NEIGHBOURHOODS

FOR AGEING

IN PLACE

HANNA VAN DIJK

NEIGHBOURHOODS FOR AGEING IN PLACE

Oud worden in eigen buurt

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Proefschrift

ter verkrijging van de graad van doctor aan de
Erasmus Universiteit Rotterdam
op gezag van de
rector magnificus

Prof.dr. H.A.P. Pols

en volgens besluit van het College voor Promoties.
De openbare verdediging zal plaatsvinden op

donderdag 25 juni 2015 om 09.30
door

Hanna Maria van Dijk
geboren te Rotterdam

Erasmus University Rotterdam

PROMOTIECOMMISSIE

Promotor:
Prof. dr. A.P. Nieboer
Overige leden:
Prof. dr. R. Huijsman MBA
Prof. dr. M.I. Broese van Groenou
Prof. dr. P.P. Groenewegen

Copromotor:
Dr. J.M. Cramm

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...de organisatie   Rotterdam 10.2.2012.
EvenBuurten 'Rotterdam.

Bijgaand, niet ingevuld. Uw vragenlijst.

Waarom niet? Deze vragenlijst is puur persoonlijk

Ondergetekende wordt 23.3. a.s. 77 jaar.
Altijd actief geweest, om te proberen
gezamenlijk de kwaliteit in de 'achterlands
wijken te evalueren.

In deze crisis, weet een ieder, hoe waar en
op wie er wordt bezuinigd
Op de meest kwetsbaren in onze samenleving.
o.a.: - gezondheidszorg
      - woon en leefklimaat
      - onderwijs
      - sluiten van buurt en clubhuizen
        enz. enz.
Regelmatig brengt de media een 'bestopleedje'
ouderen, een lijst er misactien in de declomate
privatisering (particuliere) verhuizing op de loer.
Doe door wat tegen uit solidariteit voor ons,
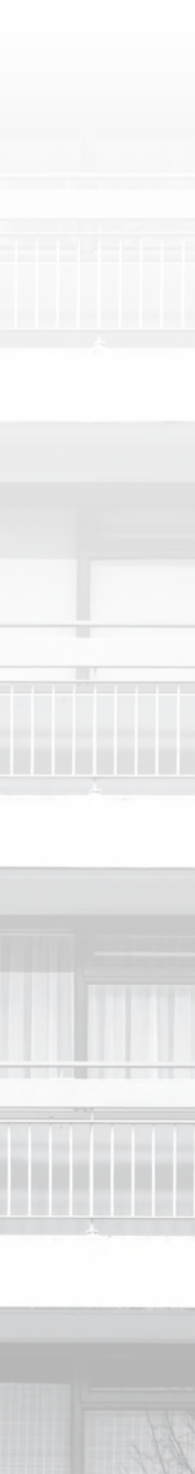die Rotterdam rijk hebben gemaakt.

U mag mij bellen.
      hoogachtend,

The notes that are presented at the beginning of each chapter are written by older people in Rotterdam who were invited to participate in our research. I received these notes during data collection.

CHAPTER 1

General introduction

POLICY CONTEXT

Many western countries struggle continuously to find a balance between the provision of support for increasing numbers of care-dependent older people and effective use of scarce public resources (Grootegoed & van Dijk 2012). The development of a sustainable long-term care system that adequately addresses this challenge places huge pressure on the innovative capacities of these countries (Pierson 2001, Esping-Andersen 2003).

During the post-World War II economic expansion, many western countries demonstrated a general tendency to increase social welfare spending, especially for people aged ≥ 65 years (Jegermalm 2005). Professionals were increasingly deployed to provide (social) care that was deemed to go beyond resources available within families (van Hooren & Becker 2009). However, many western countries now face challenges that undermine the sustainability of current health and social care systems (Daly & Lewis 2000, Pierson 2001, Pavolini & Ranci 2008). Demographic changes, such as the long-term decrease in fertility rates combined with increased longevity, have resulted in significant growth in the absolute and relative numbers of older people (Glendinning & Kemp 2006). Moreover, the increase in single-parent households and the rise of women's participation in the labour market have placed pressure on family caregiving (Gray 2009, OECD 2011). Another important trend has been the introduction of market relations into public sector welfare (Daly & Lewis 2000), which according to critiques may have resulted in rising inequalities, especially those affecting frail groups (Esping-Andersen 2003, Glendinning & Kemp 2006).

These developments, combined with current economic crises, spur western countries to cope with the paradoxical situation of meeting *increasing* health and social care demands with *limited* public resources. In response, many western countries have restructured the division of responsibilities among the state, market, and community (Daly & Lewis 2000, Pavolini & Ranci 2008, Triantafillou *et al.* 2010). Instead of the state serving as the main provider of (social) care, such burdens have been allocated to communities (Daly & Lewis 2000, Tonkens 2011, Grootegoed & van Dijk 2012, Verhoeven & Tonkens 2013). In this framework, public protection is provided only when the community cannot provide care for objective reasons, such as the absence of informal caregivers and/or insufficient economic means (Pavolini & Ranci 2008).

POLICY ASPIRATIONS: SHIFTING RESPONSIBILITIES

The provision of support for ageing in place has become an important imperative in the redefinition of health and social care policy (Bettio & Plantenga 2004, Chan *et al.* 2008, Pavolini & Ranci 2008, Wiles *et al.* 2012). Governments agree that the ability of older people to continue living in their neighbourhoods has economic and social value (Pavolini & Ranci 2008, Lui *et al.* 2009). Ageing in place policies thus fuel the need for *supportive* neighbourhoods that accommodate older people's needs. Given their shrinking social networks (McPherson *et al.* 2006, Oh & Kim 2009) and declining mobility (Philips *et al.* 2005), the neighbourhood context gains importance in meeting older people's everyday needs. This is especially relevant for *frail* older people, who experience losses in one or more domains (*i.e.* physical, psychological and social) of human functioning and increasingly rely on neighbourhood resources to fulfil their needs. The availability of sufficient and diverse neighbourhood resources dictates the extent to which they can do so (Steverink 2001, Nieboer & Lindenberg 2002). In 2007, the World Health Organization (WHO) introduced a 'Global Age-Friendly Cities' guide to encourage cities to develop supportive and 'age-friendly' neighbourhoods for older people (WHO 2007). Based on findings from 158 focus groups composed of 1485 older people, caregivers, and service providers in 33 cities in developed and developing countries, the WHO identified important neighbourhood aspects in eight domains: outdoor spaces and buildings, transportation, housing, social participation, respect and social approval, civic participation, communication and information, and community support and health services. This framework highlights the breadth of issues that affect supportive neighbourhoods and demonstrates that physical and social neighbourhood characteristics are mutually contingent (Lui *et al.* 2009). The development of environments that integrate physical and social facilities and services is thus needed (WHO 2007, Lui *et al.* 2009).

   In addition to an age-friendly social and physical environment the success of integrated neighbourhood construction is expected to depend on the ability to engage multiple community partners that share responsibility for the delivery of care and support to (older) people (Barr *et al.* 2003, Harris & Boyle 2009, Lui *et al.* 2009). In addition to broad commitment among the *formal* network, *i.e.* between professionals in health and social care and housing, these partnerships require close collaboration with the *informal* network. Through the involvement of the resources of professionals, (older) people, families, and neighbours, barriers to the well-being of individuals and communities may be identified and removed (Barr *et al.* 2003). The engagement of (older) people in the

neighbourhood is not only perceived as a way to increase responsiveness to communities' specific needs (Plochg & Klazinga 2002, Musso *et al.* 2011); it is also expected to give new meaning to and create recognition of the need for solidarity in the community, which according to critiques was 'crowded out' and eroded by traditional welfare states (Putnam 2000, Van Oorschot & Arts 2005). Furthermore, the encouragement of greater citizen responsibility aims to enlarge the caring capacity of the community (Pavolini & Ranci 2008, Muehlebach 2012, Verhoeven & Tonkens 2013) and, as a consequence, reduce the demand on public resources.

Although the need for supportive neighbourhoods is currently widely acknowledged and integrated neighbourhood approaches (INAs) are increasingly perceived as means to achieve that goal, their value has yet to be properly assessed (Lui *et al.* 2009). Critics have expressed doubts about the assumed caring capacity of communities, especially in the context of current cost containments and changing family structures (Brown 2012). Despite growing interest in the development of supportive neighbourhoods and establishment of INAs to support ageing in place, much of the literature leaves us ignorant about the processes and effectiveness of such approaches (Lui *et al.* 2009). This thesis therefore aimed to provide insight into a) characteristics of neighbourhoods that support ageing in place and b) INAs that promote ageing in place.

PART A: NEIGHBOURHOODS THAT SUPPORT AGEING IN PLACE

Part A of this thesis addresses the first research question: *what are the characteristics of a neighbourhood that supports ageing in place?* Several exploratory studies were conducted to gain insight in characteristics that contribute to a supportive age-friendly neighbourhood. Although the WHO's (2007) age-friendly cities guide offers a useful and thorough framework, it provides no information on the *relative* importance of neighbourhood characteristics that support ageing in place. This thesis thus provides insight into older people's perspectives on the *comparative* importance of physical and social neighbourhood characteristics identified by the WHO. Furthermore, although the relationship between neighbourhood characteristics and health status is well established (Subramanian *et al.* 2006, Kawachi *et al.* 2008, Stafford *et al.* 2008, Van Hooijdonk *et al.* 2008, Mohnen *et al.* 2011), we lack knowledge of its importance for overall well-being, especially among older people. This thesis will therefore investigate the relationship between neighbourhood characteristics and older people's well-being. Furthermore, given that the social dimension

underlying supportive neighbourhoods has been insufficiently addressed (Lui *et al.* 2009) this thesis gives particular attention to important social neighbourhood characteristics, such as social capital, social cohesion, and social support.

PART B: AN INTEGRATED NEIGHBOURHOOD APPROACH TO PROMOTE AGEING IN PLACE

Although neighbourhood approaches are increasingly advocated as means to support the growing number of community-dwelling older people, we lack thorough descriptions of such approaches, as well as insight into their effectiveness. The second research question of this thesis was: *what is needed to build an INA to promote ageing in place?*

In part B of this thesis, a Dutch INA that aimed to improve older people's health-related quality of life and well-being via strengthened integrated social support systems in the neighbourhood is discussed. The INA was initiated in 2011 by diverse partners in Rotterdam, *i.e.* the municipality, local health and social care organisations, Erasmus University Rotterdam, the University of Applied Sciences, and Geriatric Network Rotterdam, with the ultimate aim of creating a supportive environment that would enhance older people's well-being allowing them to age in place. In such partnerships, health and social care professionals *and* informal support-givers in the community become mutually responsible for the optimisation of current services and support of older people. The INA corresponds to broader policy in the Netherlands. The Social Support Act (WMO), which went into force in 2007, is a major Dutch reform enacted to address health and social care challenges. This act, which is currently being reformed, was designed to shift tasks and responsibilities concerning social care and support from central government to local governments. Based on the general principle that municipalities are best able to respond to the needs of citizens and support and enable them to participate in society, this act aims to promote individual responsibility and active participation among all groups in society (van Ewijk 2010).

The INA can be perceived as a real-life experiment that combines current policy aspirations and tests their ability to supporting community-dwelling older people in ageing in place by the enhancement of older people's well-being. It thus serves as a perfect case for exploration of the complexity of today's challenge to meet the increasing needs of older people with limited public resources. As the INA combines interacting components at several levels (*i.e.* personal, community, and professional levels), it is considered to be a complex social intervention (Campbell *et al.* 2007, Craig *et al.* 2008).

OUTLINE OF THIS THESIS

1

In addressing the first research question, part A of this thesis begins with an examination of supportive neighbourhoods from older people's perspectives. As an understanding of older people's perceptions of supportive neighbourhood characteristics is critical for the design and implementation of neighbourhood programmes, chapter 2 examines frail and non-frail older people's preferences regarding their ideal neighbourhood for ageing in place. Chapter 3 focuses on *social* neighbourhood characteristics, beginning with an elaboration of the importance of social cohesion and social capital for older people's well-being. Following this discussion of how the social environment impacts older people's well-being, the importance of gaining insight into elements that contribute to this social dimension of the neighbourhood is described. In chapter 4, the individual and neighbourhood characteristics that contribute to older people's sense of social cohesion, *i.e.* social interactions among neighbours and the associated process of building shared values (Fone *et al.* 2007), are discussed. After an examination of these social neighbourhood characteristics, further insight is required to deepen our understanding of the supportiveness of these social relationships among neighbours. Although public policy increasingly relies on neighbours to support older people in ageing in place, whether these expectations are justified remains unknown. Thus, in chapter 5 the types of informal support that neighbours and volunteers provide to older people are examined and collaborative efforts between formal and informal support-givers are explored.

Part B of this thesis elaborates on the processes and outcomes of an INA in the Netherlands. Chapter 6 describes the aims and scope of the INA, as well as the design of the INA evaluation study. Chapter 7 presents the findings of the evaluation of the INA's effects on older people's health-related quality of life and well-being. In chapter 8, the discussion focuses on whether the INA was able to meet expectations in supporting community-dwelling older people and protecting their quality of life, with an in-depth exploration of INA partners' experiences in providing support. Factors that may hamper or facilitate INA success are identified at the micro-level of the primary process of care and support, as well as at the meso-level (organisational context) and the macro-level (broader policy context). Chapter 9 contains a summary and reflection on the main findings and methodological issues, with recommendations for practice and suggestions for future research.

Omdat ik op het meren-
deel van de vragen geen
kundig antwoord kan geven,
stuur ik dit formulier
ongevuld retour.
'Veel vragen heb ik mezelf
nooit gesteld.
Bovendien bestaat mijn
buren voor mij alleen uit
de mensen die in hetzelfde
appartementen complex
wonen. De rest ken ik niet.
Dat is dus veel te beperkt
Succes, en hopelijk meer
respons van anderen, gewenst

PART A

Neighbourhoods that support ageing in place
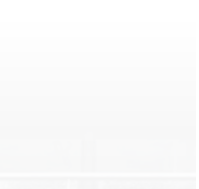
7. De buurt is netjes en is veilig voor het publiek   X   1   2   3   4   5

X over het algemeen is dit altijd zo geweest (woon hier sinds 55 jaar en ik ben 84 jaar) alleen sinds [1 juli 2011] is de riolering voor mijn deur [Groene Halledijk] stuk en liggen nu al 2 planken voor mijn buitendeur en met een leeftijd van 84 jaar springt men niet meer over de planken, die aardig doorzakken. Alle instantie's heb ik dit doorgegeven, maar mijn huisbaas is hier verantwoordelijk voor, maar doet niets. en dan?

CHAPTER 2

The ideal neighbourhood for ageing in place as perceived by frail and non-frail community-dwelling older people

ABSTRACT

Background: Due to demographic changes and a widely supported policy of ageing in place, the number of community-dwelling older people will increase immensely. Thus, supportive neighbourhoods enabling older people to age in place successfully are required.

Methods: Using Q-methodology, we examined older people's perceptions of the comparative importance of neighbourhood characteristics for ageing in place. Based on the World Health Organization's Global Age-friendly Cities guide, we developed 26 statements about physical and social neighbourhood characteristics. Thirty-two older people in Rotterdam, half of whom were frail, rank-ordered these statements.

Results: Q-factor analysis revealed three distinct viewpoints each among frail and non-frail older people. Comparisons within and between groups are discussed. Although both frail and non-frail older people strongly desired a neighbourhood enabling them to age in place, they have divergent views on such a neighbourhood.

Conclusions: Older people's dependence on the neighbourhood seems to be dynamic, affected by changing social and physical conditions and levels of frailty.

INTRODUCTION

Many Western countries have adopted a widely supported policy of 'ageing in place' (Means 2007, Sixsmith & Sixsmith 2008, Lui *et al.* 2009). Although driven predominantly by financial imperatives to limit health and social care costs, older people also prefer to age in place (Heywood *et al.* 2002, Gitlin 2003). Research supports the importance of the residential environment, showing that neighbourhood characteristics significantly influence the health (Young *et al.* 2004, Day 2007, Muramatsu *et al.* 2010) and well-being (Cramm *et al.* 2012b) of older people, who spend large proportions of their lives in their neighbourhoods (Philips *et al.* 2005). Moreover, mobility limitations (Shaw *et al.* 2007) and smaller social networks (McPherson *et al.* 2006, Oh & Kim 2009) increase their dependence on the neighbourhood. Thus, neighbourhood characteristics are expected to affect older people's ability to continue living independently (Peace *et al.* 2006, Cagney & Cornwell 2010, Wiles *et al.* 2011). The need for supportive neighbourhoods further increases with the growing number of community-dwelling older people (Sheets & Liebig 2005).

THEORETICAL FRAMEWORK

In 2007, the World Health Organization (WHO) published a 'Global Age-Friendly Cities' guide. Based on 158 focus groups with 1485 older people, caregivers, and service providers in 33 cities in developed and developing countries, this guide identified important aspects in eight domains: outdoor spaces and buildings, transportation, housing, social participation, respect and social approval, civic participation, communication and information, and community support and health services. Although the framework was developed to encourage cities to promote 'active ageing' (i.e. 'to optimize opportunities for health, participation, and security in order to enhance quality of life as people age') (WHO 2007: p. 1), we propose that these aspects are also prerequisites for ageing in place. Therefore, and because of its wide scope and extensive design, we used this model to define neighbourhood characteristics enabling older people to age in place.

Outdoor spaces and buildings

Much research on the physical environment has examined physical activity levels and health issues among older people (Wilcox *et al.* 2003, Li *et al.* 2005, Van Lenthe *et al.* 2005), identifying important attributes such as sufficient green spaces (Li *et al.* 2005,

Sugiyama & Ward Thompson 2008), accessible buildings (WHO 2007), and age-friendly streets and crossings (Burton & Mitchell 2006, Wennberg *et al.* 2009). Furthermore, older people have consistently stressed the importance of neighbourhood security in outdoor spaces (Wilcox *et al.* 2003, Van Lenthe *et al.* 2005, De Donder *et al.* 2009). Insecurity impinges on older people's sense of control and ability to walk around in neighbourhoods, especially at night (Gilroy 2007). Recent research demonstrates that physical features such as road safety and distance to services contribute to feelings of security (De Donder *et al.* 2013).

Transportation

The availability of convenient transportation is important for ageing in place, profoundly impacting older people's independence (Coughlin 2001, Kostyniuk & Shope 2003) and ability to retain contact with the community (Cvitkovich & Wister 2001, Feldman & Oberlink 2003). Access to (private and public) transport is associated with higher quality of life (Gilhooly 2002). Older people value driving or *being driven* by car, which avoids barriers associated with public transport (e.g. security issues, vehicle unsuitability) (Coughlin 2001, Gilhooly 2002, Kostyniuk & Shope 2003, Fiedler 2007).

Housing

The home has special significance for older people, who spend approximately 80 per cent of daytime hours there (Baltes *et al.* 1999) and identify it with comfort and familiarity (Wahl & Gitlin 2007, Wiles *et al.* 2009). To avoid institutionalisation and ensure continuing independence in daily activities, housing should accommodate older people's functional needs; new housing must adhere to high access standards (Brewerton & Darton 1997) and older housing must be adapted (Means 2007). Home modifications (e.g. stair lifts, ramps, automatic door openers) enable older people to continue their routines, accommodating their needs for accessibility, safety, and comfort (Petersson *et al.* 2008, Tanner *et al.* 2008). Moreover, the affordability of age-friendly housing is clearly crucial for ageing in place (Libson 2007).

Social participation

In the context of *active* ageing, the promotion of older people's social participation has received much attention. Social participation mitigates loneliness (Victor *et al.* 2005) and benefits older people's health (Avlund *et al.* 2004, Glass *et al.* 2006) and quality of life (Bowling *et al.* 2002, Gabriel & Bowling 2004). We thus expect social participation to increase older people's ability to age in place, which seems to rely on the affordability

and accessibility of social activities and the presence of social interaction sites (Baum & Palmer 2002, Bowling & Stafford 2007, WHO 2007).

Respect and social approval

With advancing age, the neighbourhood may become an important source of social approval and identity (Burns *et al.* 2012). Older people value good social bonds with neighbours (Gabriel & Bowling 2004, Gardner 2011, van Dijk *et al.* 2013), which contribute to neighbourhood satisfaction (Scharf *et al.* 2002). Due to their familiarity and accessibility neighbours may provide critical support, enabling older people to age in place (Gardner 2011). Moreover, ethnic and age homogeneity in neighbourhoods contribute to social inclusion, although some studies found that older people prefer age heterogeneity (Gabriel & Bowling 2004).

Civic participation

Engagement in civic activities is considered an essential element of ageing in place, enabling older people to maintain social contacts and continue involvement in neighbourhood events and politics (Burr *et al.* 2002, van der Meer 2008). Although civic engagement encompasses diverse activities (e.g. voting, attending community meetings, involvement in public affairs), most research on older people has focused on volunteering (Martinson & Minkler 2006). Volunteering among older people may meet service needs and improve health and well-being (Morrow-Howell *et al.* 2003, Musick & Wilson 2003). However, various barriers - practical (e.g. financial, mobility), policy (e.g. maximum age, narrow activity range), and attitudinal (e.g. lack of knowledge/experienced expertise) - are found to hinder volunteering among older people (Rochester & Hitchison 2002).

Communication and information

Adequate information provision is an overarching theme of ageing in place, as it enables older people to stay connected with the community and manage their lives (WHO 2007, Menec *et al.* 2011). Older people especially appreciate the accessibility of relevant information at the local level, such as local media and newspapers, widely visited locations in the neighbourhood, public posters, direct mailing (Barrett 2005, WHO 2007, Everingham *et al.* 2009). Furthermore, everyday social interactions with neighbours enable the acquisition of personal, word-of-mouth information (Fisher *et al.* 2004, Barrett 2005). Finally, older people increasingly use the internet to obtain information and communicate with distant family members (Russell *et al.* 2008), although

affordability issues and lack of familiarity and confidence hinder its accessibility (Selwyn 2004, WHO 2007).

Community support and health services

The importance of health and social services in the neighbourhood increases with illness and disability in advancing age (Rogero-Garcia *et al.* 2008). Home- and community-based services contribute to physical and mental health (Albert *et al.* 2005) and delay institutionalisation (Gaugler *et al.* 2005). However, frail older people's ability to perceive their service needs for ageing in place is limited (Tang & Lee 2010). Several barriers, such as lack of service awareness (Strain & Blandford 2002, Casado *et al.* 2011) and affordability (Li 2006, Casado *et al.* 2011), may hinder home- and community-based service utilisation. Service accessibility (proximity to home) is also important, given older people's declining mobility (Michael *et al.* 2006, Walker & Hiller 2007).

Frailty and ageing in place

Based on the recognition that community-dwelling older people have varying preferences, needs and resources, the WHO advocated cities to accommodate this heterogeneity by "adapting its structures and services to be accessible to and inclusive of older people with varying needs and capacities" (WHO 2007: p. 1). Previous research (Eales *et al.* 2008, Menec *et al.* 2011, Keating *et al.* 2013) suggests that the level of age-friendliness can best be understood by the 'person-environment fit'; i.e. the fit or congruence between the needs and resources of older people and environmental conditions. Demographic changes and a widely supported policy of ageing in place lead to a growing concern about person-environment fit in later life (Peace *et al.* 2011), especially because cities are urged to meet the needs of increasing numbers of older people with complex and multidimensional needs. Current research indicates that nearly half of community-dwelling people aged ≥ 70 years are frail (Cramm & Nieboer 2012c). Although definitions of frailty abound, there is now growing consensus that frailty is not simply an equivalent of (physical) disability (Fried *et al.* 2004) but should be understood as an integral concept (Schuurmans *et al.* 2004, Gobbens *et al.* 2010, Nieboer *et al.* 2010). Gobbens and colleagues (2010: p. 85) define frailty as "a dynamic state affecting an individual who experiences losses in one or more domains of human functioning (physical, psychological, social)", increasing the risk of adverse outcomes, such as falls, hospitalization and mortality (Markle-Reid & Browne 2003, Fried *et al.* 2004). Older people must compensate for such losses to fulfil their needs and live independently; the availability of various resources dictates the extent

to which they can do so (Nieboer & Lindenberg 2002). The neighbourhood is likely to become increasingly important in providing resources to maintain well-being; for example, loss of affection caused by friends' deaths may be compensated by intensifying neighbour contact (Steverink 2001). Likewise, older people may attach greater value to accessible and proximate facilities once they are confronted with mobility loss (Menec *et al.* 2011). In line with previous research (Menec *et al.* 2011, Keating *et al.* 2013), we thus suggest that person-environment fit is not static, given that both communities and older people change. We argue that the diversity among older people should be accounted for when examining the importance of neighbourhood characteristics. As frailty captures the complex interplay of physical, psychological and social factors among older people (Markle-Reid & Browne 2003, Gobbens *et al.* 2010), we will study whether older people's neighbourhood needs may vary according to frailty. To our knowledge, we are the first to examine the preferences of frail and non-frail older people regarding their ideal neighbourhood for ageing in place.

Study aim

Previous studies identified many neighbourhood characteristics that are important for older people's health and well-being. However, their *comparative* importance for ageing in place remains unknown and we lack insight into frail and non-frail older people's views and their possible divergence (Glass & Balfour 2003, Burton & Mitchell 2006). Thus, this study examined frail and non-frail older peoples' perceptions of the relative importance of ideal neighbourhood characteristics for ageing in place.

METHODS

Q-methodology (Cross 2005, Watts & Stenner 2012), increasingly used and established in socio-medical sciences (e.g. van Exel *et al.* 2006, Kreuger *et al.* 2008, Robinson *et al.* 2008, Cramm *et al.* 2009), combines qualitative and quantitative methodologies to study people's viewpoints, attitudes, or beliefs on a specific topic. A Q-study's main aim is to describe a population of viewpoints, rather than people (Risdon *et al.* 2003). Participants are asked to rank a set of statements according to their perspectives on a certain subject. Assuming that correlation among individual statement rankings reflects similar viewpoints, by-person factor analysis of the correlation matrix identifies a limited number of ranking patterns. These patterns are interpreted and described

as viewpoints on the topic: here, frail and non-frail older people's viewpoints on the ideal neighbourhood for ageing in place.

Q-statements

First, we developed statements utilising the WHO (2007) framework for age-friendly cities. We complemented the model by searching the literature on important neighbourhood aspects for older people, accounting for aspects relevant in the Netherlands. Then, three researchers separately constructed statements from the model; after iterated comparison and discussion, 30 statements were developed. Statement comprehensiveness and unambiguity were tested in four pilot interviews with older people. All authors collaboratively excluded or rephrased overlapping statements, yielding a final set of 26 statements (Table 1).

Participants

The sample we used for this study was part of a larger evaluation study of an integrated neighbourhood approach for community-dwelling older people (a detailed description of our study design can be found in our study protocol; Cramm *et al.* 2011a). Respondents from this sample previously took part in survey research for this evaluation study. We therefore had information on respondents' age, gender, ethnic background, educational level and level of (physical, mental and social) frailty (measured by the Tilburg Frailty Indicator; Gobbens *et al.* 2010). We approached older people of this sample by telephone and asked for their willingness to participate in this Q-study. To ensure wide representation of viewpoints, we used purposive sampling to recruit an even amount of frail and non-frail participants aged ≥ 70 years in socio-economically disadvantaged and advantaged neighbourhoods in Rotterdam (population > 600,000). In total, 16 frail and 16 non-frail older took part in this study, which is considered an appropriate sample size in Q-studies (Watts & Stenner 2012: p. 73). The first author conducted face-to-face interviews (60-90 minutes) in participants' homes. All interviews were audio-taped (with participants' permission) and transcribed.

During interviews, respondents were first instructed to sort the statements into three piles: (relatively) important and unimportant for their ideal neighbourhood for ageing in place, and undecided. Then, they were asked to rank-order the statements using a quasi-normal distribution (Fig. 1), and to elaborate on their ordering. The interviewer focused on the 10 outermost statements and considered remarks made during sorting. Finally, we solicited background information (gender, age, marital status, ethnic background, educational level, home ownership, years of residence).

LEAST IMPORTANT | | | | | | MOST IMPORTANT

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
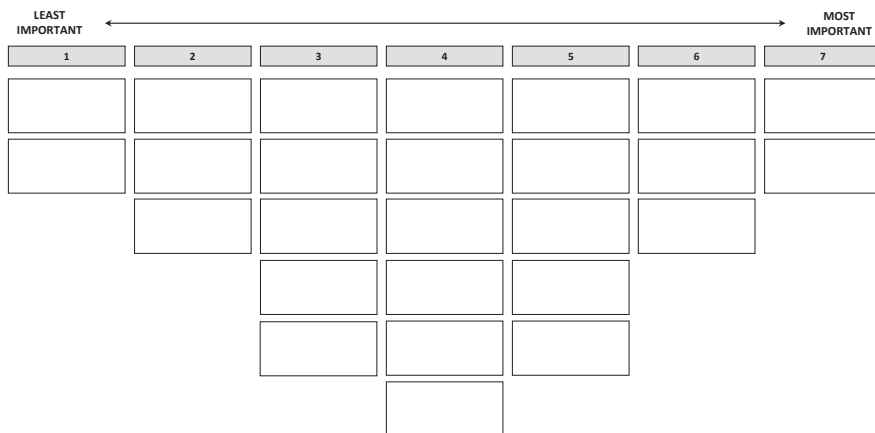
Figure 1: Ranking format

Analysis

Q-sorts of frail and non-frail older people were separately subjected to by-person factor analysis (centroid extraction, varimax rotation) to identify corresponding statement rankings (factors). Both qualitative and quantitative criteria determined the amount of factors within both groups; the statistics indicated the maximum number of views that could be identified and the qualitative interpretation lead to the selection of the factor solution that provided the most comprehensible account of the views expressed through the Q-sorts. Next, an idealized Q-sort was computed for each factor based on rankings of individual participants' loading, weighted by the correlation coefficient. This idealized Q-sort reflects how a person with a 100 per cent loading on a factor would rank the statements (Table 1). The statements that are ranked at the extreme ends (+3, +2, -2, -3) of the idealized Q-sort, the *characterising* statements, provide a first description of a viewpoint. To analyse the differences and commonalities between factors, the statement scores on each factor are normalized to Z-scores (with a mean of 0 and a S.D. of 1) and standard statistical tests and cut-off p-values are used to identify *distinguishing* (those with a score that differs significantly from those of other factors) and *consensus* (those with a score that is not statistically significantly different between any pair of factors) statements. Moreover, we used the post-Q-sort interviews of the participants loading on a factor to gain further insight into the viewpoint represented by that factor. In the description of the viewpoints, each statement will be accompanied by its rank score and distinguishable statements will be indicated with a ** ($P < .01$) or * ($P < .05$). Last, we will present a factor analysis that was applied to compare idealized Q-sorts of frail and non-frail participants' viewpoints in a second-order analysis (Table 2). Data were analysed using PQMethod 2.11 (Schmolck & Atkinson 2002).

RESULTS

This study included 32 participants (16 frail, 16 non-frail; 18 women, 14 men; average age, 81 years). Four participants had foreign ethnic backgrounds. At the time of the interview, seven participants lived with spouses, one with his son, and 75% lived alone. Participants had resided at their current addresses for an average of 18.6 (range, 2-50) years. Q-factor analysis revealed three distinct viewpoints each among frail (F1-F3) and non-frail (NF1-NF3) older people.

Frail older peoples' viewpoints

F1: A secure neighbourhood with facilities nearby

These older people, who become increasingly frail and fear institutionalization, largely depend on the neighbourhood to provide the necessities of life. They value a neighbourhood where they can buy groceries [26; +3* (short for statement 26 ranked +3*) see table 1] and visit doctors, pharmacies, and other public buildings (3; +2, 23; +2). These frail and relatively old (m=87.5) participants prioritised a neighbourhood enabling them to preserve minimal independence in what they remain able to do: *'Previously, I took gym lessons. But after a while, I had to sit on my chair half the lesson. It made me aware of reality: another thing I'm not capable of anymore...the fact that I was still able to bring my neighbours' groceries [before she died], I found it so enjoyable'.* They feel *'too old'* for active participation in society (16;-3, 17; -2*, 19; -3*) and spend most time at home; thus, they value a neighbourhood where they feel safe (4) and comfortable at home, driven by previous experiences of harassment at their doors. Their explanations of enjoying a clean and green neighbourhood (1; +1) also reflected time spent indoors: *'I like to sit on that chair and watch children play outside'.* As these people gradually draw back from society, their greatest concerns are retaining control and preventing institutionalisation: *'I don't want to end up as a wreck, being dependent on the help of others'.* Although they struggled with burdening others, especially their children, who *'already had a life of their own'*, they concurrently commented on the critical roles of specific persons. As their friends and close neighbours often passed away, these participants mostly had to depend on the support and structure of *one* person (in most cases a child or home help) that enabled them to age in place: *'I feel quite privileged with my son. If I didn't have him… it would be much more difficult'*; *'The most important thing I have at the moment is my home nurse'.*

Table 1: Idealized Q-sorts

Domain and statement	Frail			Non-frail		
	Viewpoint					
	F1	F2	F3	NF1	NF2	NF3
Outdoor spaces and buildings						
1. A clean and green neighbourhood.	1	1	-1*	3*	1*	-2*
2. A neighbourhood with wide sidewalks and safe crosswalks.	1	-1*	0	2	-1*	1
3. Public buildings with elevators that are easily accessible for wheelchairs and walkers.	2	0*	3	1*	-1*	3*
4. A safe neighbourhood.	3	0**	2	3**	3**	0*
5. A calm neighbourhood.	0	-1	0	1	2	-3*
Transportation						
6. Good public transport.	1**	-3*	2**	2	3	1
7. Sufficient parking spots.	-2	-2	-3	-2	0*	-3
Housing						
8. Affordable housing.	0	3*	1	1	1	-1**
9. Suitable housing for older people.	1	2	0	1	2	0
Social participation						
10. A neighbourhood where many social activities are organised.	-1	0	-2	-1**	-3*	0**
11. Affordable activities for older people.	-1	-1	-1	0	-1	-1
Respect and social approval						
12. A neighbourhood where people have respect for older people.	0	1	0	0	0	1
13. A neighbourhood where people are willing to help each other whenever necessary.	0	2	1	0	0	2**
14. No majority of immigrants in the neighbourhood.	-1	-2	-3	-1*	-2	-2
15. A neighbourhood where people know each other and dare to approach each other.	-1	2*	-1	-1	-1	2*
Civic participation						
16. Possibilities for voluntary work.	-3	-2	-1*	-3	-2	-2
17. A neighbourhood where older people are involved, for example concerning changes in the neighbourhood.	-2*	1*	-3*	-1	-2	-1
Communication and information						
18. Local newspaper with information about what's going on in the neighbourhood.	-1	0	-1	-2**	-3*	0**
19. Access to internet and internet courses in the neighbourhood.	-3*	-1*	2*	-3*	1*	-2*
20. A neighbourhood where neighbours, shopkeepers and others keep each other updated about what's going on in the neighbourhood.	-2	-1	-2	-2**	0	-1

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Table 1: Idealized Q-sorts *(continued)*

	Frail			Non-frail		
	Viewpoint					
Domain and statement	F1	F2	F3	NF1	NF2	NF3
Community support and health services						
21. A neighbourhood where home care is easily accessible.	2	1	0	1	1	1
22. A neighbourhood where caregivers collaborate and keep each other informed.	0*	3*	1*	-1	0	0
23. A neighbourhood with the GP and pharmacy at walking distance.	2	-3*	3	0*	2	3
24. Places where older people can go for advice and support.	1	0	0	0	0	1
25. Volunteers who provide help when necessary.	0	1	1	0	-1	-1
26. Shops and other facilities within walking distance.	3*	0	1	2	1	2

Distinguishing statements (significant difference in ranking within group): $^{**}P < .01$; $^{*}P < .05$.

F2: A neighbourhood with adequate housing and a supportive network

Rather than abundant (physical) facilities (2; -1*, 3; 0*, 6; -3*, 23; -3*), participants with this viewpoint prefer strong social ties among neighbours (13; +2, 15; +2*) and professionals (22; +3*) in their ideal neighbourhood. Concerned about current health and social care savings, these participants emphasised the importance of formal and informal support networks (22; +3*, 13; +2, 25; +1). Neighbours are crucial in this respect (13; +2, 15; +2*): *'In my ideal neighbourhood, neighbours chat with each other regularly and knock on each other's door when they haven't seen someone for a while…Because if something's wrong over here, neighbours wouldn't notice'*; *'There are a lot of neighbours who call her [a supportive neighbour of the participant]…For example, I had a hard time losing my neighbour next door. So we talked about it together… she really helped me through it'*. These older people also value a well-functioning formal support network (22; +3*) that continues to provide necessary care: *'Currently, my knee strikes up, then I wonder: will I receive the care and therapy we previously received? It frightens me'*. Participants feared a lack of affordable (8; +3*), suitable (9; +2) housing for older people, which they deemed an important precondition for ageing in place. They expressed a desire for involvement in such neighbourhood issues (17; +1*), arguing that their contributions could benefit the neighbourhood.

F3: An accessible neighbourhood

Among frail participants, those with this viewpoint expressed the strongest preference for a neighbourhood enabling them to remain active (6; +2**, 16; -1*, 19; +2*), despite their *physical* frailty (e.g. walking difficulties). They primarily require an accessible neighbourhood that allows them to be outside and undertake activities, with accessible

buildings (3; +3), (health care) facilities within walking distance (23; +3), and good public transport (6; +2**) permitting them to visit friends and favourite places: *'When I visited the Christmas market with my friend, I couldn't bring along my walker. It truly was a gruelling experience'*; *'From here, I can take the tram, the subway...If you can't walk properly, that becomes really important'.* Like public transport, the internet (19; +2*) enables them to maintain networks and remain active, preventing social isolation: *'I'm on Facebook quite a lot, I like it. It keeps you going and keeps you mixed with the people'.* People with this viewpoint maintain contacts independently and proactively, and do not depend on social (10; -2) or civic (17; -3*) neighbourhood activities.

Consensus statements

Despite discrepancies among factors, some statements were ranked similarly. Frail participants agreed that community support and health services were important, appreciating readily available home care (21) and volunteers' support (25). They explained that these services enabled them to live independently and avoid institutionalisation. Moreover, they often enjoyed the company of home helpers: *'When she arrives in the morning, we first drink a cup of tea together. Then, I share my concerns with her and she [the home help] is able to that as well'.* Frail older people also valued neighbours' mutual assistance (25) and monitoring, such as checking each other's curtains, exchanging keys, and visiting lonely older people. At the same time, frail participants expressed needs for autonomy and privacy; for example, they did not prefer a neighbourhood where neighbours, shopkeepers, and others keep each other updated (20) or with organised social activities (10, 11).

Non-frail older people's viewpoints

NF1: A well-kept neighbourhood with people to whom you can relate
Participants with this viewpoint value a neighbourhood where they feel safe [4; +3** (short for statement 4 ranked +3**) see table 1] and at home, and where social and physical deterioration do not occur (1; +3*, 2; +2): *'It's the appearance of the neighbourhood, if someone comes by and the neighbourhood seems clean and proper, then you reside in a good environment'.* Apart from proper outdoor spaces (1; +3*, 4; +3**) and nearby shops (26; +2), they prefer a neighbourhood with people to whom they can relate; among participants, they objected most to an immigrant-majority neighbourhood (14; -1*). The language barrier and immigrants' values and habits alienate these participants: *'We used to live with four Dutch people on this floor...we really got along with each other.*

And then a Moroccan woman came and there were cigarette-ends lying in the hall…At a certain point you think: I wouldn't step aside for an immigrant…We sometimes consider moving to Zeeland or Drenthe [rural Dutch communities associated with friendliness]'. Although participants appreciated good social ties among neighbours, they did not desire excessive neighbour contact: *'It's good to be friendly and help one another when necessary, but it shouldn't be too intrusive'.* As 80% of these participants lived with partners, they had access to support and affection that other (mostly single) older people lacked and drew from the neighbourhood (16; -3, 18; -2**, 19; -3*). Participants explained that they tried to distance themselves from older people who perceived the neighbourhood as a primary source of entertainment and information exchange (20; -2**), which they associated with social control and gossiping: *'That's what their life revolves around, what happens at someone else's place. That's their television, their entertainment. Because they know an awful lot about everybody'.*

NF2: A calm neighbourhood with good facilities

Participants with this viewpoint prefer to live an independent and calm (5; +2) life, demonstrating low neighbourhood attachment (10; -3*, 17; -2, 18; -3*). They mainly perceived the neighbourhood as a place to fulfil basic needs (e.g. eating, sleeping), relying on their own resources to satisfy social needs: *'I'm better served by my own environment, my own friends and my own club, than joining social activities in the neighbourhood'.* Accordingly, participants valued a safe neighbourhood (4; 3**) accessible by car and public transport (6; +3, 7; 0*). Unlike other participants, who often mentioned pragmatic reasons for using public transport (e.g. going to the doctor or shops), these people regularly provided social reasons (e.g. going to the theatre or visiting grandchildren). Moreover, they commonly used the internet (19; +1*) for social contact and information: *'I can't live without it. Then I would be forced to handle my business elsewhere and I wouldn't be able to establish contacts'.* These people, whom appeared more resourceful and in better physical condition than other participants, often expressed aversion toward 'older' people: *'Older people…it won't bring you much. They don't have a future, that's the thing',* preferring to surround themselves with younger people: *'I just prefer to hang around with younger people…you always end up in the past with the oldies, how good those days were. But I don't live in the past, I live in the present'.* However, these people were aware of their relatively good physical condition, and mentioned that they might rank social (10; -3*) and physical (2; -1*, 3; -1*) statements differently when they became frail and more reliant on the neighbourhood.

NF3: A lively and engaged neighbourhood

People with this viewpoint clearly perceived a good social dynamic, rather than the appearance of outdoor spaces (1; -2*, 4; 0*, 5; -3*), as the most essential part of an ideal neighbourhood (13; +2**, 15; +2*, 10; 0**). They particularly appreciated close ties and mutual assistance among neighbours (13; +2**, 15; +2*) (*'That's what you do'),* mentioning *'doing the groceries, repairing a broken radio, installing the television or accompanying someone to the doctor'.* Participants remarked that mutual support among neighbours may be particularly crucial for older people, especially those without (nearby) family, who increasingly face cognitive and physical impairments: *'I found it very important. It's your first line of aid right?'.* Moreover, they favoured a dynamic, lively neighbourhood atmosphere (5; -3*): *'I like the neighbourhood to be dynamic. I'm already quite old myself… So I don't want the neighbourhood to be calm as well',* best achieved by an age mix: *'it's what makes the neighbourhood cheerful and interesting'.* Among non-frail participants, they attached most value to neighbourhood social activities (10; 0**), believing that being active benefits one's health: *'I think it's important, people should remain active…I do have geraniums, but I'm not sitting behind them [a Dutch expression for inactive (often older) people]. That's what I noticed during my voluntary work in the nursing home. The way people sat in their chair, they looked paralyzed. But when I joined them and talked to them, they literally came up in their chair'.* Accordingly, these people stated that the proximity of care facilities (23; +3) and availability of accessible public buildings (3; +3*) are important preconditions enabling older (disabled) people's participation in society: *'Of course these [public buildings] should be accessible. They should allow you to go anywhere with them. They may be disabled, but that doesn't mean you should write them off'.*

Consensus statements

Good public transport (6), enabling continued visitation of favourite people and places, was a common preference among non-frail participants. Many appreciated public transport within walking distance of their homes. The proximity of shops and other facilities (26) was also important, as buying one's own groceries contributes to a sense of independence. Like frail participants, they valued readily available home care (21). They did not value engagement in civic activities (16, 17), perceiving voluntary work (16, 25) as a way to reduce public spending and commenting on volunteers' heavy burdens. They remarked that only flexible and -truly- voluntary work would be successful for older people. Non-frail participants agreed on the relative unimportance of a neighbourhood where people are involved in neighbourhood decisions (17), mentioning that they often

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got involved too late, felt unheard, and considered neighbourhood decision making a matter for younger people.

Comparison of frail and non-frail older people's viewpoints
Some patterns of consensus in frail and non-frail participants' viewpoints emerged. Viewpoints F1 and NF1 were highly correlated (.86), due mainly to the common desire for a safe neighbourhood with abundant facilities (Table 2). However, post-Q-sort interviews revealed distinct considerations underlying the rankings; frail participants referred mainly to safety at home, whereas non-frail participants referred to outdoor safety. Furthermore, viewpoints F3 and NF3 were correlated (.55), based on the importance of remaining active through one's social network (F3) or the neighbourhood (NF3). Moreover, participants with viewpoints F3 and NF2 (.58) did not rely on the neighbourhood to fulfil social needs, depending on their own social networks and the internet. Viewpoint F2 was distinct, demonstrating no strong correlation.

Table 2: Correlations between Viewpoints.

	F2	F3	NF1	NF2	NF3
F1	.13	.59	.86	.54	.61
F2		.04	.16	-.06	.15
F3			.41	.58	.55
NF1				.57	.32
NF2					.10

DISCUSSION AND CONCLUSION

With increasing numbers of community-dwelling older people, interest in supportive neighbourhoods that allow (frail) older people to age in place is growing. Although previous research already identified a large number of important neighbourhood characteristics (WHO 2007), we lack insight into the *relative* importance of these characteristics. In this Q-methodological study, we asked frail and non-frail older people to rank neighbourhood characteristics according to their view of the ideal neighbourhood for ageing in place. We thereby respond to the previously highlighted need to identify 'leverage points' that are particularly relevant in enabling older people to age in place (Stokols 1996, Menec *et al.* 2011).

We identified three viewpoints in each group. Although participants' perceptions of the ideal neighbourhood differed, all emphasised the importance of maintaining

independence. In line with previous research (Peace *et al.* 2011), older people seem to evaluate important neighbourhood characteristics in terms of the extent to which they contribute to retaining a sense of control and autonomy, taking account of both past experiences and future expectations. Frail participants often expressed preferences reflecting their conditions, whereas non-frail participants were influenced more by previous experiences with physical and/or mental impairment (e.g. due to a fall, ailing partner) or imagined future impairments. The 'outdoor spaces and buildings', 'transportation', 'housing', and 'community support and health services' domains of the WHO's 'Global Age-Friendly Cities' framework (2007) appeared to be most essential to older people. Participants indicated that living in close proximity to services enabled them to meet necessities, such as buying groceries and visiting the doctor. Just as an accessible neighbourhood, public transport and safety were perceived as prerequisites for independence.

Safety is an important meta-goal to avoid older people's (further) loss of social and physical well-being (Van Bruggen 2004, Nieboer *et al.* 2010). Being caught in a so-called loss frame is particularly damaging for well-being (Nieboer 1997). Feelings of insecurity affect older people's willingness to take risks: '*if something goes wrong, is there someone who can help us? But when you're young, you don't reflect upon those matters... But now we do...a safe neighbourhood, that's what you care for.. previously, if someone harassed you, you could run, but that's not the case anymore*'.

In line with previous research (Walker & Hiller 2007, Menec *et al.* 2011, Novek & Menec 2013), physical and social neighbourhood aspects were closely related. For example, participants associated a safe neighbourhood with close ties among neighbours and a sense of familiarity. When commenting on the importance of nearby grocery stores, participants concurrently mentioned that these facilities connected them with neighbours: '*When I'm buying my groceries, I always encounter someone I chat with. If you're able to talk with someone -albeit superficial-it benefits your day*'. Such -seemingly-small everyday interactions often underpin strong senses of support and belonging; one participant proudly commented on the importance of being noticed: '*When I'm walking in the town, you should see how many people wave at me*'. All participants valued neighbour contact (in relation to their needs), although the desired degree of such contact ranged from low-level everyday interactions to strong social and emotional bonds. Many participants, however, controlled the amount of neighbour contact to safeguard their privacy, which was also reflected by moderate rankings of statements in the 'respect and social approval' domain. Thus, participants highlighted the critical tension between appreciating neighbour contact as a key source of support and preventing

it from becoming too constricting. Likewise, most participants did not desire active social or civic participation, perceiving it as (relatively) unimportant for well-being, despite policymakers' promotion of such participation among older people. Whereas frail participants often indicated that they were consumed with daily activities and the challenges of ageing, non-frail participants (excepting those with viewpoint NF3) preferred to rely on their own social networks, which had formerly met their social needs. Moreover, participants regularly associated civic engagement with the shifting of responsibilities to the community, mainly to enable cutbacks in health and social care (see also Martinson & Minkler 2006).

This Q-study provided insight into older people's preferences for ageing in place. Participants appreciated the opportunity to concretely express their views about a relevant and vital theme. *Face-to-face* Q-interviews, rather than self-administered Q-sorts, were highly beneficial in this group because we could further clarify the procedure during ranking. Moreover, the interviews allowed us to gain impressions of older people's living situations and insights into motives underlying rankings. For example, consistent with previous findings (Peace *et al.* 2011), frail and non-frail participants repeatedly highlighted their wish to age in place and displayed deep attachment to their ability to make decisions about where to live. Some participants felt ignored by others (e.g. family members, doctors) who tried to convince them to move to a nursing home, as they perceived their homes as ideal for ageing in place. This finding stresses the need to enable (frail) older people to continuously reside in their 'own' neighbourhoods and support them in their capability of finding ways to maintain their routines and manage themselves in their own homes (Peace *et al.* 2011). Another recurrent theme in interviews was the presence of immigrants in the neighbourhood. Although some participants objected to an immigrant-majority neighbourhood in interviews, arguing that immigrants' habits and values impeded on their sense of 'home', they simultaneously felt uncomfortable about explicitly ranking the corresponding statement (14) as 'important', possibly resulting in socially desirable responses. Because only this statement was affected in this way and we extracted participants' views on this theme in interviews, we do not believe that our results were affected considerably.

Some other methodological issues merit further discussion. First, although this study provides insight into older people's main views about their ideal neighbourhood for ageing in place, surveys are needed to examine the prevalence of these views in a wider population. Second, although participants were instructed to rank statements according to their views of the *ideal* neighbourhood, (unsatisfactory aspects of) their own

neighbourhoods may have influenced preferences. However, we repeatedly emphasised our search for the *ideal* neighbourhood in face-to-face interviews.

As in previous research, frail and non-frail older people strongly desired a neighbourhood enabling them to age in place; however, we identified divergent views on such a neighbourhood. This study demonstrated that older people's dependence on the neighbourhood is not static, but affected by changing social and physical conditions and levels of frailty. In line with previous research (Peace *et al.* 2011), the 'fit' between the needs and resources of older people and environmental conditions thus should be considered as a dynamic process, incorporating changes over time in both neighbourhoods and people. Although frail and non-frail participants highlighted similar themes, such as their common desires for independence, security, and belonging, the meanings of these themes differed (e.g. Wiles *et al.* 2011). Both groups for example were attached to a safe neighbourhood, but whereas frail older people mainly referred to safety within the house, non-frail older people mentioned examples of outdoor safety. Likewise, frail older people may feel independent through the support of a home help, whereas non-frail older people may derive independence from their ability to clean their house by themselves. Moreover, this study provided evidence for the argument that different neighbourhood characteristics often interact with each other, which highlights the need to simultaneously consider physical and social neighbourhood characteristics.

In building neighbourhoods that support independent living, the dynamic interplay between the varying needs of frail and non-frail older people and environmental conditions must be recognised. Supportive neighbourhoods may play a crucial role in providing older people with resources to compensate social and physical losses as they age, and to live independently and age in place as long as possible.

Mijn excuses voor het niet reageren
op uw brief en dan ook nog geen
ingevulde lijst opsturen.
In mijn geval zijn de vragen vaak moeilijk
om kort te beantwoorden.
Ik ben een bevoorrecht mens, gezond, een schat
van een dochter in de buurt, mijn beste
vriendin is mijn zus, leuke vrienden,
gezellige buren. Woon naar mijn zin.
Maar besef heel goed, dat het grotendeels
van jezelf afhangt, of de mensen graag bij je
blijven komen. Succes met uw onderzoek

CHAPTER 3

The importance of neighbourhood social cohesion and social capital for the well-being of older people in the community

ABSTRACT

Background: We aimed to investigate whether social capital (obtaining support through indirect ties such as from neighbours) and social cohesion (interdependencies among neighbours) within neighbourhoods positively affect the well-being of older people.

Methods: This cross-sectional study included 945 of 1440 (66% response rate) independently living older people (aged ≥ 70 years) in Rotterdam. We fitted a hierarchical random effects model to account for the hierarchical structure of the study design: 945 older people (Level 1) nested in 72 neighbourhoods (Level 2).

Results: Univariate analyses showed that being born in the Netherlands, house ownership, education, income, social capital of individuals, neighbourhood security, neighbourhood services, neighbourhood social capital, and neighbourhood social cohesion were significantly related to the well-being of older people. Multilevel analyses showed that social capital of individuals, neighbourhood services, neighbourhood social capital, and neighbourhood social cohesion predicted the well-being of older people. Single and poor older people reported lower well-being than did better off and married older people. However, the effects of marital status and income were mediated by neighbourhood services, social capital, and social cohesion. Neighbourhood services, social capital, and social cohesion may act as buffer against the adverse effects of being single and poor on the well-being of older people.

Conclusions: The results of this study support the importance of social capital of individuals, as well as social capital within the neighbourhood and social cohesion within the neighbourhood for well-being of older people. The well-being of older people may also be enhanced through the improvement of quality of neighbourhood services.

INTRODUCTION

The Netherlands - along with the rest of the world -faces a number of demographic challenges that will have a significant and detrimental effect on its population if not adequately addressed (e.g. negative impact on economic growth and strain on the provision of services for older people). Demographic change due to increased life expectancy is affecting all of Europe. The percentage of the European Union (EU) population aged ≥ 65 years increased from 13.7% in 1990 to 17.4% in 2010, and about 30% of the EU population is predicted to be ≥ 65 years of age by 2060. The proportion of the EU population aged ≥ 80 years is forecast to increase fourfold from 1990 (3.1%) to 2060 (12.1%; The European Commission 2011). Due to increased life expectancy at birth and decreased life fertility rate, it is expected that by 2050 for the first time in history there will be more older people (≥ 65) than youth (<15; Lunenfeld 2008). The decline of the working population and increase of the retired population has a negative impact on economic growth. Furthermore, demand for health care budgets will rise and there will be an increased pressure on health care budgets (The European Commission 2011). While the continuing increase in life expectancy is a major achievement, it presents the challenge of keeping older people active and maintaining their well-being. Although older people often experience a number of chronic diseases and functional impairments, many achieve some degree of balance in their lives; they may require health care but it does not dominate their existence. Active aging is the process of optimizing opportunities for social participation and security to enhance well-being (World Health Organization 2002). "Active" refers to the continuing participation of older people in society, not necessarily by playing contact sports or being in the labour force, but in a manner that allows them to realize their potential for well-being throughout their lives. A holistic approach to the well-being of the older population that includes the investigation of individual characteristics as well as neighbourhood contexts may be helpful in understanding how to enhance older people's activities (Hildebrand & Neufeld 2009) improve healthy lifestyles, social relationships, and, in turn, well-being (Oswald *et al.* 2011, Wiles *et al.* 2011, Cramm *et al.* 2012b).

Although neighbourhood characteristics have been found to affect individual health status (Marmot 1998, Subramanian *et al.* 2003, Halpern 2005, Veenstra *et al.* 2005, Wen *et al.* 2005, Subramanian *et al.* 2006, Blazer 2008, Fagg *et al.* 2008, Kawachi *et al.* 2008, Stafford *et al.* 2008, Van Hooijdonk *et al.* 2008, Cramm *et al.* 2011b, Cramm & Nieboer 2011a, Mohnen *et al.* 2011) their effect on well-being has been investigated to

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a lesser extent. Well-being refers to an individual's appraisal of his or her life situation as a whole; the totality of pleasures and pains, or quality of life (Bradburn 1969, Diener 1984, Watson 1988, Omodei & Wearing 1990), which is broader than health. According to the Social Production Function theory besides the universal goals of psychological, physical, and social well-being (identical for all human beings), it additionally contains instrumental goals stimulation, comfort, status, behavioural confirmation, and affection (individual preferences for the means leading to universal goals; Ormel et al. 1999). This allows much more specificity about how individuals achieve well-being. Relatively little research has investigated the effect of neighbourhood characteristics, such as social cohesion and social capital, on well-being (Cramm et al. 2010, Cramm et al. 2012b). Neighbourhood social capital and social cohesion represent resources that individuals can access via membership in a group or community. These resources consist of norms of reciprocity, civic participation, trust in others, and the benefits of membership (Kawachi et al. 1999, Putnam 2000, Lochner et al. 2003, Subramanian et al. 2003, Drukker et al. 2005, Wen et al. 2005, Poortinga 2006, Stafford et al. 2008, Van Hooijdonk et al. 2008). If such neighbourhood conditions are poor, then obtaining support may be more difficult, especially for older people who live alone (Thompson & Krause 1998). Therefore, one might expect that greater access to social capital or stronger cohesion among community members would enhance well-being. Previous research on the effects of neighbourhood characteristics has mostly been conducted at higher geographical levels of aggregation (i.e. countries, states/provinces, or large regions; Kawachi et al. 1999, Folland 2007). Mohnen and colleagues (2011) however, argue that the effect of collective social capital and social cohesion can be measured and understood much more precisely at the neighbourhood level. Because older people report greater residential stability and spend a large part of their leisure time at home, it is plausible to expect that they are influenced by their neighbours and the neighbourhood environment (Mohnen et al. 2011). Furthermore, existing studies have shown limitations regarding the measurement of social capital (Fagg et al. 2008). For example, the failure to adjust for the influence of relevant socioeconomic, as well as physical conditions, and neighbourhood characteristics may lead to biased conclusions about the effects of social capital and cohesion within neighbourhoods on older people' well-being.

Some available research has examined the effects of neighbourhood characteristics on well-being among individuals in the Netherlands (Völker et al. 2007) and South Africa (Cramm et al. 2012b). Both studies, however, were conducted among adults aged 18 - 65 years; the effect of social capital and social cohesion in the neighbourhood on

well-being among older people remains unknown. The present study examined the association between neighbourhood social capital (obtaining support through indirect ties; Mohnen *et al.* 2011) and social cohesion (interdependencies among neighbours) and the well-being of older people while controlling for important neighbourhood-level conditions (e.g., neighbourhood security and quality of services) and relevant individual characteristics (e.g., education, income, age, gender, and individual-level social capital [obtaining support through direct ties]). We aimed to determine whether social capital and social cohesion within neighbourhoods positively affected well-being of older people; and if so, whether this effect remained stable after accounting for other relevant socioeconomic and physical conditions of both neighbourhoods and older individuals.

DESIGN AND METHODS

A sample of 440 independently living older people (aged ≥ 70 years) in four districts of Rotterdam (Lage Land/Prinsenland, Lombardijen, Oude Westen, and Vreewijk) was randomly identified using the population register. These four districts consisted of 72 neighbourhoods. This sample included about 430 eligible older people per district and was proportionate to the 72 neighbourhoods in these districts and proportionate to age (age groups 70 - 74; 75 - 79; 80 - 84; 85+). The eligible older people were asked by mail to complete a written or online questionnaire. Respondents were rewarded with a 1 of 5 ticket in the monthly Dutch State Lottery. Nonrespondents were first sent a reminder by mail, were then asked by telephone to participate, and were finally visited at home if respondents could not be reached by telephone. This strategy yielded a 66% (n = 945) response rate. The study was approved by the ethics committee of the Erasmus University Medical Centre of Rotterdam in June 2011. A detailed description of our study design can be found in our study protocol (Cramm *et al.* 2011a).

Measures
Well-being was measured with the 15-item version of the Social Production Function Instrument for the Level of Well-being (SPF-IL; Nieboer *et al.* 2005). This scale measures levels of physical (comfort, stimulation) and social (behavioural confirmation, affection, status) well-being. Examples of questions are: "Do people pay attention to you?" (affection), "Do you feel useful to others?" (behavioural confirmation), "Are you known for the things you have accomplished?" (status), "In the past few months have you felt physically comfortable?" (comfort), "Do you really enjoy your activities?" (stimulation).

Answers were given on a four-point scale ranging from *never* (1) to *always* (4), with higher mean scores indicating greater well-being. Cronbach' s alpha of the SPF-IL was .86, indicating good reliability. The SPF-IL has proven to be a reliable instrument to assess well-being in older populations (Schuurmans *et al.* 2005, Steverink *et al.* 2005, Frieswijk *et al.* 2006, Cramm *et al.* 2012b).

Our main explanatory variables were social capital and social cohesion in the neighbourhood. Social capital within the neighbourhood is obtained through support from indirect ties and group membership from neighbours, whereas social cohesion within the neighbourhood refers to interdependencies among neighbours. We used the eight -item instrument of Fone and colleagues (2007) to investigate neighbourhood social cohesion. Examples of items are: "If I needed advice about something, I could go to someone in my neighbourhood", "I borrow things and exchange favours with my neighbours", "I would be willing to work together with others on something to improve my neighbourhood". Each question consisted of a five-point response scale ranging from *strong disagreement* (1) to *strong agreement* (5). A social cohesion score (range, 8-40) was created by summing the responses to these eight questions with equal weighting (*M* = 24.4; standard deviation [*SD*] =5.4). The Cronbach's alpha value of this subscale was .75, indicating reliability. For the analyses, variables and the resulting scale were coded so that higher values indicated stronger social cohesion.

We used the eight-item instrument of Yang, Yang, Shih, and Kawachi (2002) to assess social capital in the neighbourhood. Examples of questions are: "Neighbours enjoy participating in community activities together", "Neighbours chat and greet each other", "Neighbours are mutually concerned for each other" and "I feel happy with my neighbourhood". Responses were structured on a fourpoint Likert scale ranging from total disagreement (1) to total agreement (4). The social capital score was derived by summing the responses to each item, with higher values indicating stronger social capital. Cronbach's alpha of this score was .87.

In the analyses, we adjusted for nine individual characteristics (sex, age, marital status, ethnic background, home ownership, years of residence, education, income, and social capital of individuals) that can influence the perception of neighbourhood social capital, social cohesion, and well-being (Easterlin 2000, Ross *et al.* 2000, Haggerty *et al.* 2001, Grootaert 2002, Bjørnskov 2003, Diener & Scollon 2003, Frey & Stutzer 2003, Bjørnskov 2006, Wilkinson & Pickett 2006, Yip *et al.* 2007, Harpham 2008, Cramm *et al.* 2010, Cramm *et al.* 2012b). We coded sex as a dummy variable; age, measured in years; ethnic background, coded as a dummy variable (country of birth: the Netherlands or other); and marital status, coded as a dummy variable.

We included the variable of home ownership (owner or renter) in the survey. Also, the years of residence at the given address were included to control for the length of influence of the neighbourhood context. This variable was recorded using the question, "How long have you lived at this address?". Responses to this question were grouped into five categories: <1 year (1), 1 - 3 years (2), 3 - 7 years (3), 7 - 15 years (4), and ≥15 years (5).

Two indicators of social status were used in the analysis: education and income. We asked respondents to indicate the highest educational qualification achieved. We used a seven-point scale ranging from 1 (primary school or less) to 7 (university degree). In our analyses, we measured net monthly household income. This variable took into account all types of income per household, including social benefits, pensions, and salaries. We used a five-point scale ranging from 1 (€1000) to 5 (>€3050). The total monthly household income was than divided by the number of people in the household.

Because we were interested in social capital within the neighbourhood in addition to social capital of individuals, we controlled for social capital of individuals. We assessed social capital of individuals by asking about structural (e.g., group membership) and cognitive (e.g., trust, social harmony, sense of belonging, and sense of fairness) characteristics (De Silva *et al.* 2006, De Silva *et al.* 2007). Factor analyses showed that the instruments used to assess individual level social capital and social capital within the neighbourhood were clearly distinguishable (Table 1).

We also adjusted for older people' experiences with neighbourhood conditions, such as the adequacy of neighbourhood services and facilities (Yang *et al.* 2002), using three items: (a) The neighbourhood has adequate lighting; (b) The neighbourhood has convenient transportation; and (c) The neighbourhood has adequate public facilities. Responses to these items were structured on a four-point Likert scale ranging from total disagreement (1) to total agreement (4). The adequacy of services score was derived by summing the responses to each item, with higher values indicating more adequate services. Cronbach's alpha of this score was .65. We also assessed security in the neighbourhood (Yang *et al.* 2002) using four items: (a) The neighbourhood is quiet and peaceful; (b) The neighbourhood is spacious and roomy; (c) The neighbourhood is safe; and (d) The neighbourhood is orderly, with good public security. Responses to these items were structured on a four-point Likert-scale ranging from total disagreement (1) to total agreement (4). The neighbourhood security score was derived by summing the responses to each item, with higher scores indicating a more secure neighbourhood. Cronbach's alpha of this score was .83.

Table 1: Factor Analyses

	Component			
	1	2	3	4
Neighbourhood social capital instrument				
Item 1: Neighbours participate in activities	**0.700**	0.072	0.066	0.051
Item 2: Neighbours chat and greet	**0.740**	0.163	0.011	0.027
Item 3: Neighbours are mutually concerned	**0.826**	0.144	0.004	-0.001
Item 4: Neighbours provide assistance	**0.696**	0.132	-0.014	0.059
Item 5: Neighbours talk in distress	**0.725**	0.068	0.006	0.038
Item 6: Neighbours maintain public hygiene	**0.673**	0.101	-0.112	-0.012
Item 7: Neighbours solve problems	**0.775**	0.138	0.006	0.056
Item 8: I feel happy with my neighbourhood	**0.557**	0.240	-0.066	-0.063
Individual social capital instrument: subscale support				
Item 1: Active group membership	0.002	0.221	0.083	**0.702**
Item 2: Receive help from the groups	-0.075	0.015	0.051	**0.837**
Item 3: Social support from individuals/groups	0.144	-0.119	0.084	**0.546**
Individual social capital instrument: citizenship activities				
Item 4: Did you address problems/issues	-0.012	-0.034	**0.841**	0.133
Item 5: Did you talk to local authority	-0.046	-0.056	**0.843**	0.132
Individual social capital instrument: cognitive social capital				
Item 6: Trust in the community	0.157	**0.759**	-0.106	0.045
Item 7: People in this community get along	0.301	**0.754**	0.006	0.003
Item 8: Feeling part of the community	0.311	**0.669**	0.099	-0.040
Item 9: The majority of people in this community would try to take advantage of you (reverse coding)	0.006	**-0.507**	0.383	-0.123

Notes: Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Four factors (eigenvalues > 1) explained 56% of variance; factor solution presented after varimax rotation.

Analysis

We employed descriptive statistics and used univariate analyses to assess the relationships between the well-being of older people and individual characteristics (sex, age, marital status, ethnic background, home ownership, years of residence, education, income, and social capital of individuals) and neighbourhood conditions (neighbourhood security, adequacy of neighbourhood services, social capital, and social cohesion).

We fitted a hierarchical random effects model to account for the hierarchical structure of the study design. The structure comprised 945 older people (Level 1) nested in 72 neighbourhoods (Level 2). Respondents were excluded if observations were missing for any outcome, which led to the inclusion of 772 respondents in our multilevel regression analyses. We employed a two-level model to investigate the predictive role

of individual and neighbourhood characteristics on well-being of older people. To assess the extent to which variance should be ascribed to the neighbourhood rather than to the individual, neighbourhoods served as Level -2 units in Model 1. We introduced the individual characteristics in Model 2 and the neighbourhood characteristics in Model 3. Results were considered statistically significant if two-sided p values were =.05. Deviance tests or likelihood ratio tests were used to compare the relative fit of the different models. The difference in deviance of two nested models had a χ^2 distribution with degrees of freedom equal to the number of additional parameters in the larger model (SPSS ver. 17, mixed models option; SPSS, Inc., Chicago, IL).

RESULTS

Table 2 displays the descriptive statistics for all independent variables and well-being. Of the 945 respondents, 57% were women. Their average age was 77.5 (range = 70 - 101; SD = 5.8) years. About one-third (35%) of respondents were married and 83% were born in the Netherlands. These results are comparable with a community study of

Table 2: Descriptive Statistics

Demographic characteristics	Range	% or mean (SD)
Sex (female)		57%
Age (years)	70-101	77.5 (5.8)
Marital status (married)		35%
Ethnic background (Dutch)		83%
House ownership (owner)		19%
Years of residence	1-5	4.34 (0.99)
<1 year		2%
1-3 years		6%
3-7 years		9%
7-15 years		22%
≥ 15 years		61%
Education	1-7	2.3 (0.50)
Income	1-5	2.18 (1.0)
Social capital of individuals	0-19	6.2 (2.7)
Neighbourhood security	4-16	11.4 (2.2)
Neighbourhood services	3-12	8.9 (1.4)
Neighbourhood social capital	8-32	21.8 (4.0)
Neighbourhood social cohesion	8-39	24.4 (5.4)
Well-being	1-4	2.6 (0.5)

Table 3: Associations among Individual Characteristics, Neighbourhood Characteristics, and Well-Being of Older people

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Sex (female)													
2. Age	.17***												
3. Marital status (married)	-.37***	-.28***											
4. Ethnic background (Dutch)	.13***	.16***	-.07*										
5. House ownership (owner)	-.04	-.07*	.12***	.08*									
6. Years of residence	-.01	.08**	-.01	.02	.09**								
7. Education (1-7)	-.07*	-.06	.06	.19***	.34***	.05							
8. Income (1-5)	-.08*	.07	-.20***	.24***	.32***	.01	.43***						
9. Social capital of individuals	.03	.11***	-.07*	.11***	.12***	-.02	.27***	.23***					
10. Neighbourhood security	-.04	.10**	.02	-.01	.13***	-.06	.11***	.14***	.07*				
11. Neighbourhood services	-.05	-.01	.01	-.04	.11***	-.04	.05	.06	.03	.54***			
12. Neighbourhood social capital	.03	.07*	.01	.03	.03	-.06	-.01	.13***	.24***	.48***	.40***		
13. Neighbourhood social cohesion	.03	-.07*	.02	.10**	.11***	.05	.11**	.15***	.35***	.14***	.14***	.55***	
14. Well-being	.04	-.04	.05	.09**	.10**	.01	.11***	.13***	.26***	.19***	.18***	.38***	.45***

Notes: ***$p \leq 0.001$; **$p \leq 0.01$; *$p \leq 0.05$ (two-tailed).

Metzelthin and colleagues (2012) among 532 community-dwelling older people (70+) in other Dutch regions. The average age of respondents in their sample was 77.2 years (range = 70 - 97; SD = 5.5) and 59% of the respondents were women.

Correlations of independent variables and well-being of older people are displayed in Table 3. The results of univariate analyses showed that being born in the Netherlands (p ≤ .01), house ownership (p ≤ .01), education (p ≤ .001), income (p ≤ .001), social capital of individuals (p ≤ .001), neigbourhood security (p ≤ .001), neighbourhood services (p ≤ .001), neighbourhood social capital (p ≤ .001), and neighbourhood social cohesion (p ≤.001) were significantly related to the well being of older adults. No significant relationship was found between well-being and gender, age, marital status, or years of residence.

Table 4 displays the results of the multilevel regression analysis. The first (empty) model served as a baseline with just intercepts. Model 2 showed that marital status, income, and social capital of individuals had a positive effect on well-being. When neighbourhood characteristics were added to the equation in Model 3, the results showed that in addition to social capital of individuals, neighbourhood services, social

Table 4: Hierarchical Linear Multilevel Analyses of Well-Being in Older people (n = 772)

Model	1		2		3	
	B	SE	B	SE	B	SE
Constant	2.56	0.02	2.56	0.02	2.57	0.02
Sex (female)			0.03	0.02	0.03	0.02
Age			-0.03	0.02	-0.01	0.02
Marital status (married)			0.05*	0.02	0.04	0.02
Ethnic background (Dutch)			0.02	0.02	0.01	0.02
House ownership (owner)			0.02	0.02	0.01	0.02
Years of residence			0.00	0.02	0.00	0.02
Education (1-7)			-0.01	0.02	0.00	0.02
Income (1-5)			0.05*	0.02	0.02	0.02
Social capital of individuals			0.13***	0.02	0.07***	0.02
Neighbourhood security					0.03	0.02
Neighbourhood services					0.04*	0.02
Neighbourhood social capital					0.08***	0.02
Neighbourhood social cohesion					0.16***	0.02
-2 log likelihood	1455.001		1169.602		961.165	
Explained variance (individual level)			18.3%		27.4%	
Explained variance (neighbourhood level)			10.7%		19.7%	

Notes: ***p ≤ 0.001; **p ≤ 0.01; *p ≤ 0.05 (two-tailed).

capital, and social cohesion predicted the well-being of older people. Marital status and income were not significantly associated with well-being when neighbourhood services, security, social capital, and social cohesion were included in the equation. Thus, neighbourhood security, social capital, and social cohesion acted as mediators between marital status, income, and well-being among older people. In total, 27.4% of individual-level variance and 19.7% of neighbourhood-level variance could be explained.

DISCUSSION

Understanding the effect of the social environment on the well-being of older people is important for the promotion of active aging in the community. To our knowledge, we are the first to show that in addition to social capital of individuals and the quality of neighbourhood services, neighbourhood social capital, and social cohesion are significantly and independently associated with well-being of older people. Social cohesion and social capital among neighbours may lead to higher levels of well-being in older people because higher levels of neighbourhood cohesion result in higher degrees of social organization, including the provision of instrumental support to neighbours (e.g., support in times of sickness and help with transportation, groceries, picking up mail, and throwing away garbage). These seemingly small favours among neighbours may prevent worries about the future -neighbours take care of each other and watch over each other- that translate into better well-being outcomes. Neighbourhood social cohesion and social capital might influence well-being through psychosocial processes, such as through the provision of affective support and the enhancement of self-esteem and mutual respect. The ability to depend on neighbours for help may attenuate the adverse effects on well-being caused by increasing losses and declining gains that comes with aging (Baltes & Baltes 1990).

This study showed that single and poor older people reported lower well-being than did better off and married older people. This finding is consistent with earlier studies showing that the risk of low subjective well-being is apparently higher for poor and single individuals (Cramm *et al.* 2010, Diener & Biswas-Diener 2002). However, the effects of marital status and income were mediated by neighbourhood services, social capital, and social cohesion. Neighbourhood services, social capital, and social cohesion may act as buffer against the adverse effects of being single and poor on the well-being of older people. This finding is particularly relevant for policymakers helping them to target community interventions at these neighbourhoods. It is important for health

and well-being promotion policies to take into account not only the socioeconomic characteristics of people but also the contexts of their everyday lives. This paper makes a contribution to debates about how to measure and possibly intervene on particular elements of everyday life, namely neighbourhood services, social cohesion, and social capital within the neighbourhood.

The mean well-being score within our study population (2.6 ± 0.5; range=1.0 - 4.0) was significantly lower than that obtained by Frieswijk and colleagues (2006) in a study of older people using the SPF-IL (2.8 ± 0.4; p≥001). Whereas we included 70+ older people, Frieswijk and colleagues (2006) investigated among 65+ older people. Furthermore, we investigated older people living in the city of Rotterdam, while they also included older people from smaller towns and villages. The older age and inclusion of older people living in a large city may explain the lower well-being scores in our study sample.

Our study has some limitations. Most importantly, the cross-sectional design hampered our ability to capture neighbourhood dynamics and to draw causal inferences. It is not possible to determine the direction of the association using our study findings. Our results establish a significant association, which is an important step that prompts further studies to identify directionality. We followed the advice of Mohnen and colleagues (2011) and assessed neighbourhood social capital and cohesion by using items that focus specifically on access to neighbours and general local contacts in the neighbourhood, which is a strength of our study. Usually, social cohesion and social capital instruments are more general. In line with theoretical considerations of social capital, we measured this variable using questions regarding actual interactions between neighbours. This is the first study to investigate neighbourhood social capital and social cohesion separately in a large sample of older people. Furthermore, we also systematically accounted for individual-especially social capital of individuals-and neighbourhood conditions in our analysis of the effects of neighbourhood social capital and social cohesion on well-being in older people.

We can conclude that in addition to social capital of individuals, neighbourhood services, social capital, and social cohesion are beneficial to the well-being of older people. These findings are particularly important given the aging of global populations. Our results support the importance of social capital of individuals (obtaining support through direct ties), as well as social capital within the neighbourhood (obtaining support through indirect ties such as from neighbours) and social cohesion within the neighbourhood (interdependencies among neighbours). Furthermore, the well-being of older people may be enhanced by the improvement of the quality of neighbourhood services.

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Nadere toelichting:

U moet zich realiseren dat wij in een flat wonen,
waarin nogal een groot verloop is. Er zijn geen naambordjes
meer, waardoor het mogelijk is dat men niet eens de namen
van de naaste buren weet.
Je ziet steeds nieuwe gezichten.
Als je de lift in komt en je zegt gedag, wordt er vaak niets
teruggezegd.
Men stoort zich vaak niet aan regels. Zo boort of timmert
men rustig op tijden, waarin dat niet toegestaan is.

CHAPTER 4

Social cohesion as perceived by community-dwelling older people: the role of individual and neighbourhood characteristics

ABSTRACT

Background: Social cohesion in neighbourhoods is critical to supporting the rising number of community-dwelling older people. Our aim was thus to identify individual and neighbourhood characteristics influencing social cohesion among older people.

Methods: We employed a cross-sectional study of 945 (66% response rate) community-dwelling older residents (70+) in Rotterdam. To account for the hierarchical structure of the study design, we fitted a hierarchical random-effects model comprising 804 older people (level 1) nested in 72 neighbourhoods (level 2).

Results: Multilevel analyses showed that both individual (age, ethnic background, years of residence, income and self-rated health) and neighbourhood characteristics (neighbourhood security) affect social cohesion among community-dwelling older people.

Conclusions: Results suggest that policy makers should consider both individual and neighbourhood factors in promoting social cohesion among community-dwelling older people. Policies aimed at improving neighbourhood security may lead to higher levels of social cohesion.

INTRODUCTION

In answer to the growing demands of ageing populations, governments increasingly promote community-based care rather than investing in costly institutional care (Anderson & Hussey 2000, Sixsmith & Sixsmith 2008). Although this tendency towards 'ageing in place' is driven by a need to reduce health and social care costs, research findings show that older people also *prefer* to live at home for as long as possible (Heywood *et al.* 2002, Hooyman & Kiyak 2008). Smaller social networks (McPherson *et al.* 2006, Oh & Kim 2009) and declining mobility (Shaw *et al.* 2007) render community-dwelling older people more dependent on their neighbours for support (Russell *et al.* 1998, Nocon & Pearson 2000, Forrest & Kearns 2001, Cannuscio *et al.* 2003, Wiles 2005).

Governments across the western world increasingly invest in policies to promote social cohesion (Forrest & Kearns 2001, Morrison 2003, Höhn 2005), which may be particularly important in supporting older people to live healthily and independently (Forrest & Kearns 2001). In these debates, the neighbourhood is perceived as the key setting in fostering social cohesion (Forrest & Kearns 2001, Social Exclusion Unit 2001, Kawachi & Berkman 2003, Morrison 2003, Forrest 2009), especially for older people who spend a great proportion of their lives in the neighbourhood (Kellaher *et al.* 2004, Philips *et al.* 2005).

Social cohesion can be understood as patterns of social interaction among neighbours and the associated process of building shared values (Maxwell 1996, Kawachi & Berkman 2000, Carpiano 2006, Fone *et al.* 2007). Neighbourhoods with high levels of social cohesion are expected to generate values such as familiarity, interpersonal trust and norms of reciprocity (Carpiano 2006, Fone *et al.* 2007), which may be beneficial to the health and well-being of community-dwelling older people. Research has led to an increasing awareness of the importance of social cohesion on both mental (Ellaway *et al.* 2001, Fone *et al.* 2007, O'Campo *et al.* 2009, Mair *et al.* 2010) and physical health outcomes (Wolf & Bruhn 1993, Ellaway *et al.* 2001, Browning & Cagney 2002). Kawachi and Berkman (2000) have argued that social cohesion contributes to better health through providing social support, adopting health-promoting behaviour, and facilitating access to services. Communities marked by high levels of social cohesion also mediate against the deleterious effects of stress (Rios *et al.* 2012) and adverse life events (Egolf *et al.* 1992), which has particular relevance for older people who are likely to face both (Hardy *et al.* 2002).

Although research supports the importance of social cohesion for health and well-being, we lack evidence on the *predictors* of neighbourhood social cohesion among

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community-dwelling older people. A few studies conducted among populations of all ages provide some insight, reporting higher levels of social cohesion among married (Farrell *et al.* 2003, Pampalon *et al.* 2007), older (Skjaeveland & Gärling 1997, Ellaway *et al.* 2001, Pampalon *et al.* 2007, Letki 2008, Wilkinson 2008) and more highly educated (Buckner 1988, Robinson & Wilkinson 1995, Pampalon *et al.* 2007) people. For the population at large, research has consistently shown that residential stability exerts a positive influence on social cohesion (Buckner 1988, Robinson & Wilkinson 1995, DiPasquale & Glaeser 1999, Ellaway *et al.* 2001). Moreover, several studies demonstrated a relation between social cohesion and health outcomes. Whereas some studies argue that social cohesion contributes to positive health outcomes (Kawachi & Berkman 2000, Browning & Cagney 2002, Ellaway *et al.* 2001), other studies argue the opposite, showing that people with poor health reported lower social cohesion scores (Robinson & Wilkinson 1995), presumably because their (physical) disabilities hinder establishing social relations and participation in neighbourhood activities (Paillard-Borg *et al.* 2009).

With respect to neighbourhood characteristics, several studies have reported that negative perceptions of neighbourhood security hinder social interaction among neighbours (Bursick & Grasmick 1993, Liu 1993, Bellair 1997, Sampson & Raudenbusch 1999, Markowitz *et al.* 2001, Oh 2003) and inhibit social cohesion (Sampson 1991, Gibson *et al.* 2002, Saergent & Winkel 2004, Ziersch *et al.* 2005). Conversely, the existence of sufficient neighbourhood services and facilities promotes interaction (Peterson *et al.* 2000, Baum & Palmer 2002, Flap & Völker 2005, Völker *et al.* 2007), which in turn is found to increase the level of social cohesion in the neighbourhood (van Bergeijk *et al.* 2008).

Even though neighbourhood social cohesion seems to be an important source of support for older people and may buffer negative health consequences of ageing, it has received surprisingly little research attention. Insight into what contributes to social cohesion among community-dwelling older people will provide policy makers with valuable knowledge on how to support independent living. This study aims to identify individual and neighbourhood characteristics for social cohesion among community-dwelling older people. In line with previous research (see e.g. Cummins *et al.* 2005, Pampalon *et al.* 2007), we thus consider both individual *and* contextual factors, which enables us to understand the role of the (social) environment in relation to social cohesion more thoroughly.

METHODS

We disposed of a randomly selected recruitment sample of 1440 independently living older persons aged 70 and over from 72 neighbourhoods of four Rotterdam districts (Lage Land/Prinsenland, Lombardijen, Oude Westen and Vreewijk) in 2011. Neighbourhoods were defined on the basis of 4-digit postal codes designated by the government. The sample comprised approximately 420 persons per district, proportional to neighbourhood and age group (70-74; 75-79; 80-84; 85+), allowing us to account for different age groups within neighbourhoods.

   Respondents were asked by mail to participate in the study by completing a written or online questionnaire. Respondents that did not respond first received a reminder by mail, then were reminded by telephone and finally, visited at home. All participants were rewarded with a 1/5 ticket in the Dutch State Lottery. Our final sample consisted of 945 respondents (66% response rate). No differences were found in gender and age compared to the original sample (n=1440). We did however find a small but significant difference in ethnic background; 17% had another ethnic background in our study sample, compared to 22% in the original sample. Ethical approval was provided by the ethics committee of the Erasmus University Medical Centre of Rotterdam in June 2011. A detailed description of our study design can be found in our study protocol (Cramm *et al.* 2011a).

Measurements

Dependent variable

Our dependent variable was social cohesion in the neighbourhood. Following Fone and colleagues (2007), we used an 8-item instrument derived from Buckner (1988) to assess neighbourhood social cohesion. The measure covers feelings of trust, norms of reciprocity, and more tangible sources of support. Respondents were asked to assess their agreement (on a five-point scale ranging from 'strongly disagree' (1) to 'strongly agree' (5)) with the following statements: "I visit my neighbours in their homes"; "The friendships and associations I have with other people in my neighbourhood mean a lot to me"; "If I need advice about something I could go to someone in my neighbourhood"; "I believe my neighbours would help in an emergency"; "I borrow things and exchange favours with my neighbours"; "I would be willing to work together with others on something to improve my neighbourhood"; "I rarely have a neighbour over to my house to visit" (reverse coded); and "I regularly stop and talk with people in my neighbourhood". By summing the responses to these eight questions with equal

weighting (mean: 24.39; standard deviation (SD): 5.38), we derived a social cohesion score (range: 8-39) with higher scores indicating higher levels of social cohesion. The Cronbach's alpha (0.75) of the score demonstrated reliability.

Individual-level indicators

We employed different individual characteristics relevant to an analysis of social cohesion: gender, age (measured in years), marital status (coded as a dummy variable), and ethnic background (country of birth). We included education and income as indicators of socioeconomic status. The first was measured by highest educational achievement on a seven-point scale ranging from 1 (primary school or less) to 7 (university degree). Net monthly income (including social benefits, pensions and salaries) was measured on a five-point scale ranging from 1 (€1000) to 5 (>€3050) divided by the number of household members. We asked for home ownership (owner versus renter) and established years of residence at the current address in five prescribed categories: <1 year (1), between 1-3 years (2), between 3-7 years (3), between 7-15 years (4), and ≥ 15 years (5).

Finally, we measured self-rated health with the question: "How would you describe your overall state of health these days? Would you say it is (5) excellent, (4) very good, (3) good, (2) fair, or (1) poor?". This measure is considered a valid and robust measure of general health status; previous studies demonstrate that self-rated health has high predictive validity for objective health measures such as mortality, physical disability and chronic disease status (Mossey & Shapiro 1982, Idler & Kasl 1995, Idler & Benyamanini 1997).

Neighbourhood-level indicators

Two explanatory variables on the neighbourhood level were included in our analysis: neighbourhood services and neighbourhood security. Neighbourhood services and neighbourhood security are examples of shared neighbourhood level characteristics. Therefore, both neighbourhood characteristics were aggregated from individual level variables. We measured them by using two dimensions of the Neighbourhood Quality Index (Yang *et al.* 2002). We assessed adequacy of neighbourhood services and facilities by asking respondents how strongly they agreed with the following statements: "The neighbourhood has adequate lighting"; "The neighbourhood has convenient transportation"; and "The neighbourhood has adequate public facilities". Responses to these items were structured on a four-point Likert-scale ranging from total disagreement (1) to total agreement (4). The adequacy of services score was derived by summing

the responses to each item and aggregating them to the neighbourhood level. The Cronbach's alpha of the neighbourhood services scale was 0.65.

We assessed perceived neighbourhood security by using responses to the following statements: "The neighbourhood is quiet and peaceful"; "The neighbourhood is spacious and roomy"; "The neighbourhood is safe"; and "The neighbourhood is orderly, with good public security". Responses were structured on a four-point Likert-scale ranging from total disagreement (1) to total agreement (4). A score was derived by summing the responses to each item and aggregating them to the neighbourhood level. The Cronbach's alpha of the scale was 0.83, indicating good reliability.

Analysis

We employed descriptive statistics and used univariate analyses (indicated by the Pearson's R) to assess the relationship between social cohesion and individual characteristics (gender, age, marital status, ethnic background, home ownership, years of residence, education, income and health).

First, we tested for the influence of the neighbourhood (level 2) on social cohesion. The results indicated that the neighbourhood did affect social cohesion (-2 loglikelihood 5650.082 vs. 5644.360: $p \leq 0.05$). Moreover, we also checked for clustering in neighbourhoods for security and services scores and found that the neighbourhood affects both security (-2 loglikelihood 4031.641 vs. 3981.478: $p \leq 0.01$) and services (-2 loglikelihood 3333.226 vs. 3322.560: $p \leq 0.01$). Therefore, we fitted a hierarchical random-effects model to account for the hierarchical structure of the study design.

We also checked for a three-level structure of the district level (level 3). Because these results indicated that district level did not affect social cohesion (-2 loglikelihood 5650.082), we used the 2-level structure. The structure comprised 945 older people (level 1) nested in 72 neighbourhoods (level 2). Individuals were excluded when observations were missing for any outcome, leading to the inclusion of 804 people in our multilevel analysis. In view of the comparability of our findings, we standardized all the independent variables.

We employed a two-level model (using maximum likelihood estimation) to examine the predictive role of individual- and neighbourhood-level indicators on social cohesion. The analyses were performed by multilevel linear regression analysis with a stepwise inclusion of the group of individual variables in model 3, neighbourhood services in model 4, and finally, neighbourhood security in model 5. Statistical Package for the Social Sciences (SPSS) software (version 17.0; SPSS Inc., Chicago, IL, USA) was used for all statistical analyses.

RESULTS

Table 1 provides descriptive statistics for the independent variables and social cohesion. Respondents were mostly female (57%), had an average age of 77.5 (range: 70-101; SD: 5.8), and were married in about one-third (35%) of the cases. A vast majority was born in the Netherlands (83%) and had lived ≥ 7 years at their current address (83%), indicating residential stability (Ross *et al.* 2000).

Univariate analysis of the associations between individual-level indicators and social cohesion are presented in table 2. Respondents' age ($p \leq 0.05$), ethnic background ($p \leq 0.01$), home ownership ($p \leq 0.01$), education ($p \leq 0.01$), income ($p \leq 0.001$) and self-rated health ($p \leq 0.01$) were significantly related to social cohesion. No significant correlations were found between social cohesion and gender, marital status, or years of residence.

Table 3 presents the results of the multilevel regression analysis. Looking at the individual characteristics in the final full model (5) age appeared to be negatively associated with social cohesion ($p \leq 0.01$). In addition, we found significant positive relations between social cohesion and Dutch background ($p \leq 0.05$), years of residence ($p \leq 0.05$), income ($p \leq 0.05$) and self-rated health ($p \leq 0.05$). Years of residence ($p \leq 0.05$) became significant once neighbourhood variables were included in the model (model 4 and 5). Gender, marital status, home ownership, and education were not significantly associated with social cohesion in our study population. Besides the individual-level indicators, neighbourhood security appeared to be important for social cohesion ($p \leq 0.01$). Adequacy of neighbourhood services was only found to be significant in model 4 ($p \leq 0.01$), but lost significance once neighbourhood security entered the equation in model 5.

The intraclass correlation (ICC=0.03) showed that 3% of the total individual differences in older people's perceptions of social cohesion occurred at the neighbourhood level and might be attributable to contextual factors.

Table 1: Descriptive Statistics

Demographic characteristics	Range	% or mean (SD) mean (SD)
Gender (female)		57%
Age (years)	70-101	77.5 (5.8)
Marital status (married)		35%
Ethnic background (Dutch)		83%
Home ownership (owner)		19%
Years of residence	1-5	4.34 (0.99)
<1 year		2%
1-3 years		6%
3-7 years		9%
7-15 years		22%
≥ 15 years		61%
Education	1-7	3.97 (1.70)
Income	1-5	2.18 (1.04)
Health	1-5	2.65 (0.95)
Neighbourhood security	8.75-14	11.4 (0.95)
Neighbourhood services	7.5-12	8.94 (0.51)
Social cohesion	8-39	24.39 (5.38)

Table 2: Associations among Individual Characteristics and Social Cohesion (r)

	Social Cohesion	n
Gender (female)	0.03	911
Age	-0.07*	911
Marital status (married)	0.02	911
Ethnic background (Dutch)	0.10**	911
Home ownership (owner)	0.11**	911
Years of residence	0.05	906
Education (1-7)	0.11**	890
Income (1-5)	0.15***	822
Health	0.10**	905

 *Notes: ***p ≤ 0.001; **p ≤ 0.01; *p ≤ 0.05 (two-tailed).

DISCUSSION

In order to support growing populations of community-dwelling older people to live independently, social cohesion in the neighbourhood becomes increasingly important. Whereas research to date has tended to focus on the effects of social cohesion on health and was limited to younger populations, this multilevel study enhances our

Table 3: Hierarchical Linear Multilevel Analyses of Social Cohesion (n = 804)

Model	1 B	1 SE	2 B	2 SE	3 (unstandardized) B	3 (unstandardized) SE	3 (standardized) B	3 (standardized) SE	4 (unstandardized) B	4 (unstandardized) SE	4 (standardized) B	4 (standardized) SE	5 (unstandardized) B	5 (unstandardized) SE	5 (standardized) B	5 (standardized) SE
Constant	24.39	1.78	24.31	0.21	25.07	2.84	24.34	0.19	16.60	4.28	24.35	0.18	15.01	4.28	24.36	0.18
Individual characteristics																
Gender (female)					0.55	0.41	0.27	0.20	0.53	0.40	0.26	0.20	0.45	0.41	0.22	0.20
Age					-0.08*	0.03	-0.47*	0.19	-0.08*	0.03	-0.48*	0.19	-0.09**	0.03	-0.52***	0.19
Marital status (married)					0.38	0.45	0.18	0.21	0.35	0.45	0.17	0.21	0.29	0.45	0.14	0.21
Ethnic background (Dutch)					1.09*	0.52	0.41*	0.20	1.20*	0.52	0.45*	0.19	1.05*	0.52	0.39*	0.19
Home ownership (owner)					0.71	0.52	0.28	0.20	0.52	0.52	0.20	0.20	0.43	0.51	0.17	0.20
Years of residence					0.32	0.19	0.32	0.19	0.37*	0.19	0.36*	0.19	0.42*	0.19	0.42*	0.19
Education (1-7)					0.06	0.13	0.09	0.21	0.06	0.22	0.05	0.21	0.02	0.12	0.03	0.21
Income (1-5)					0.59**	0.22	0.61**	0.22	0.55**	0.22	0.57***	0.22	0.49*	0.22	0.50*	0.22
Health					0.44*	0.19	0.41*	0.19	0.41*	0.19	0.39*	0.19	0.41*	0.19	0.39*	0.18
Neighbourhood characteristics																
Neighbourhood services									0.97**	0.37	0.50**	0.19	0.49	0.41	0.25	0.21
Neighbourhood security													0.58***	0.22	0.55**	0.21
- 2 log likelihood	5650.082		5.644.360		4.919.360				4912.891				4906.212			
Explained individual variance																
-of the individual level	93.5%		93.5%		94.2%				94.2%				93.5%			
-of the total					5.7%				5.6%				6.3%			
Explained neighbourhood variance																
-of the individual level	93.5%		70.3%		95.5%				95.5%				99.9%			
-of the total			2.3%		2.3%				3.0%				3.1%			

*Notes: ***p ≤ 0.001; **p ≤ 0.01; *p ≤ 0.05 (two-tailed)

understanding of both individual and neighbourhood characteristics that contribute to social cohesion among older people in the neighbourhood.

The mean social cohesion score in this study (24.39 ± 5.38; range 8-39) was significantly lower than that reported by Fone and colleagues (2007) (29.2 ± 5.5; range 8-40), which might be explained by the studies' respective samples: older people (70+) living in a metropolitan area (our study) versus 18 to 74-year-olds residing in a provincial town (Fone *et al.* 2007). Although previous studious among younger populations demonstrated that social cohesion is positively associated with age (Ellaway *et al.* 2001, Pampalon *et al.* 2007, Letki 2008), our multilevel analysis indicates that from a certain age upwards (70+) age may actually inhibit social cohesion. This finding may be explained by the fact that older people are increasingly faced with cognitive impairments and physical disabilities that hinder engagement in social activities (Paillard-Borg *et al.* 2009). Furthermore, older people are especially vulnerable to having fewer social network ties and less social interaction (McPherson *et al.* 2006, Oh & Kim 2009).

Consistent with previous research (Buckner 1988, Robinson & Wilkinson 1995, Ellaway *et al.* 2001, Prezza *et al.* 2001, Obst *et al.* 2002, Almeida *et al.* 2009), our study showed a positive association between residential stability and social cohesion. However, this association was only found when we accounted for neighbourhood characteristics in the analysis. This finding may suggest that the relationship between residential stability and social cohesion is strengthened by neighbourhood characteristics such as the adequacy of services and security in the neighbourhood. As indicated in prior studies, length of residence enables social relationships to develop and strengthens community attachment (Sampson 1988, Sampson 1991, Bridge 1994), leading in turn to higher levels of social cohesion (Wilkinson 2008). Though, to allow residential stability among older people, there is an increasing need for governments to invest in appropriate and affordable long-term housing (Davey 2006). However, given our finding that social cohesion decreases from a certain age upwards (among people aged 70+ and over), governments should consider an age mix in the neighbourhood when building long-term housing. Previous research supports that older people prefer an age-mix in the neighbourhood (Gabriel & Bowling 2004). Governments may manage to attain an age mix through combining a variety of houses and services that suit both the needs of younger and older people (Thang 2001, Morris *et al.* 2012). Moreover, governments would be well advised to invest in regulations that allow second units to be built on the property of (single) family dwellings. Research shows that current regulations now often restrict older people from living near their children and grandchildren (Rosenberg & Everitt 2001).

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Our multilevel analysis demonstrated no relation between home ownership and social cohesion; in line with previous research (DiPasquale & Glaeser 1999) the influence of home ownership on social cohesion may diminish or disappear when accounting for length of residence. Our analysis revealed that self-rated health was associated with social cohesion, most likely because people in poor health are less able to establish social connections and participate in neighbourhood activities (Robinson & Wilkinson 1995, Mulvaney-Day *et al.* 2007). Policy makers may target interventions toward engaging older people with poor health, which will allow them to participate in the neighbourhood in spite of their (physical) impairments.

Furthermore, the results demonstrated an association between ethnic background and social cohesion. In line with previous research among younger populations (Dekker & Bolt 2005, Curley 2010), ethnic minority groups are found to have fewer social contacts with their neighbours and tend to focus on their own ethnic group for social contact. Since three out of four districts in our study comprise a large majority of Dutch neighbours, the likelihood of being surrounded by non-Dutch co-ethnics is low, which may constrain social cohesion among these groups.

Moreover, we found a positive relation between a higher income and social cohesion. This contrasts previous studies among younger populations that report lower cohesion scores for higher income people (Robinson & Wilkinson 1995, Obst *et al.* 2002), which is mostly explained by the fact that affluent people can afford (travel) costs that allow them to maintain social contact outside the neighbourhood (Musterd & Ostendorf 1998). However, given older people's declining health and limited mobility, older people are more reliant on their neighbourhood for social contact (Shaw *et al.* 2007). Therefore, income may provide older people with financial resources to participate in neighbourhood activities, enabling them to maintain their social network *within* the neighbourhood (Scharf *et al.* 2004). This finding may highlight the need for policy-makers to invest in affordable social activities.

Unlike previous research, we did not find any evidence that gender (Glynn 1981) or marital status (Prezza *et al.* 2001, Farrell *et al.* 2003) predicted social cohesion among older people. This could indicate that, with age, differences between such socio-demographic indicators tend to diminish or become less decisive in explaining social cohesion. For example, the higher social cohesion scores that were reported among women (Prezza *et al.* 2001, Farrell *et al.* 2003) may be due to their larger amount of time spent in the neighbourhood. However, with rising age, women and men spend an equal amount of time in the neighbourhood (Horgas *et al.* 1998). Likewise, although previous studies among populations of all ages reported higher social cohesion scores among married

people, both married and non-married or widowed older people (70+) may rely on previously established relationships with neighbours. The high level of residential stability we found among older people does provide evidence for this finding.

This multi-level study enabled us to demonstrate that over and above individual characteristics, neighbourhood characteristics affect social cohesion scores among community-dwelling older people. This study stresses the importance of positive perceptions of neighbourhood security for social cohesion, a finding that policy makers should heed. Next to improving *objective* security, which is often done through the identification and adaptation of physical features (such as street lighting) that may provide opportunities for crime (Welsh & Farrington 2008, Lorenc *et al.* 2012), policy makers should try to increase *perceptions* of security, which are found to represent an independent psychological dimension (Lindström 2003, Farrell *et al.* 2007). They could target interventions toward engaging older people in voluntary associations and local decision-making processes, both of which positively relate to feelings of security and social cohesion (Lee 1983, Laurence & Heath 2008).

In accordance with previous research (van Bergeijk *et al.* 2008), our multilevel analysis demonstrated an association between neighbourhood services and social cohesion among older people. However, this effect disappeared once neighbourhood security was added to the model. This may indicate that neighbourhood security acts as a mediator between neighbourhood services and social cohesion; a finding that further stresses the importance of improving neighbourhood security. Moreover, our operationalization of neighbourhood services may have been too limited. For example, we did not account for the proximity and use of (recreation) facilities, such as grocery stores and parks, which are found to act as meeting places (Völker *et al.* 2007), affecting social cohesion scores (Van Bergeijk *et al.* 2008).

We should note some other limitations. Although this multilevel study enhances our understanding of both individual and neighbourhood level characteristics, the results were based on cross-sectional data, which limits the possibility of demonstrating causality. And, whereas our data indicated that feelings of security increase social cohesion, a large body of research has revealed social cohesion diminishes feelings of insecurity and crime (e.g. Baum *et al.* 2009 and Putnam 2000). Likewise, our study showed that poor health status negatively associated with social cohesion, which in turn may further affect health. Such a pattern of findings indicates that social cohesion, health, and security are dynamic social processes that affect each other in a reciprocal manner. Since older people (70+) report lower levels of social cohesion, report a higher sense of insecurity (De Donder *et al.* 2005), and are likely to experience illness and stressful

life events (Hardy *et al.* 2002), further research to disentangle the interplay between these processes is particularly relevant for this group. Another limitation was that we had to exclude 141 individuals from our multilevel analysis due to missing observations for any outcome. We checked whether the 804 respondents differed from those with complete data and found no differences for ethnic background and age, but a small difference regarding gender. Given that we found no association between gender and social cohesion in our univariate analysis, we do not think this has affected our findings. Last, the selective nonresponse (i.e. the difference between our randomly selected recruitment sample and study sample) among people with another ethnic background should be noted. Lower response rates among ethnic minorities are common across Western countries (Feskens *et al.* 2006, Eisner & Ribeaud 2007), especially in urban areas (Feskens *et al.* 2007). Although we do not think the marginal underrepresentation of people with another ethnic background has affected our ability to gain insight in important individual and neighbourhood characteristics for social cohesion, future research may pay specific attention to social cohesion among older people with another ethnic background.

CONCLUSION

Our study contributed to our understanding of social cohesion among community-dwelling older people. Since research has indicated that neighbourhood social cohesion enhances both the health (Ellaway *et al.* 2001, Kawachi & Berkman 2000) and well-being (Cramm *et al.* 2013) of older people, this study provides policy makers with valuable information on generating more social cohesion among the growing population of community-dwelling older people. Our analysis clearly showed that over and above individual (age, ethnic background, years of residence, income and self-rated health) characteristics, neighbourhood characteristics (neighbourhood security) are beneficial to social cohesion among older people in the community. We trust that these are interesting findings for policymakers, governments and municipalities aiming to promote social cohesion in neighbourhoods. To enable residential stability and in turn social cohesion among older people, consideration needs to be given to appropriate and affordable long-term housing that protects older people from being forced to move. Furthermore, given our finding that people with an older age (among people aged 70+), a non-Dutch background, lower income and poor self-rated health reported lower social cohesion scores, policy makers may pay specific attention to these groups in

promoting social cohesion. Moreover, the improvement of security in neighbourhoods is an advisable policy goal for the enhancement of social cohesion. Last, our multilevel study prompts future research to account for the neighbourhood context when studying social cohesion among older people.

4

"Ik ben 82 jaar
Of ik nog wat kan betekenen
voor de buurt genoten. Ik heb
zelf veel hulp nodig.
Maar ik krijg het niet

CHAPTER 5

The experiences of
neighbour, volunteer and
professional support-givers
in supporting community-
dwelling older people

ABSTRACT

Background: Public policy increasingly emphasises the importance of informal support networks to meet the needs of the ageing population. Evidence for the types of support neighbours provide to older people and how neighbours collaborate with formal support-givers is currently insufficient. Our study therefore explored (i) types of informal neighbour support and (ii) experiences of neighbours, volunteers and professionals providing support.

Methods: Interviews with nine Dutch neighbour support-givers, five volunteers and 12 professionals were conducted and subjected to latent content analysis.

Results: Findings indicate that commitment occurred naturally among neighbours; along with providing instrumental and emotional support, neighbour support seems to be a matter of carefully 'watching over each other'. Neighbour support-givers, however, are often frail themselves and become overburdened; they furthermore lack support from professionals. Neighbour, volunteer and professional support-givers seem to operate in distinct, non-collaborative spheres.

Conclusions: Findings suggest that policy-makers should consider the opportunities and limitations of neighbour and volunteer support. Professionals have an indispensable role in providing back-up and accountable, specialised support. They may be trained to adopt a visible and proactive attitude in neighbourhoods to facilitate, cooperate with and mediate between neighbour and volunteer support-givers.

INTRODUCTION

Current estimates indicate that people aged ≥65 years will comprise nearly one third of the population in most European Union countries by 2060 (European Commission 2008). The ageing population will increase the demand for health and social care, with far-reaching implications for the financing and performance of public health systems (Bolin *et al.* 2008). Generally, public debate seems to agree that professional care alone will not suffice in meeting the needs of older people (Arno *et al.* 1999, Havens *et al.* 2001, Knickman & Snell 2002, Dahlberg *et al.* 2007). Throughout Europe, public policies increasingly promote community-based care (Anderson & Hussey 2000, Rechel *et al.* 2009) and emphasise the need for informal and non-institutional support, such as that from family, friends and neighbours (Fast *et al.* 2004, Shaw 2005).

Numerous studies have demonstrated the significance of informal support networks in promoting active and healthy ageing (Uchino 2009, Stephens *et al.* 2011). They are widely recognised as important to the functioning and well-being of older people (Berkman *et al.* 2000, Eng *et al.* 2002, Shaw 2005, Stephens *et al.* 2011). Most informal support is provided by family members (Bond *et al.* 1999, Nocon & Pearson 2000, Institute of Medicine 2008, Gitlin & Schulz 2012); daughters in particular feature in personal or long-term care (Litwak 1985, Bond *et al.* 1999, Barker 2002, Silverstein *et al.* 2006). Although support provided by family members is commonly appreciated (Ross *et al.* 1990), research has shown a dwindling number of family support-givers (Clarke 1995) because of reduced family size, increased geographical distances and higher female employment rates (Timmermans & Pommer 2008, Gray 2009).

Promising evidence has shown that neighbour support meets a crucial need by supplementing family support (Cantor 1979, Barker 2002, Shaw 2005). Older people in particular perceive higher levels of neighbour support due to more frequent neighbour contact and greater residential stability (Shaw 2005). Mainly during nights and weekends, neighbours were found to be important substitutes for formal service providers or family carers (Nocon & Pearson 2000). Neighbours may also offer exclusive types of support (Litwak 1985, Shaw 2005, Gardner 2011) due to their accessibility and familiarity, even if contact with neighbours is limited (Naaldenberg *et al.* 2011). According to a longitudinal study by Wenger *et al.* (2001: p. 45), older people tend to turn to friends and neighbours to talk when feeling depressed, to borrow small items and as a source of lifts, while depending on family members for personal care and advice. Proximity and social intimacy are key assets of non-kin support (Jarvis 1993, Nocon & Pearson 2000, Naaldenberg *et al.* 2011).

Previous studies have reported that *diverse* compositions of support networks (formal and informal) were associated with positive health outcomes for older people (Glass *et al.* 1997, Fast *et al.* 2004, Litwin & Shiovitz-Ezra 2006) and made them less dependent on formal services for personal care (Wenger *et al.* 2001). Formal support networks for older people in the community encompass professionals and volunteers, operating through organisations (Wilson & Musick 1997). Whereas professionals are distinguished by their training and well-defined roles (Triantafillou *et al.* 2010), volunteers constitute a separate category of formal support as they provide unpaid support to parties to whom the worker owes no contractual, familial or friendship associations (Wilson & Musick 1997: p. 694). Unlike professionals and volunteers, neighbours provide support in a private and non-organised setting and are therefore part of the informal support network for older people (Wilson & Musick 1997, Burr *et al.* 2005).

This diversity of support-givers complicates collaboration, and improvements are required (Harlton *et al.* 1998, Koelen *et al.* 2008). The primary dilemmas concerning professional collaboration with informal support-givers stem from tensions between different value systems, and conflicting role expectations and working procedures (Froland 1980, Twigg 1989, Wiles 2003, Koelen *et al.* 2008). Whereas informal and volunteer support-givers rely on personal knowledge and devotion, professionals operate with technical skills and specialised information (Froland 1980, Hoad 2002). Informal and volunteer support-givers cannot be deployed in the same way as professionals due to organisational constraints, such as legal issues, accountability principles and lack of experience and knowledge (Hoad 2002).

We currently lack evidence for the nature of collaboration between formal and informal neighbour support for older people in the community (Dahlberg 2004). The main objective of this study was thus to explore (i) types of informal support provided by neighbours to older people and (ii) the experiences of neighbours, volunteers and professionals providing support to older people. Ultimately, this analysis sought to increase our understanding of how to optimally facilitate collaboration.

METHODS

Design and setting

This qualitative, descriptive study was based on face-to-face interviews with neighbour, volunteer and professional support-givers conducted over a 4-month period in 2011 in two Rotterdam neighbourhoods (Lage Land/Prinsenland and Lombardijen).

Sample

The sample consisted of formal (professional, volunteer) and informal (neighbour) neighbourhood support-givers. Professionals from various health and social care organisations (e.g. social and welfare agencies, health care and voluntary organisations) were recruited through local meetings of a Dutch integrated neighbourhood approach, which seeks to create a supportive environment for frail older people (Cramm *et al.* 2011a). Volunteers were recruited from these same health and social care organisations. Because a recruiting source for neighbour support-givers was absent, we relied on the staff of these organisations to identify potential neighbour support-givers. We then used snowball sampling, asking participants whether they knew of others who provided non-organisational, voluntary support to older people.

In total, twelve professional, five volunteer, and nine neighbour support-givers were interviewed. The group of professionals (eight women, four men; age 26-58 years) comprised three managers, four community workers, two volunteer coaches, one social worker, one community nurse, and one parson. The group of volunteers consisted of three women and two men aged 27-89 years. Finally, we interviewed two male and seven female neighbour support-givers, all but one of whom were aged >70 years.

Interviews

The primary author conducted all face-to-face interviews (~60-90 minutes); one of the interviews included three neighbour support-givers simultaneously. Interviews with professionals and volunteers were conducted at their offices or district public institutions. Neighbour support-givers were interviewed at home or self-selected local public institutions. All interviews were audio-taped with the participants' permission, excepting two due to technical failure.

Because research on the nature of neighbour support and the perceptions and interactions between formal and informal support-givers is sparse, performing interviews with a limited number of preconceived categories was most appropriate (Hsieh & Shannon 2005). We allowed themes to arise from the data so that new insights could emerge (Kondracki & Wellman 2002, Hsieh & Shannon 2005). Participants were encouraged to describe and reflect in detail upon their experiences with formal and informal support services including how they cooperated or competed with one another and how they perceived their roles and responsibilities.

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Analysis

Latent content analysis of narrative text was performed, which yields a rich understanding of a phenomenon (Graneheim & Lundman 2004, Hsieh & Shannon 2005). To avoid loss of nuances within participants' narratives, we did not translate transcribed data into English until the report-writing stage. To obtain a sense of the whole, the transcribed interview texts were first read open-mindedly in their entirety a few times. Interviews in each group were then read separately to comprehend overall meaning. Because the boundary between neighbour and volunteer support is usually not clear (Wilson & Musick 1997, Hoad 2002), we carefully interpreted interviews with participants representing multiple roles (e.g. volunteer and neighbour support-giver) by carefully ascribing the corresponding role to each excerpt. Then, we read the texts word by word and condensed them by extracting 'units of meaning' that were coded and categorised. Finally, the underlying meanings (i.e. latent content) of categories were formulated into themes for each group (Graneheim & Lundman 2004). Results are reported by group (neighbour, volunteer and professional support-givers) to understand differences and similarities among and within them.

RESULTS

Types of neighbour support

Social monitoring

Keeping a careful watch on one's neighbours seems to be the primary form of neighbour support provided to older people. All neighbour support-givers included in our study gave examples of monitoring their neighbours. They paid attention to when they had last seen their neighbours and made safety provisions, such as setting up a neighbourhood phone network or exchanging keys:

> We really look after each other. If you haven't seen someone for a couple of days … or if my neighbours' curtains remain closed… then I just ring the doorbell or call her. That's a form of mutual monitoring. Everyone does it actually.

> If she needs my help, she taps on the wall with her walking-cane. Then I go inside. We both leave our doors open, you see.

The underlying asset of this naturally occurring type of support is proximity. During interviews, neighbour support-givers generally referred to their nearest neighbours by name and situation. They mentioned that neighbour support often substituted for distant family members. Neighbour support-givers were aware of their own and their neighbours' increasingly frail conditions, and mutual monitoring provided a sense of control. One woman described how a phone network she had set up may have saved her neighbour's life:

> I had two neighbours living close by. I already had their keys. I got scared that something might go wrong sometime. So I said to them: 'Guys, we're going to set up a phone network'. I'm old too, but still able to walk, and they're not. So every morning and evening, we called each other to make sure everything was fine. … Once, I called in the evening and got no answer. The day after, I called again in the morning; she still didn't answer. Then I called the police. They broke her door open and found her on the toilet in a filthy state but still alive.

Instrumental support

Neighbour support is also expressed instrumentally. Some neighbours offered instrumental support only occasionally, such as in times of illness or when it involved technical assistance. Neighbour support-givers, however, frequently indicated that they regularly and intensively took on practical tasks, such as doing a neighbour's shopping, picking up mail and disposing of trash. Neighbour support-givers frequently indicated that their tasks expanded gradually:

> That neighbour is not able to come downstairs anymore, so I pick up her newspaper and mail every day; I do her groceries twice a week, and if anything's wrong she can call me - even in the night... Gradually, my support expanded. From nothing, it became a lot.

One neighbour support-giver described how she and other neighbours provided instrumental support to a neighbour to prevent her from being institutionalised:

> With the help of many people, she was able to stay here. On Fridays a neighbour always picked her up for some drinks, and she asked me to buy her cheese. She had access to some nice resources.

Emotional support

The above-mentioned types of support were sometimes accompanied by emotional support, which mostly involved chatting, having coffee, or undertaking leisure activities. To broaden the networks of isolated older people, several neighbour support-givers even arranged social activities:

> *This year we're organising special street activities for older people. We're now arranging a spa day just for them. There will be a hairdresser, pedicures, manicures …*

> *Last year, I organised an afternoon with several story-tellers in my flat. Eighty-one older people were coming to listen. That's wonderful! Right?*

However, some neighbour support-givers preferred to limit contact with neighbours. They feared the disadvantages of social control, referring to the spread of gossip or unwanted interference, which they negatively associated with the past:

> *When you're visiting each other too much, it will soon end up in a gossip circuit. You have to be careful, right?*

> *Of course, it's good to be friendly with one another. But I'm absolutely against constant contact. Anyway, I don't have time to visit my neighbours. That's how it used to be in the neighbourhood. But society has changed and that goes for me, too.*

Experiences of neighbour support-givers

Interviews revealed that neighbour support frequently impacts neighbour support-givers' own lives. As an older person's condition deteriorates, neighbour support tends to expand, occasionally leading to an excessively heavy burden. This process is related closely to older neighbour support-givers' own increasing disabilities. Some neighbour support-givers also remarked that older support-recipients tended to become increasingly demanding and exhibit consumer-like behaviour. In some cases, a neighbour's unreasonable behaviour had jeopardised the initially mutual nature of the relationship:

> *She's becoming increasingly difficult. If I bring back the wrong groceries…, well, she gives me a talking-to. … I think she perceives me as her grocery maid … At first it bothered me. I thought, 'Hey, be nice to me, I do so much for you'.*

For 18 months, I visited a sick lady who had pulmonary emphysema. But she started being so ugly towards me that I just stopped visiting. In a way, she showed me the door because I did not do the things she wanted me to do.

Although some neighbour support-givers were capable of dealing with these situations, others found it difficult to withdraw because they felt morally obligated to honour their commitments. One woman explained that she did not want to abandon her neighbour, although she felt she should have reduced her support earlier and her neighbour's condition actually called for institutionalisation. She described feeling immensely relieved when her neighbour went on holiday for a few days. The potential negative impact was also expressed by another neighbour support-giver, who described walking home in tears after helping her unkind neighbour.

   Regardless of these difficulties, no neighbour support-giver indicated receiving professional support. One, who worked concurrently as a volunteer, admitted that she experienced neighbour support as a heavy burden. Although she informed her volunteer welfare organisation about the situation, they neither intervened nor provided assistance.

Experiences of volunteers

Many volunteers explained that they started volunteering because they saw defects in the health and social care system or were unable to undertake paid work. Some explained that volunteering made them feel valuable to and respected by society; one proudly said she was called the *little jewel of Lombardijen* [her neighbourhood]. Thus, volunteers take their work seriously and approach it as a 'regular' job:

It's a job. Yes, that's the way I perceive it. I take it extremely seriously… I have to approach these people seriously, I have to approach their problems seriously, and I want to be approached seriously myself as well.

If you interfere with my work, you interfere with my life. So don't mess with my work.

Volunteers distinguished themselves from neighbour support-givers because they felt that their specialised tasks exceeded neighbour support. Some expressed strong beliefs about obligations they associated with good volunteering and described being frustrated by volunteers who violated them. As in a regular workplace, they displayed a competitive spirit with other volunteers:

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And now she's in Curacao! She's abandoned those old people! I wouldn't do that; I would never let them down.

Someone who organises activities in his/her street should know the street. You can't teach German without knowing it, right?... Sometimes I wonder: what are these people doing? Such things really make me angry.

Although volunteers considered the work of professionals as equal to theirs, in interviews they regularly disassociated themselves from professionals. Some volunteers commented they were more able and dedicated to helping older people than professionals. Volunteers felt that their main difference from professionals derived from professionals' adherence to training and professional methods. Volunteers criticised professionals for not being in the neighbourhood and thought they should *work from their hearts.* By doing precisely these things, volunteers felt they were better able to respond to older people's needs. Dissatisfaction among volunteers was intensified by frustration that professionals received income for work that was no better than their own:

They studied at a university or whatever, but actually, they don't know a thing since they don't walk around in the neighbourhood. They're unaware of what happens outside.

I don't understand. An institution with a core objective focusing on older people should be able - given their knowledge, money and experience - to reach anyone, right?

And if they ask for the resources I've collected, I say: 'I'll take them with me to my coffin; those'll be burned'. You're not going to get what I've built over 60 years - while you earn a fat salary behind my back. I make only 50 cents an hour [a compensation volunteers receive from their organisations]. I've worked my ass off since I was 23. They should do that too.

Because many volunteers felt they were not on the same level as professionals, they avoided collaboration, preferring to work autonomously and relying on organisations for practical resources such as telephones, photocopiers and money:

I do everything by myself. I said to [a welfare organisation]: 'The only thing I need from you is money'.... Besides that, I need nothing. Because [professionals] are sitting behind their desks, you know, they never drop by the street.

Some volunteers, however, mentioned they regretted the lack of professional support. One man described overstepping boundaries once by providing accommodation to an older woman; although he had received some training, he was not prepared to protect himself from becoming overly emotional. Others said they had tried to collaborate with professionals, but were disappointed with the outcome. Professionals were often unable to facilitate them or forced them to bureaucratise their activities:

I've tried to organise meetings several times. But the costs always get in the way. And you have to plan and administer months, years in advance. Well, that's... just bureaucracy, it gets you nowhere.

Another volunteer had positive experiences and felt respected by professionals:

All institutions I've dealt with respected me. Up to now, I haven't had negative experiences when requesting information or dealing with a problem. Besides appreciating me, they approach me as an equal.

Experiences of professionals
Professionals have noticed an ongoing trend of shifting responsibility for older people to the community, which they generally perceive as inevitable. Some professionals, however, doubted whether neighbour support could be mobilised easily. One stated that society needed a paradigm shift whereby neighbour support is considered the norm. Unlike a few decades ago, when interests were more unified and people more easily mobilised, pessimistic professionals questioned neighbours' willingness and struggled with relinquishing responsibility to the community:

There are some real active neighbours, but it always comes down to the same people. I find it hard to broaden my network.

To give responsibility back to the neighbourhood, that's new and challenging to me, to look at it from something other than my own welfare perspective.

Optimistic professionals indicated neighbours' willingness, but emphasised the need for adequate support and advocated for providing constant reinforcement:

> Neighbours want to help, but don't know how to ask their neighbours if they need support. There's a certain barrier; they're afraid. So I think there is sufficient supply and demand, but they can't reach out to each other.

> Together with two women we set up a library in their apartment with the aim of bringing neighbours together. But once I got sick for a while and it immediately collapsed. Sometimes I don't understand: if I want something, I just go for it. But once people are faced with the amount of work that has to be done, they slow down.

Although professionals' trust of neighbours' self-sufficiency varied, none disputed the importance of neighbour and volunteer support-givers. However, professionals unanimously expressed concern in interviews about their limited employability. They indicated several constraints, most related to volunteer and neighbour support-givers' capabilities. Professionals agreed that addressing the specific needs of older people required specialised knowledge and skills:

> They're too intense for a neighbour to tackle. If you're dealing with a socially isolated person, you cannot easily work with volunteers.

> Our target group belongs to the frailest people; those are the people with financial problems, health care issues, or language deficits. We don't believe that a person who's heavily in debt can knock at their neighbours' doors.

Volunteer and neighbour support-givers' employability is further hindered by their own frailty. Professionals indicated a fuzzy line between being a neighbour or volunteer support-giver and an older person in need. Frequently, professionals dealt with volunteers who eventually needed support themselves. Some professionals suggested that proper training could, to some extent, alleviate such constraints. One professional who worked as a volunteer coach at a church opined that neighbour support-givers would benefit from *organised* volunteering. She noticed that volunteers appreciated an organisation's support and backup. Along with other professionals, the volunteer

coach stated that neighbour and volunteer support-givers were frequently incapable of setting their own boundaries. Intermediary organisations could serve as safeguards:

> *Volunteers must sign a contract with a term of notice. Otherwise, people would feel they got stuck with someone. I notice people like to be supported by an organisation. We can always arrange replacement for them.*

> *The first thing I did was set up a code of good conduct because there are so many people who can't protect themselves. Some people immediately hand over their private numbers or provide accommodation for people … things I think they may regret. So I think a neighbour should volunteer via an organisation.*

Others, however, warned against overly formalising neighbour support and voluntary work, which would undermine its spontaneous and voluntary character:

> *Of course it's important to equip a volunteer, but it's not always necessary. Do I need training if I want to do the shopping for my neighbour? If my neighbour asks, I'll just do it.*

Professionals also stated neighbour support-givers and, to a lesser extent, volunteers lacked accountability. Unlike professionals, volunteer and neighbour support-givers cannot be monitored and held responsible:

> *It all must be volunteer work. What will be the result? You can never lay claim on someone.*

> *You see, within our organisation we have formalised it all; we have a quality mark, evaluation moments, we watch each other, make sure no one oversteps the mark, we handle our financing properly. Before you know, you've got your neighbour's key to water the plants. Great. But troubles could arise from it too.*

By constantly underscoring their own added value and indicating the limits of neighbour and volunteer support, professionals indirectly displayed a sense of competition. Just as they experienced a sense of competition towards other professionals, some felt threatened by neighbour and volunteer support-givers. One professional explicitly admitted fear of being replaced by informal support-givers:

I asked the district as well: what is our job then? If the things we do can be replaced by informal networks…

Underlying these constraints, professionals mainly seemed to advise careful consideration of the limitations of neighbour and volunteer support.

DISCUSSION

This study explored types of neighbour support provided to older people and specific experiences of neighbour, volunteer and professional support-givers. Findings indicate that monitoring occurred naturally among neighbours; neighbour support-givers consistently emphasised carefully watching over each other. The spontaneous and everyday nature of such commitment among neighbours was identified by Gardner (2011) as well. Furthermore, neighbour support was expressed in providing instrumental and emotional support. The main assets underlying this support include neighbours' proximity and awareness of their own and their neighbours' increasing frailty (Jarvis 1993, Nocon & Pearson 2000, Naaldenberg *et al.* 2011). Consistent with previous findings (Cantor 1979, Barker 2002, Shaw 2005), neighbours also seem to play a *compensatory* role by supplementing the lack of family and professional support.

   Our study corroborates the importance of neighbour support by demonstrating that it increases neighbours' sense of control and contributes to a supportive environment for older people. But the experiences were not entirely positive: disadvantages for neighbour support-givers were also identified. Neighbour support tends to expand gradually, often developing into a complex emotional commitment (Nocon & Pearson 2000, Barker 2002). Overburdened neighbour support-givers indicated that they receive no professional support and feel morally obligated to continue their support. Thus, their *own* well-being can be jeopardised. As formal health and social care services recede and narrow their focus to those with the greatest needs (Kröger & Leinonen 2011), this finding warrants policy-makers' concern and action. With increasing reliance on informal sources of support, professional training is needed urgently to identify excessive burden among support-givers and provide backup support. Although previous research suggested that volunteers were supported and protected by their organisations (Hoad 2002), this study indicates that professional backup is equally important for volunteers. Volunteers were often subject to a process whereby they came to require support, which can be explained partly by a predominance of older volunteers (Putnam 2000, Van

Willigen 2000, Barker 2002). In accordance with previous research (Wilson & Musick 1997, Hoad 2002), volunteers, especially those working in their own communities, tend to expand their roles on an informal basis.

In an era marked by public spending cuts and growing numbers of older people (Glasby 2010), collaboration between informal and formal support-givers seems to be essential in providing complementary support (Penning & Keating 2000). However, our study reveals that collaboration is mostly absent and hindered by mutual disassociation; neighbour, volunteer and professional support-givers seem to operate in separate worlds. Interactions between professionals and volunteers are characterised by a *mode of coexistence* (Froland 1980); although volunteers in our study indicated they took on similar tasks, they deliberately distanced themselves from professionals because they criticised their working procedures or felt counteracted by them. Collaboration between neighbour support-givers and professionals was hampered by neighbours' isolation; formal services seemed invisible to them. Research on family carers' experiences of accessing formal support indicates that isolation prompts informal carers to cope with the need for help themselves (Wiles 2003). Finally, professionals in our study demonstrated a reluctance to collaborate with and a fear of replacement by neighbour and volunteer support-givers, although this seems unreasonable given the high prevalence of frailty; according to Metzelthin *et al.* (2010), 40.2% of Dutch older people are frail. By referring to their lack of accountability and capabilities, professionals also warned against the inappropriate deployment of volunteer and neighbour support-givers. Although some professionals preferred *organised* volunteering as a measure of control, they emphasised that formalising support could undermine its spontaneous and voluntary character (Bulmer 1986). Furthermore, professionals suggested that providing support to those in need should be part of a paradigm shift whereby neighbour support is self-evident and occurs naturally.

Our study highlighted the complementary roles of neighbour, volunteer and professional support-givers; where neighbour and volunteer support-givers can provide flexible and familiar support, professionals seem indispensable in providing accountable, specialised support *and* backup for informal supporters. To ensure that their roles complement each other in practice, we suggest that professionals take responsibility for collaboration. Our findings indicate that professionals do not sufficiently acknowledge the strengths of neighbour and volunteer support-givers, perceiving them in terms of their limitations and considering them potential *co-clients* (Twigg 1989). Professionals should be trained to simultaneously approach them as *co-workers*, adopting a cooperative and facilitating

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role. By identifying more closely with the local neighbourhood, professionals may be better able to perceive constraints among support-givers and provide backup.

When interpreting our findings, some limitations must be considered. First, we did not interview older support-recipients, and thus lack evidence on receiving support. Such data would provide interesting insights into older people's perceptions of different support-givers, showing whether and how they want them to collaborate. Second, we only interviewed active neighbour support-givers, reflecting the experiences of a selective group of visible, willing neighbours. Third, the Netherlands, along with Austria, Luxembourg, Germany and Scandinavian countries, is known to have one of the highest rates of volunteering; more than half (56%) of the Dutch population engages in voluntary activities (Eurobarometer 2011). This may have affected our results.

CONCLUSION

Our findings suggest that policy-makers should carefully consider opportunities and limitations of neighbour and volunteer support. Although our analysis highlighted the added value of such support, it also identified constraints affecting neighbour and volunteer support-givers' well-being. The risk of excessive burden among these much-needed sources of support emphasises the need for professional backup. As our study indicated that neighbour, volunteer and professional support-givers operate mainly in distinct, non-collaborative spheres, we suggest that professionals take responsibility for collaboration. This would require professionals to be trained sufficiently in acknowledging the efforts of neighbour and volunteer support-givers. To cope with neighbours' isolation, professionals may also gain from training that would stimulate them to adopt a visible and proactive attitude in neighbourhoods.

Rotterdam
24.04.2012

Geachte Collega van Dijk,

6 maanden geleden ben ik verhuisd naar
Humanitas (levenbestendige woning).
Ik ben 88, dovig,matig mobiel,beroerd
handschrift en niet geintegreerd in deze
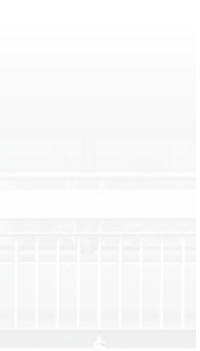omgeving.
Sorry dat ik U niet kan helpen..
Respect en vriendelijke groet van
een oude ex-collega

PART B

An integrated neighbourhood approach to promote ageing in place

R'dam, zo 24 februari 2013

Geachte mevr. Hanna,

DE AANHOUDSTER WINT . . . !!

M.vr.gr.

Jan zonder kinderbijslag.

Bijl.: als gewenst

CHAPTER 6

Evaluating an integrated neighbourhood approach to improve well-being of frail older people in a Dutch community: a study protocol

ABSTRACT

Background: An important condition for independent living is having a well-functioning social network to provide support. An Integrated Neighbourhood Approach (INA) creates a supportive environment for the frail older people, offering them tailored care in their local context that allows them to improve self-management abilities and well-being. The purpose of our research is to investigate how an INA can contribute to outcomes of frail older people and the cost-effectiveness of such a program. The first central study question is: To what extent does INA contribute to (a) continuous, demand-driven, coordinated care and support for the independently- living frail older people; (b) improvement of their well-being and self-management abilities; and (c) reinforcement of their neighbourhood networks. The second central research question is: is the INA a cost-effective method to support the frail, independently- living older people?

Methods: We investigate a Dutch INA. This transition experiment aims to facilitate the independently-living frail older people (70+) to live the life they wish to live and improve their well-being. The study population consists of independently-living frail older people persons in Rotterdam. The transition experiment starts in two Rotterdam districts and is later extended to two other districts. We propose a concurrent mixed methods design, that is, a combination of qualitative and quantitative research methods to evaluate processes, effects and costs of INA. Such a design will provide insight into an on-going INA and demonstrate which of its elements are potentially (cost)-effective for the frail older people.

Conclusions: We embrace a wide range of scientific methodologies to evaluate the INA project and obtain information on mechanisms and contexts that will be valuable for decision making on local and national levels. The study will lead to a better understanding of how to provide support via social networks for the frail older people and add to the knowledge on the feasibility and cost-effectiveness of the program in maintaining or improving their well-being. Last, the study will highlight the factors that determine the program's success or failure.

BACKGROUND

People with highly-functioning social networks are better able to give and receive support, are more psychologically resilient, and live longer and healthier lives (Hortulanes *et al.* 2003). Regrettably, various reports and signals from the field suggest that the current professional approach fails to provide frail older people with needed social support networks to make living conditions safer, more stimulating, comfortable, and pleasant and to enable them to live in their own neighbourhoods for a longer time. Strengthening social networks fosters early detection of problems, is crucial to public health, and is expected to reduce the pressure on the healthcare system by preventing or delaying nursing home admissions. Facilitating older people through an integrated neighbourhood approach (INA) to live independently for as long as possible requires a supportive community environment, which is in turn dependent on the presence of meeting places (Kalmijn & Flap 2001), mutual interdependence of residents, and motivation to invest in local relationships reflected, for example, by residential stability (Völker *et al.* 2007). Neighbourhood differences in this regard have been reported. An important condition seems to be that the community engage in shared activities, thus establishing contacts through which social networks can develop (Lindenberg 1986, Blokland 2003). Residents will be more inclined to participate in neighbourhood activities if they perceive a sense of community (Glaeser 2001). Currently, the frail older people have to depend on professional care; informal networks and social support are underemployed (Leichsenring 2004).

The point of departure of INA is reinforcing networks between welfare, health care, informal care and community members in neighbourhoods, optimizing current services, and involving the (frail) older people. Such a demand driven approach offers older people tailored care -including care-related services such as housing - in their local context to enhance self-management abilities and well-being. The focus is on "de-medicalisation" and recognition of mutual dependence between welfare, health care, and informal care. Thus, for INA to be successful the partners in primary, secondary, and tertiary care as well as informal networks need to work well together - from signalling problems to prevention, cure, care, promotion of welfare, and independent living. Early recognition of complaints and encouraging effective self-management may positively influence well-being. It requires older people to 'star' in the 'production' of their own well-being as a form of empowerment (Schuurmans *et al.* 2005). Informal caregivers play a central role in their social networks and are important to supporting independent living. Evidence suggests that caring for a frail older people person is an arduous task that may cause

financial difficulties, emotional strain, or physical problems (Cantor 1983, Zarit *et al.* 1986). A supportive network for older people may alleviate such negative aspects of caregiving, which in turn helps sustain informal caregivers' support.

While INA may improve outcomes, evidence regarding the (cost-) effectiveness of such programmes is lacking. The purpose of our research is to investigate how an INA can contribute to outcomes of the frail older people and its cost-effectiveness. The first central study question is: To what extent does INA contribute to (a) continuous, demand-driven, coordinated care and support for the independently- living frail older people and the well-being of their informal caregivers; (b) improvement of their well-being and self-management abilities; and (c) reinforcement of their neighbourhood networks. The second central research question is: is the INA a cost-effective method to support the frail, independently- living older people?

METHODS

Setting: Dutch example of an Integrated Neighbourhood Approach

Although welfare and health care are widely available in the city of Rotterdam, the specific needs of frail older people remain inadequately addressed and 'outreach' work is lacking. A number of 'best practices' may exist locally, but not a good overview of the services because of fragmentation and compartmentalisation. Such services are difficult for the older people to find and are not visible to others in the city. In the current situation the frail older people have to depend on professional care, while informal networks and social support are underused. An INA is based on reinforcing neighbourhood networks through which continuous, demand-driven, coordinated care and support can eventually be offered to all independently-living frail older people persons. Community workers -professionals with a care or welfare background familiar with the residential area - are important to the network. They visit older people at home and map their wishes and needs via a phased interview. In consultation with the older people, they seek appropriate solutions within the (preferably informal) network. Such a transition experiment aims to facilitate independently-living frail older people persons (70+) to live the life they wish to live, improving their well-being. The study population consists of independently-living frail older people persons and their informal caregivers in Rotterdam. The transition experiment begins in two Rotterdam districts (Lage Land/Prinsenland and Lombardijen) and is later extended to the Oude Westen and Vreewijk districts. The project ('An integrated neighbourhood approach to

welfare and care for the frail older people in Rotterdam') and the associated evaluation study are part of the National Care for the Elderly Programme (NPO) launched in the Netherlands in 2008. Funding is provided by the Netherlands Organisation for Health Research and Development (ZonMw; project number 314030201).

Evaluation design

Our evaluation study uses a concurrent mixed-methods design (a combination of qualitative and quantitative research methods) to evaluate processes, effects and costs of INA. A frequent shortcoming of evaluation studies is failure to give good descriptions of what was done and the context in which it was done (Øvretveit & Gustafson 2002). In the first phase (months 1-6), therefore, the eventual local level interventions will be described extensively along with how welfare, care, and network support for frail older people persons and their informal caregivers is achieved. A good description of interventions is the first step and towards that, key figures including community workers will be interviewed.

The evaluation will comprise (I) inventory and (II) controlled pre-post measurement. Inventory is taken among the older people (70+) in the four relevant districts (Lage Land/Prinsenland, Lombardijen, Oude Westen, and Vreewijk) to investigate the general situation of older people in these districts. Furthermore, we investigate social networks, social cohesion, and the sense of community in these districts to learn if INA contributed not only to older people included in the experiment, but to the wider context as well.

The controlled pre-post measurement is the main part of the evaluation. Independently-living older people (70+) in the first two districts will serve as the experimental group.

I. Inventory

A sample of 1440 independently-living older people (70+) in the four districts will be taken from the population register, 430 eligible older people per district and proportional to neighbourhood and age. The eligible older people will be asked by mail to complete a (written or online) questionnaire (T0) whose estimated completion time is 15 minutes. Those who do so will be rewarded with a 1/5 ticket in the monthly Dutch State lottery. Those who do not respond after having been sent a reminder will be telephoned. If not available, they will be visited at home. This strategy is expected to result in a 60% response rate (n = 864). The group will be contacted again after 24 months (T1) to assess whether (i) local social networks have been reinforced, (ii) the older people participate more actively, and (iii) the frail older people have built up better personal networks. Using the same strategy as in the T0 measurement (incentives

and follow-ups), we expect a 70% response at T1 (which includes a 15% attrition from death, relocation, institutional admission, et cetera), resulting in n = 605.

II. Controlled pre-post measurement (effect evaluation)

The independently-living older people (70+) in the first two districts whose TFI-score is ≥ 5 (Gobbens *et al.* 2010) will serve as the experimental group and will be recruited by community workers (figure 1). On the basis of TFI-score, age, and gender, they will be matched with the older people recruited from comparable districts in Rotterdam as a control group. In total we expect to include 370 older people (247 in the experimental group; 123 in the control group). All will be interviewed at home by experienced interviewers at three time-points: T0, T1 (6 months after inclusion), and T2 (12 months after inclusion). On average the interviews will take 60 minutes.

Informal caregivers will be interviewed twice by telephone for about 15 minutes each. They will be identified on the basis of the definition provided in the National Care for the Elderly Programme: those who provide structured care voluntarily and for free to people in their family, household, or social network with physical, mental or psychological disabilities. It involves providing more care than usual in personal relationship and consists of tasks that healthy people could normally do themselves.
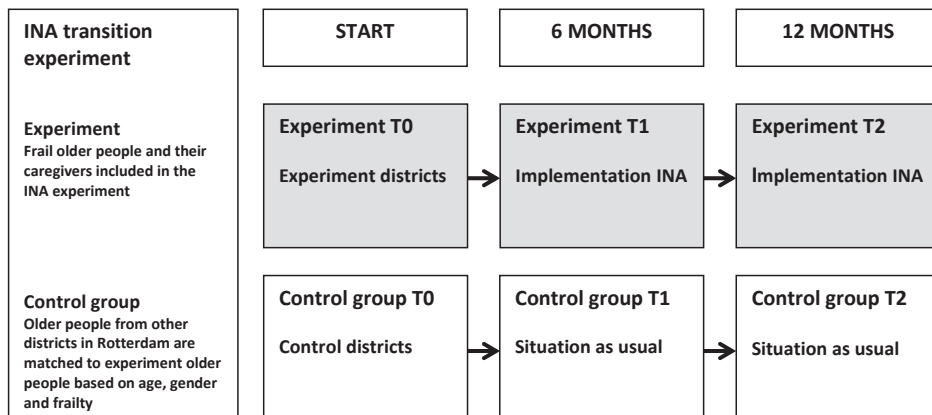

Figure 1: Study Design Integrated Neighbourhood Approach

Sample size

We will include 370 older people (2/3 in intervention group, 1/3 in control group). We will try to limit sample losses by personal house visits, but expect a loss of about 27% (by death, moving, no longer wishing to participate, etc.) between T0 and T2,

resulting in a final sample of 270. This number - 180 in the intervention group and 90 in the control group - is required to detect a 1-point improvement in TFI-score in the intervention group as compared with the control group at T2 (with mean TFI-score 4.7, sd 3.0; one-sided test; alpha = 0.05, power= 0.80) (Gobbens *et al.* 2010).

Ethical approval

The study protocol was approved by the ethics committee of the Erasmus University Medical Centre of Rotterdam in June 2011. Respondents will receive a brochure prior to the interview to explain the study and procedure, provide a free helpdesk telephone number, and state that the Medical Ethical Review Board of Erasmus MC has issued a Certificate of No Objection after having established that the study complies with the Dutch Act on Medical Research in Humans. The respondents' informal caregivers will also receive a brochure with information about the study and an invitation to participate. Both the older people and their informal caregivers will be explicitly informed in the brochure and by the interviewer that participation can end at any time without adverse consequences. Written informed consent will be obtained from all participating respondents.

Evaluation components

The evaluation study has three parts: (i) process (ii) effects, and (iii) costs of INA (Figure 2).

i. Process

The process evaluation study will find whether INA contributes to (a) continuous, demand-driven, coordinated care and support for independently-living frail older people, and (b) reinforcing the welfare, health care, informal care and community networks in their neighbourhoods. We will describe INA in Rotterdam, how the various networks are reinforced, what they do, and how they cooperate to improve the self-management abilities and well-being of frail older people. Process indicators will be registered continually during 12 months. Data such as descriptions of client visits, assessment outcomes, action goals, and agreements will be captured by a computerized Client Monitoring System and registration forms. An evaluation of the process indicators and data about contacts with professionals is expected to reveal any INA effects.

   We will hold semi-structured interviews with professionals, key figures, neighbours, older people and their caregivers to provide insight into possible barriers and conditions under which proposed changes take place. Earlier research has shown, for example,
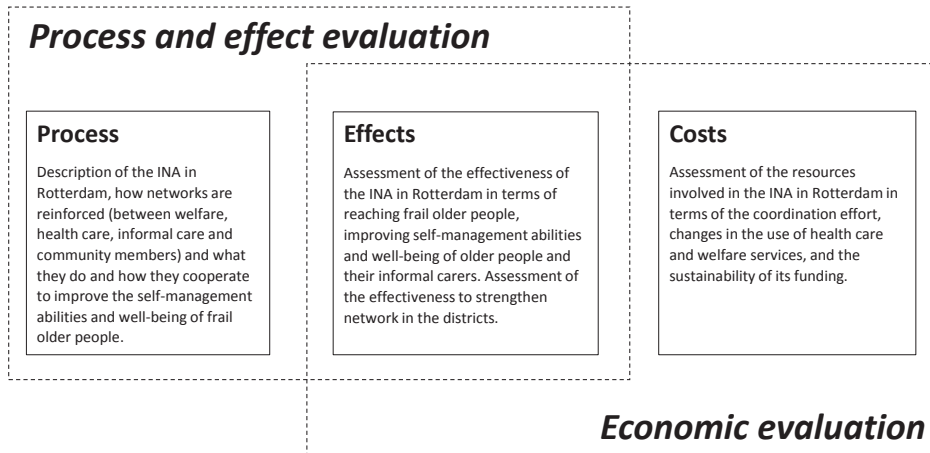
Figure 2: Process and effect evaluations; cost-effectiveness evaluation

that conflicting priorities, lack of specificity of and consensus on intended changes, and professionals' insufficient commitment can be important barriers (Campbell *et al.* 2007). We will also investigate the experiences of professionals and key figures via questionnaires. Since the effectiveness of a transition experiment is strongly dependent on the implementation process, we would like to know what conditions promote or limit the effectiveness of welfare and care support in neighbourhoods to get an even better understanding of the success of the intervention(s) and the merit of INA for other settings (Øvretveit & Gustafson 2002). All professionals (community workers, district nurses) and key figures directly involved in the care and support of the older people will be given a written questionnaire at T0 and T1. The instrument is partly based on the partnership self-assessment tool (Cramm *et al.* 2011c), which is currently being tested in a disease management study (Lemmens *et al.* 2011) and validated via interviews in its first phase. Aspects addressed in the questionnaire are (a) participation of the professionals and key figures involved in INA (partnership synergy); (b) different dimensions of partnership functioning (leadership, control and management, efficiency, non-financial resources, challenges in partners' commitment and to the municipality/district); and (c) relational coordination (frequency of communication between parties involved, quality of the communication, extent of shared goals, knowledge, and respect) (Cramm & Nieboer 2012d) (table 1).

Table 1: Outcome and Process Instruments

Primary outcomes older people	Instruments	Items
Frailty		
Tilburg Frailty Indicator (TFI)	Questionnaire	15 items
Quality of life		
Short Form 20 (SF-20)	Questionnaire	20 items
EuroQol (EQ-6D)	Questionnaire	6 items
Visual Analogue Scale (VAS)	Questionnaire	1 item
Social Production Function Instrument for Level of well-being (SPF-IL)	Questionnaire	15 items
Secondary outcomes older people	**Instruments**	**Items**
Health outcomes, functioning and abilities		
Cognitive functioning	Questionnaire	6 items
Katz Index of Independence in Activities of Daily Living (ADL)	Questionnaire	15 items
Self Management Ability Scale Short version (SMAS-S)	Questionnaire	18 items
Health behaviour		
Smoking behaviour	Questionnaire	3 items
Physical Activity	Questionnaire	1 item
Health care utilization		
Health care utilization	Questionnaire	18 items
Neighbourhood experiences		
Social cohesion and belonging	Questionnaire	15 items
Neighbourhood quality index	Questionnaire	15 items
Social resources		
Social support index	Questionnaire	20 items
Social connection index	Questionnaire	5 items
Social support of partner/children/family and friends/ neighbours	Questionnaire	6 items
Social capital	Questionnaire	9 items
Social participation	Questionnaire	2 items
Outcomes caregivers	**Instruments**	**Items**
Quality of life		
Short Form 20 (SF-20)	Questionnaire	20 items
CarerQoL-7D	Questionnaire	7 items
CarerQol-VAS	Questionnaire	1 item
Social Production Function Instrument for Level of well-being (SPF-IL)	Questionnaire	15 items
Health outcomes		
Katz Index of Independence in Activities of Daily Living (ADL)	Questionnaire	15 items
Caregiving experiences		
Activity restriction scale	Questionnaire	10 items
Caregiver Strain Index (CSI+)	Questionnaire	18 items
Self-Rated Burden	Questionnaire	1 item
Health care utilization		
Health care utilization	Questionnaire	14 items
Social resources		
Social support of partner/children/family and friends	Questionnaire	6 items
Process outcomes	**Instruments**	**Items**
Partnership Self-Assessment Tool Short version (PSAT-S)	Questionnaire	24 items
Relational Coordination Survey	Questionnaire	7 items
Intervention and other direct costs	Data registration	

6

ii. Effects

Assessment of effectiveness will be in terms of reaching the frail older people, improving their self-management abilities and well-being, and improving the well-being of their informal carers. Demographic data and outcome indicators - well-being, quality of life, self-management abilities, cognitive functioning, social networks, social cohesion, sense of community in the neighbourhood - will be captured with specific instruments (table 1).

INSTRUMENTS OLDER PEOPLE

Frailty

The Tilburg Frailty Indicator (TFI) will be used to measure frailty. The results regarding the TFI's validity provide strong evidence for an integral definition of frailty consisting of physical, psychological, and social domains (Gobbens *et al.* 2010).

Quality of life and well-being

The Dutch version of the SF-20 is administered to the frail older people. It aims to score 6 sub-dimensions such as physical functioning, social functioning and experienced health (Kempen 1992, Carver *et al.* 1999). The SF-20 was chosen over the SF-36 because it is shorter and because many questions are included in the MDS. The EuroQol (EQ6D) and Visual Analogue Scale (VASscale) - part of the MDS - are administered to measure quality of life among the older people and their informal caregivers. They will also be used to calculate cost-utilities of health care (EuroQol Group 1990).

Well-being

The Social Production Function Instrument for the Level of well-being scale (SPF-IL) is used to measure the universal goals needed to be realized by individuals in order to enhance their well-being (Nieboer *et al.* 2005). Social production function (SPF) theory asserts that the universal goals affection, behavioural confirmation, status, comfort and stimulation are the relevant dimensions of subjective well-being. Examples of questions are: 'do you feel that people really love you' and 'are you known for the things you have accomplished'.

Self-reported cognitive function

The MOS cognitive function scale will serve as the self-report measure of cognitive function. This scale contains six Likert-type items on memory, reasoning and thinking.

The responses to individual questions are summed and the score is then converted to a 0-100 point scale, with 100 indicating the most favorable functioning (Wu *et al.* 1991, Stewart *et al.* 1992). Examples of items are: 'How much of the time during the past month did you have difficulty reasoning and solving problems, for example making plans, making decisions or learning new things' and 'How much of the time during the past month did you have trouble keeping your attention on any activity for long'.

Physical functioning

The Katz-15 index of activities of daily living measures function over time by means of statements on several domains such as bathing, dressing, toileting, transferring, continence and feeding (Katz *et al.* 1963). Example: 'Moves in and out of bed or chair unassisted. Mechanical transferring aides are acceptable' or 'Needs help in moving from bed to chair or requires a complete transfer'.

Self-management

The SMAS-S (Self Management Ability Scale-Short version) measures a person's ability to manage his/her own general daily life activities in the past months. It contains 18 items on several self-management abilities (Schuurmans *et al.* 2005, Cramm *et al.* 2012d). Examples are: 'How often do you take the initiative to keep yourself busy?' and 'Are you capable of taking good care of yourself?'

Social cohesion & belonging

The neighbourhood cohesion scale consists of 15 items on a person's contribution to the social cohesion in the neighbourhood (Fone *et al.* 2007). Examples are: 'I would be willing to work together with others on something to improve my neighbourhood' and 'I regularly stop and talk with people in my neighbourhood'.

Neighbourhood quality

The Neighbourhood Quality Index will be used to capture residents' perceptions of neighbourhood quality (Yang *et al.* 2002). Examples are: 'participating in activities together' and 'feeling safe in this neighbourhood'.

Social support

The social support index will be used to assess levels of social support. This survey was designed to be comprehensive in terms of recent thinking about the various dimensions of social support. Multitrait scaling analyses supported the dimensionality

of four functional support scales (emotional/informational, tangible, affectionate, and positive social interaction) and the construction of an overall functional social support index (Sherbourne & Stewart 1991).

Social connections

The social connections index will be used to assess the level of social connections. This index contains five questions regarding social connections and has shown to be a predictive tool of mortality (Kaplan *et al.* 1988).

Social support of spouse, children, friends and relatives, and neighbours

This instruments assesses emotional support, instrumental support and negative aspects of relationships. Example of emotional support is 'how often does/do your [spouse/children/friends and relatives/neighbours] make you feel loved and cared for?'' Example of instrumental support is 'how often does/do your [spouse/children/friends and relatives/neighbours] give you advice or information about medical, financial, or family problems?'' Negative aspects of relationships were measured by two items that assessed the frequency with which participants' spouses, children, friends and relatives, or neighbours 'made too many demands' or 'were critical' (Gurung *et al.* 2003).

Social capital

The Short Social Capital Assessment Tool (SASCAT) serves to assess social capital. The tool could also be used to measure ecological social capital by administering it to a representative sample of a community and aggregating their responses (De Silva *et al.* 2006). Examples of items are: 'in the last 12 months, did you receive from the group any emotional help, economic help, or assistance in helping you know or do things' and 'in general, can the majority of people in this community be trusted'.

Social participation

Following the study of Guillen and colleagues (Guillen *et al.* 2011) we will measure social participation with the following questions: 'compared to other people of your age, how often would you say you take part in social activities' and 'how often do you meet socially with friends, relatives or neighbours'.

INSTRUMENTS CAREGIVERS

Quality of life

In addition to the instruments also used with the older people, the carer quality of life questionnaire (Carer QoL-7D) measures quality of life of informal carers and is part of the MDS (Nieboer *et al.* 1998, Brouwer *et al.* 2004).

Activity restriction

Burden of care for the carer is measured using the Activity Restriction Scale (ARS) (Williamson & Schurz 1992). Carers are asked to indicate the extent to which nine areas of normal activity (e.g. doing household chores, going shopping, visiting friends, participating in sports and recreation, maintaining friendships) are restricted by their caregiving responsibilities.

Self-rated burden and strain

Subjective burden of care is measured with the Self Rated Burden Scale (SRBS) and Caregiver Strain Index or CSI (Robinson 1983, van Exel *et al.* 2004). Examples of questions are: 'there have been family adjustments (e.g. helping has disrupted my routine; there is no privacy)' and 'there have been changes in personal plans (e.g. I had to turn down a job; I could not go on vacation)'.

iii. Costs

A cost-effectiveness evaluation will be performed to determine whether INA is a cost-effective method to support the frail, independently-living older people. We will assess the additional (health care) costs involved in INA and the costs per quality-adjusted life years (QALY) gained in the older people and their informal caregivers. INA costs may be higher than expected because extra care and support are offered and more people could avail themselves of the services, or they may be lower than expected because specific groups of older people and their informal caregivers will earlier and more purposefully avail themselves of the services and receive better support from their networks, preventing or delaying serious (health) problems. Delaying or preventing admission to a nursing home, for example, lowers costs and often appeals to the older people and informal caregivers.

   Health care utilization and given support will be quantified via questionnaires and additional sources where possible (Client Monitoring System, local and national monitors). Multiplying these volumes by integral cost prices will yield total costs of

care and support. For this purpose we will use the guideline of the Dutch Health Care Insurance Board (CVZ) (Hakkaart-van Roijen *et al.* 2010). INA costs are estimated via time registrations on professionals' activity levels. Different types of activity (such as contact with the older people and team meetings), professional disciplines, and corresponding tariffs will be taken into account. Assessment costs will be included in the total costs for the intervention group only and not the control group, because the costs are incurred only within the INA framework. Finally, costs per centre will be calculated (e.g., costs of the interventions, welfare, health care, community workers), providing insight for all participating organizations as to the investments that will be needed to continue INA after the study phase.

The cost-effectiveness evaluation will be on the basis of the costs and the registered effects described above. The primary analysis is a regular cost-utility analysis with differences between the intervention and control groups in costs and well-being (QALY) during a 12-month follow-up as outcome, allowing us to compare findings with other studies.

Data analysis

Data on defined outcome measures for the process- and (cost-)effectiveness evaluations will be collected at T0, T1, and T2 for the older people and at T0 and T2 for the informal caregivers. They will be described and analysed as follows:

- Descriptive statistics at the group and district levels at different time points;
- Bivariate analyses relating outcome measures to the older people's socio-demographic characteristics and process indicators;
- Correlation analysis between various types of outcomes;
- Multivariate analysis of outcome measures per time point and longitudinally;
- Subgroup analyses to determine whether outcomes strongly vary for different groups (e.g., single vs. partnered, low vs. high self-management abilities);
- Sensitivity analyses to determine the influence of major assumptions on reported outcomes.

Integration of findings

Methodologically, the assessment of a transition experiment comprises the evaluation of a complex mixture of interventions at the older people, professional, and non-professional levels. Qualitative and quantitative methods are used to answer the same research questions and are thus mixed throughout all project phases, from the design stage to

data interpretation. The method enables us to understand (i) the mechanisms through which changes are produced, (ii) the contextual conditions necessary to trigger such mechanisms, and (iii) the effects of interventions with respect to context and triggered mechanisms. Intermediate results of the qualitative, quantitative, and cost-effectiveness analyses will be continually looped within the research group to allow for improvements and recognition of emerging themes across research methods and a more fine-grained data analysis. This is especially relevant for the qualitative component of the project. Although different researchers will have responsibility for different parts of the study, regular team interaction will ensure optimal integration of results.

DISCUSSION

To describe effects of INA we will use a methodological approach that combines qualitative and quantitative research. Introducing complex, multi-component interventions is sensitive to an array of influences such as details of implementation and context (Campbell *et al.* 2007, Lemmens *et al.* 2011) and calls for embracing a wide range of methodologies to obtain information on both mechanisms and contexts, add to knowledge on the approach's feasibility and costs, and highlight the factors likely to bring success or failure. While descriptive studies may provide appropriate understanding of mechanisms and context of change, they lack rigor in terms of understanding the intervention's effectiveness.

Weaknesses

In our study, health care utilization is mainly derived from questionnaires administered to the frail older people and their informal caregivers instead of using direct and perhaps more accurate information from health care companies. Unfortunately, there is a long delay in declaration and registration of health care costs, which hampers the timely delivery of the information needed for the cost-effectiveness evaluation. Moreover, extracting information from the database of the healthcare insurance companies requires obtaining informed consent to collect the additional data in addition to written informed consent to participate, perhaps decreasing participation. Another drawback in using questionnaires might be the recall bias for health care utilization over the past three to six months, but the questionnaires will be administered by means of face-to-face interviews with the frail older people, giving the interviewer opportunity

to ask for clarification. And while we are not able to randomize the frail older people in the intervention and control groups; we will match the two groups.

Strengths

We will embrace a wide range of scientific methodologies to evaluate the INA project and obtain information on mechanisms and contexts that will be valuable for decision making on local and national levels. The study will thus lead to a good understanding of the mechanisms providing social network support for frail older people and add to the knowledge on its feasibility and cost-effectiveness in maintaining or improving well-being. Furthermore, the study will highlight the factors that determine the success or failure of such programs.

Implementation of large interventions within Dutch municipalities is not often accompanied by a thorough cost-effectiveness evaluation from a societal perspective. It enables us to give a sound description of the costs of the INA intervention and benefits from the perspective of different stakeholders (i.e., the older people, the municipality, caregivers, and health insurers).

3. Heeft u problemen in het dagelijks leven door slecht lopen? ☐ Ja ☒ Nee

Ondanks mijn plat Voeten en slechte knieen loop ik wel. Mijn Vrouw zegt: Wanneer zwaggel.

4. Heeft u problemen in het dagelijks leven door het slecht kunnen bewaren van uw evenwicht? ☐ Ja ☒ Nee

5. Heeft u problemen in het dagelijks leven door slecht horen? ☒ Ja ☒ Nee

wel, als iemand heel ~~hard~~ praat. of als iedereen door elkaar praat Zacht groeps geklets.

6. Heeft u problemen in het dagelijks leven door slecht zien? ☐ Ja ☒ Nee

ik Niet, wel mijn vrouw. Zij is slecht ziend. Moet een operatie ondergaan. Gevaarliers · Complex met risico Is uitgesteld door onze bemoeiing met mijn Zwager

CHAPTER 7

Effects of an integrated neighbourhood approach on older people's (health-related) quality of life and well-being

ABSTRACT

Background: Integrated neighbourhood approaches (INAs) are increasingly advocated to reinforce formal and informal community networks and support community-dwelling older people. They aim to augment older people's self-management abilities and engage informal networks before seeking professional support. INA's effectiveness however remains unknown.

Methods: We evaluated INA effects on older people's (health-related) quality of life (HRQoL) and well-being in Rotterdam. We used a matched quasi-experimental design comparing INA with "usual" care and support. Community-dwelling frail older (70+ years) people and frailty- and gender-matched control subjects (n = 186 each) were followed over a one-year period (measurements at baseline and 6 and 12 months). Primary outcomes were HRQoL (EQ-5D-3L, SF-20) and well-being (Social Production Function Instrument for the Level of well-being [SPF-IL]). The effect of INA was analysed using an "intention to treat" and an "as treated" approach.

Results: The results indicated that pre-intervention participants were significantly older, more often single, less educated, had lower incomes and more likely to have ≥1 disease than control subjects; they had lower well-being, physical functioning, role functioning, and mental health. Generalized linear mixed modelling of repeated measurements revealed no substantial difference in well-being or HRQoL between the intervention and control group after 1 year. The small differences we did find in the intention to treat group though were in favour of the control subjects (SF-20 = 6.98, 95% confidence interval [CI] = 2.45-11.52; SPF-IL = .09, 95% CI = .01-.17). However, the difference in well-being [SPF-IL] disappeared in the as treated analysis.

Conclusions: The lack of effects of INA highlights the complexity of integrated care and support initiatives. Barriers associated with meeting the complex, varied needs of frail older people, and those related to dynamic political and social climates challenge initiative effectiveness.

INTRODUCTION

Integrated neighbourhood approaches (INAs) are increasingly advocated as means to create a supportive environment for the growing number of community-dwelling older people with (complex) needs (Plochg & Klazinga 2002, Leichsenring 2004, Morikawa 2014). INAs, consisting of collaboration among municipalities, health and social care providers, and informal care, aim to integrate available neighbourhood resources and increase responsiveness to citizens' specific needs (Plochg & Klazinga 2002, Lowndes & Sullivan 2008). Although the need for INAs to achieve a better balance between support of increasing numbers of care-dependent older people in the community and protection of their (health-related) quality of life is widely recognized, the effectiveness of such programs is currently unknown.

In 2011, the Rotterdam municipality, local health and social care organizations, Erasmus University Rotterdam, the University of Applied Sciences, and Geriatric Network Rotterdam initiated an INA for community-dwelling older people. Its overarching aim was to create a supportive environment allowing community-dwelling older people to live independently. The INA aims to overcome barriers associated with the provision of care and support in the Netherlands, which is often characterized as reactive, i.e., lacking a proactive and preventive approach that aims to protect older people's (health-related) quality of life, and fragmented, i.e., lacking a coordinated approach to health and social care service provision. In the Netherlands, general practitioners (GPs) play a gatekeeper role in *health care* service provision, referring (older) patients to primary, secondary, or tertiary health care professionals when necessary (Ex *et al.* 2003). Municipalities assume responsibility for *social* services, such as household services and support for informal caregivers. Older people can apply for these welfare services, and their eligibility is assessed based on their needs and capabilities (Gobbens *et al.* 2010, Goodwin *et al.* 2014). Only when care and support cannot be provided for by older people themselves or their informal network for objective reasons, such as insufficient economic means and/or the absence of informal caregivers, do municipalities have a mandatory responsibility to compensate for older people's limitations in various areas, such as transport or household support.

Currently, collaboration and resource integration among health and social care providers and informal support-givers is insufficient to support the ability of community-dwelling older people to age in place (Cramm *et al.* 2011a). Thus, the INA combines components found to be effective for integrated care and support provision, such as the integration of health and social care services, a demand-driven and person-centered approach, the

use of multidisciplinary and outreaching teams, and preventive home visits (Bernabei *et al.* 1998, Elkan *et al.* 2001, Johri *et al.* 2003, Leichsenring 2004, Stuck *et al.* 2005, Eklund & Wilhelmson 2009). The INA also incorporates increasingly promoted innovative components, such as the engagement of informal caregivers and the community and the strengthening of self-management abilities (Cramm *et al.* 2011a). By reinforcing networks among health and social care providers and informal support-givers in the community, formal and informal support-givers become mutually responsible for optimizing current services and supporting older people's ability to age in place.

In this study, we evaluated the INA's effects on older people's (health-related) quality of life and well-being. To our knowledge, this study is the first to evaluate an INA's effects; it thus provides valuable insight into whether INAs can meet expectations by contributing to the (health-related) quality of life and well-being of community-dwelling older people.

METHODS

Study Design and Inclusion

We used a matched quasi-experimental design to compare outcomes of older people who participated in the INA and those who received 'usual' care and support. Measurements were performed at baseline (T0; pre-intervention) and at 6 (T1) and 12 months (T2). Older people a) aged 70 or more years who b) lived independently (i.e., not in an institutional setting) in one of four INA neighbourhoods in Rotterdam (Lage Land/Prinsenland, Lombardijen, Oude Westen, and Vreewijk), c) were frail, and d) consented to study participation were eligible for inclusion. Frailty was assessed using the Tilburg Frailty Indicator (TFI), a multidimensional instrument that captures physical, psychological, and social domains of frailty (Gobbens *et al.* 2010).

Intervention group members were recruited by community workers, who engaged other professionals and community members in reporting signals of frailty. After identifying potentially frail older people, community workers visited them at home and administered the TFI during the first or second home visit. Older people in the intervention group were matched 1:1 with control subjects on the basis of TFI score (≥5) and gender. We recruited control subjects by sending questionnaires to a random sample of community-dwelling older people residing in neighbourhoods with socioeconomic characteristics comparable to those of INA neighbourhoods. The questionnaire included the TFI instrument for matching purposes. Among respondents,

we identified older people who matched intervention subjects according to TFI score and gender, and randomly invited subjects by telephone to participate in the study.

The project and evaluation are part of the National Care for the Elderly Programme, launched in 2008 and funded by the Netherlands Organization for Health Research and Development (project no. 314030201). The ethics committee of Erasmus University Medical Center, Rotterdam, the Netherlands, approved the project in June 2011 (MEC-2011-197).

Intervention

The INA was initiated in April 2011 in two Rotterdam neighbourhoods and extended to two additional neighbourhoods 1 year later. Within the context of the INA, professionals and residents are asked to watch over neighbours and report manifestations of frailty to INA community workers (Figure 1). Community workers had health and social care backgrounds and were temporarily reassigned to INA teams, many of which included at least one social worker and community nurse familiar with the neighbourhood. Community workers visited older people at home and mapped their social and physical needs and capabilities with respect to factors such as housing, mobility issues, and
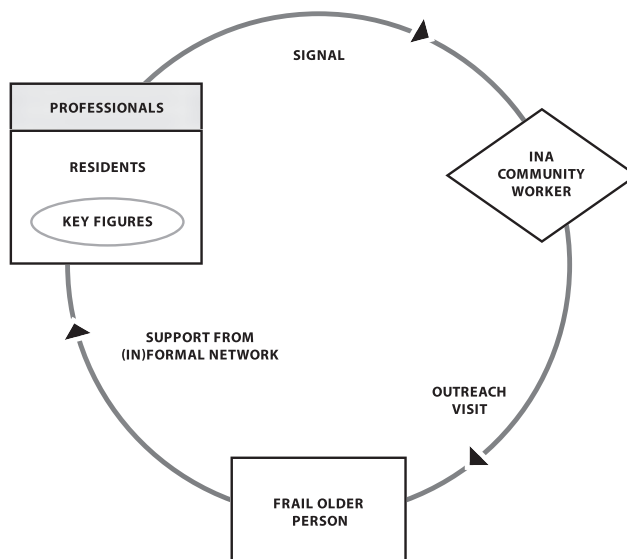

Figure 1: Working method of the integrated neighbourhood approach

social activities, through phased interviews. Together with older people, they sought appropriate solutions to identified problems or needs and composed individualized support plans. First, community workers assessed older people's capabilities and self-management abilities and sought to increase their responsibility for their health and well-being, for example when applying for a walker or learning to manage finances. For older people who could not meet their own needs, INA community workers sought informal interventions, e.g., finding a neighbour willing to bring groceries or setting up an activity with the help of neighbours, before relying on professional support. Community workers thus served as liaisons at the personal (supporting and monitoring older people), professional (seeking a multidisciplinary approach to support), and community (establishing a well-functioning network and engaging informal support-givers) levels. Few guidelines were set for INA community workers performing these roles and accompanying tasks, giving them professional autonomy to create their own working methods. Box 1 describes a real-life case illustrating the INA approach. Further details of the INA's scope, aims, and study protocol have been published elsewhere (Cramm *et al.* 2011a).

Box 1. Real-life case of an INA participant in Rotterdam

Mrs. Schols, a 75-year-old woman, resides in a large apartment block in a Rotterdam suburb. She has no children and has lived alone since her husband's passing 10 years ago. Mrs. Schols used to enjoy working as a receptionist in the banking sector, but was forced to quit due to lung disease (COPD). This disease had major impacts not only on her working life, but also on her social life. Apart from receiving personal assistance and home care, Mrs. Schols is being monitored by a kind next-door neighbour, Mr. Markus. For some time, Mr. Markus has noticed that Mrs. Schols comes outside only occasionally, leaving him worried about her physical condition. He also wonders whether Mrs. Schols might be entitled to more amenities due to her physical decline. Through the neighbourhood centre, Mr. Markus meets an INA community worker. After hearing his concerns about Mrs. Schols, the community worker schedules a home visit to gain further insight into her needs. This visit soon reveals that Mrs. Schols does not have increasing physical needs, as Mr. Markus had suggested, but rather a growing social need due to her shrinking social network. She misses having someone to talk to about her disease and longs for someone who is willing to take a walk with her. Due to her fear of riding her mobility scooter, especially given that she must carry an oxygen tank, she is hesitant to get outdoors.

After the home visit, the community worker seeks someone who would be willing to support Mrs. Schols. Through an advertisement in the local newspaper, she soon finds an enthusiastic nearby neighbour. When the two meet, they immediately get along. Currently, the neighbour visits Mrs. Schols every week and walks with her or takes her to the supermarket to buy groceries. She also helps Mrs. Schols practice with her mobility scooter, enabling her to go outside by herself.

Instruments and Data Collection

The primary outcomes were (health-related) quality of life and well-being. The validated five-dimensional, three-level EuroQol instrument (EQ-5D-3L) was administered to describe older people's health-related quality of life in terms of mobility, self-care, usual activities, pain/discomfort, and anxiety/depression (EuroQol group 1990). Preference weights were assigned to the resulting health profiles to obtain summary valuations or utility scores, with 1 representing the utility of best imaginable health state, 0 representing death or a health state considered to be equivalent to death, and negative values indicating health states considered to be worse than death (Brazier *et al.* 2007). We used five subscales of the validated Dutch version of the Short Form-20 (SF-20) to assess the following dimensions of generic (health-related) quality of life: physical functioning, role functioning, social functioning, mental health, and health perceptions (Kempen 1992, Carver *et al.* 1999). To allow comparison between groups, all scales were transformed to range from 0 to 100, with higher scores indicating better functioning. Finally, we used the Social Production Function Instrument for the Level of well-being (SPF-IL) scale (Nieboer *et al.* 2005) to assess respondents' ability to meet the universal goals needed to enhance subjective well-being: affection, behavioural confirmation, status, comfort, and stimulation. Mean scores range from 1 to 4, with higher scores indicating greater well-being.

To enhance data quality and minimize missing values and study drop out, trained interviewers administered the questionnaires during home visits. Average interview length was about 90 minutes. Intervention and control participants were rewarded with incentives (a cookie jar at T0, a notepad with pencil at T1, and a card game at T2).

Besides administering questionnaires among older people, INA's community workers filled in individualized support plans with information on the support-giving process. To establish the intention to treat vs. as treated group, we conducted file research of these support plans to assess whether older people received any intervention, i.e.

7

whether INA's community workers arranged (in)formal support; not the intensity of the support that was provided. The support plans of 18 older people revealed that no intervention was provided (often because older people felt not in need of support or felt reluctant about receiving support); therefore, these cases were removed in the as treated analysis.

Sample Size

Given the anticipated 27% drop-out rate between T0 and T2 (e.g., due to death, moving, nursing home admission, or no longer wishing to participate) (Chatfield *et al.* 2005) we aimed to include 186 older people each in the intervention and control group. This sample size was based on a pilot study of frail older people in the control neighbourhoods and was required to detect a .16-point (= 1/3 standard deviation [SD]) improvement in SPF-IL score in the intervention group compared with the control group at T2 (based on a mean SPF-IL-score of 2.42 [SD = .47]; alpha (two-sided) = .05, beta = .10). This sample size was also sufficient to detect improvements in other outcome measures.

Statistical Methods

Baseline differences between groups were assessed using unpaired Student's *t*-tests for continuous variables with (approximately) normal distributions, Mann-Whitney *U*-tests for continuous variables with non-normal distributions, and chi-squared tests for categorical variables. Intervention effectiveness was examined using unadjusted (i.e., excluding adjusting covariables, but including time) and adjusted comparisons. We performed an intention to treat analysis as well as an as treated analysis in which older people were analysed according to the actual intervention received. Those that did not receive any intervention (n=18) were excluded from the as treated analysis. We used general linear mixed models of repeated measurements to analyse differences in outcomes between groups. Dependent variables were EQ-5D-3L, SPF-IL, and SF-20 scores. Independent variables were baseline scores of the studied outcome variables; gender and frailty (TFI score) as matching factors; time and intervention/control group as main effects; and age, educational and income levels (low or high), living situation (single or not), and morbidity (0, 1, or >1 disease) as adjusting covariables. Additional analyses were performed to determine interactions between time and group membership, as well as the influence of neighbourhood level on outcomes; these analyses revealed no other effect on any outcome and their results are not presented. Goodness of fit was expressed using the -2 log likelihood and Akaike's information criterion, with lower

scores indicating better fit. $P < .05$ (two-sided) was considered to indicate a statistically significant difference. SPSS was used for all statistical analyses.

RESULTS

Participants

Figure 2 illustrates the flowchart of this study. At baseline, 372 intervention and control subjects (n = 186 each) were recruited. Observations were available for 323 (87%) participants at T1 and 287 (78%) participants at T2. Measurements from all three timepoints were available for 285 (77%) participants.

Baseline Characteristics

Table 1 shows participants' baseline characteristics. At T0, compared with control subjects, participants in the intervention group (both intention to treat and as treated participants) were significantly older, more often single, and less educated; they had lower incomes, were more likely to have one or more diseases, and had lower SPF-IL scores and lower SF-20 scores for the physical functioning, role functioning, and mental health dimensions. No significant difference in health-related quality of life (EQ-5D-3L score), SF-20 social functioning or current health perceptions score was observed.
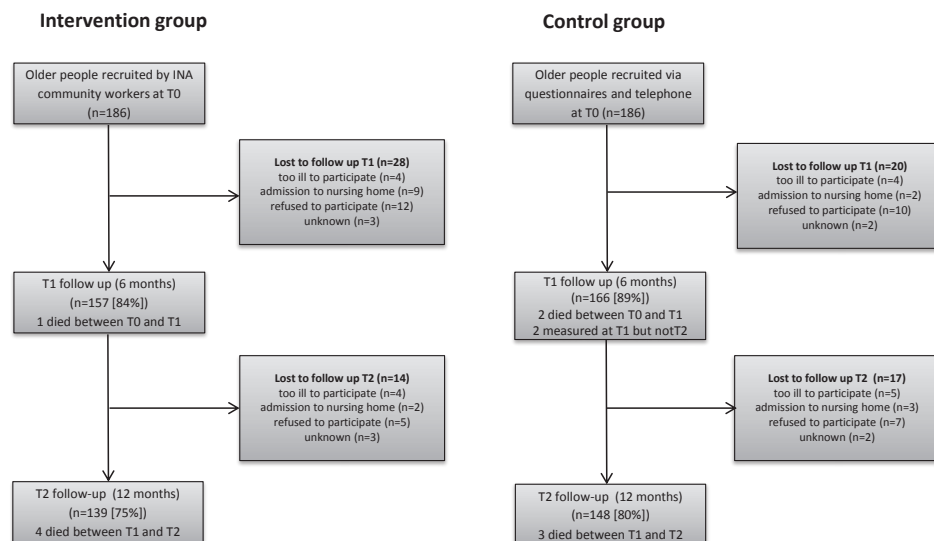

Figure 2: Flow chart of study participation INA, integrated neighbourhood approach

One-Year Changes in Well-Being and (Health-Related) Quality of Life

No substantial difference in well-being or (health-related) quality of life was observed between the intervention and control group at 1 year (T2) in analyses adjusted for time, age, sex, educational level, income, living situation, morbidity, frailty, and baseline scores. Control group participants (Table 2) reported better physical functioning (SF-20 dimension score = 6.98, 95% confidence interval [CI] = 2.45-11.52) and well-being (SPF-IL score = .09, 95% CI = .01-.17) than did intention to treat participants at 1 year. However, as treated analysis (Table 3) revealed no significant difference in well-being (SPF-IL score = .07, 95% CI = -.01-.15)

Table 1: Baseline Characteristics of Older People

	Control group n = 186	Intention to treat † n = 186	As treated † n = 168
Age (years)	79.8 (5.9)	81.6 (6.0)**	81.6 (6.0)**
Sex (female)	137 (73.7%)	143 (67.9%)	127 (75.6%)
Living situation (single)	153 (82.3%)	167 (89.9%)*	152 (90.5%)*
Educational level (low)	37 (19.9%)	73 (39.2%)***	65 (38.7%)***
Income (low)	99 (53.2%)	124 (66.7%)**	113 (67.3%)**
Morbidity (≥1 disease)	182 (97.8%)	173 (93%)*	157 (93.5%)*
Frailty (TFI)	8.0 (2.2)	8.1 (2.3)	8.2 (2.3)
Well-being (SPF-IL)	2.7 (.43)	2.6 (.56)**	2.6 (.55)**
Health-related quality of life (EQ-5D-3L)	69 (.25)	.66 (.26)	.65 (.26)
SF-20 physical functioning	45.1 (30.4)	38.3 (31.6)*	38.2 (31.8)*
SF-20 role functioning	31.6 (42.5)	23.4 (36.4)*	23.8 (36.6)*
SF-20 social functioning	65.3 (32.2)	60.2 (37.2)	59.6 (37.1)
SF-20 mental health	67.3 (21.8)	61.6 (24.2)*	61.3 (24.2)*
SF-20 current health perceptions	45.6 (9.8)	47.1 (9.3)	47.0 (9.5)

Values are presented as mean (standard deviation) or n (%).
† Statistics compared to control group.
***$p \leq 0.001$; **$p \leq 0.01$; *$p \leq 0.05$ (two-tailed).
TFI, Tilburg Frailty Indicator; SPF-IL, Social Production Function Instrument for the Level of well-being; EQ-5D-3L, five-dimensional, three-level EuroQol; SF-20, Short Form 20.

Table 2: Generalized Linear Mixed Modelling of Outcomes in the Intervention and Control Group: intention to treat analysis

	Unadjusted overall effects[a]						Adjusted overall effects[b]					
	Mean (SE) control	Mean (SE) intervention	Mean difference (95% CI)	p	-2 log likelihood	AIC	Mean (SE) control	Mean (SE) intervention	Mean difference (95% CI)	p	-2 log likelihood	AIC
Well-being (SPF-IL)	2.65 (.04)	2.47 (.04)	-.18 (-.28 to .08)	<.001	673.799	679.799	2.50 (.60)	2.41 (.60)	-.09 (-.17 to -.01)	.031	509.924	515.924
Health-related quality of life (EQ-5D-3L)	.77 (.01)	.73 (.01)	-.04 (-.08 to -.01)	.014	-538.810	-532.810	.77 (.02)	.75 (.02)	-.02 (-.05 to .01)	.121	-647.945	-641.945
Quality of life (SF-20)												
Physical functioning	45.73 (2.32)	33.73 (2.38)	-12.00 (-18.53 to -5.47)	<.001	5766.759	5772.759	44.21 (3.27)	37.22 (3.22)	-6.98 (-11.52 to -2.45)	.003	5473.313	5479.313
Role functioning	32.62 (2.87)	22.70 (2.95)	-9.92 (-18.00 to -1.83)	.016	6117.607	6123.607	36.44 (5.11)	30.63 (5.03)	-5.81 (-12.87 to 1.24)	.106	5962.798	5968.798
Social functioning	64.02 (2.26)	60.45 (2.33)	-3.57 (-9.93 to 2.80)	.272	5884.469	5890.469	64.16 (4.07)	64.00 (4.04)	-.15 (-5.71 to 5.40)	.957	5673.431	5679.431
Mental health	66.19 (1.49)	61.45 (1.53)	-4.74 (-8.93 to -.55)	.027	5285.270	5291.270	66.98 (2.29)	65.20 (2.26)	-1.77 (-4.96 to 1.42)	.276	5050.625	5056.625
Current health perceptions	46.58 (0.55)	47.06 (.56)	.48 (-1.06 to 2.02)	.540	4329.900	4335.900	45.99 (1.12)	46.70 (1.10)	.71 (-.81 to 2.24)	.359	4276.356	4282.356

[a]Excluding adjusting covariables, but including time.

[b]Adjusted for age, sex, education, income, living situation, morbidity, frailty, time and baseline scores of studied outcomes.

SE, standard error of the mean; CI, confidence interval; AIC, Akaike's information criterion;   SPF-IL, Social Production Function Instrument for the Level of well-being; EQ-5D-3L, five-dimensional, three-level EuroQol; SF-20, Short Form 20.

Table 3: Generalized Linear Mixed Modelling of Outcomes in the Intervention and Control Group: as treated analysis

	Unadjusted overall effects[a]						Adjusted overall effects[b]					
	Mean (SE) control	Mean (SE) intervention	Mean difference (95% CI)	p	-2 log likelihood	AIC	Mean (SE) control	Mean (SE) intervention	Mean difference (95% CI)	p	-2 log likelihood	AIC
Well-being (SPF-IL)	2.65 (.04)	2.46 (.04)	-.19 (-.29 to (-.09)	<.001	640.287	646.287	2.48 (.60)	2.41 (.60)	-.07 (-.15 to .01)	.092	477.725	483.725
Health-related quality of life (EQ-5D-3L)	.77 (.01)	.72 (.01)	-.05 (-.08 to -.01)	.010	-510.963	-504.963	.77 (.02)	.74 (.02)	-.02 (-.05 to .01)	.142	-510.963	-504.963
Quality of life (SF-20)												
Physical functioning	45.69 (2.34)	33.16 (2.51)	-12.54 (-19.28 to 5.79)	<.001	5510.560	5516.560	44.00 (3.42)	37.18 (3.43)	-6.82 (-11.50 to 2.15)	.004	5510.560	5516.560
Role functioning	32.60 (2.91)	23.41 (3.13)	-9.20 (-17.59 to -.80)	.032	5850.705	5856.705	37.75 (5.36)	33.04 (5.37)	-4.72 (-12.01 to 2.58)	.204	5850.705	5856.705
Social functioning	64.00 (2.26)	59.71 (2.44)	-4.29 (-10.82 to 2.25)	.198	5618.888	5624.888	61.55 (4.28)	61.60 (4.31)	.44 (-5.68 to 5.76)	.988	5618.888	5624.888
Mental health	66.19 (1.47)	60.93 (1.58)	-5.26 (-9.51 to -1.01)	.015	5032.019	5038.019	65.89 (2.39)	64.28 (2.40)	-1.61 (-4.88 to 1.66)	.334	5032.019	5038.019
Current health perceptions	46.58 (.55)	46.86 (.59)	.27 (-1.31 to 1.86)	.733	4145.909	4151.909	45.81 (1.17)	46.49 (1.18)	.67 (-.90 to 2.25)	.401	4145.909	4151.909

[a]Excluding adjusting covariables, but including time.

[b]Adjusted for age, sex, education, income, living situation, morbidity, frailty, time and baseline scores of studied outcomes.

SE, standard error of the mean; CI, confidence interval; AIC, Akaike's information criterion; SPF-IL, Social Production Function Instrument for the Level of well-being; EQ-5D-3L, five-dimensional, three-level EuroQol; SF-20, Short Form 20.

DISCUSSION

INAs are increasingly advocated to support community-dwelling older people, but their effectiveness has not been examined previously. This study thus assessed the effectiveness of an INA using measures of older people's (health-related) quality of life and well-being. The INA was found to have no substantial effect; the control group showed slightly better well-being and physical functioning as compared to the intention to treat group, but these differences were not clinically relevant. The minimal clinically relevant difference in these cases would be 0.5 SD (Norman *et al.* 2003) or equivalently 0.28 for well-being and 15.08 for physical functioning, whereas our study showed effect sizes of 0.09 and 6.98 respectively. Furthermore, differences in well-being disappeared in the as treated analysis.

Several factors may help to explain the observed lack of change in (health-related) quality of life and well-being. The social and political climate in which the INA was initiated may have contributed to these results. During this period, the municipality of Rotterdam implemented an array of policy changes - mainly in home care - and used competitive tender practices to appoint (new) health and social care providers. As described elsewhere (van Dijk *et al.* 2014) the rate and complexity of these reforms were detrimental to established community relationships and generated high levels of mutual distrust and insecurity among INA partners, including older people. Dynamic environments often hamper the ability to innovate and create learning environments (Nieboer & Strating 2012) and multicomponent interventions are particularly sensitive to contextual factors (Campbell *et al.* 2007). The achievement of multilevel alignment across professional, organizational, and policy borders through INA implementation may require more time, continuity, and broad commitment throughout all levels (i.e., micro-, meso-, and macrolevels) (Valentijn *et al.* 2013, Goodwin *et al.* 2014).

In addition to being distracted by the dynamic environment from developing and optimizing the intervention, community workers struggled to find innovative ways to support older people and lacked helpful support tools (van Dijk *et al.* 2014). Paradoxically, the project team's provision of ample professional autonomy paralyzed INA community workers in their search for innovative working methods. For example, community workers were expected to rely on informal support before seeking professional support; however, due to barriers to informal support provision and receipt (van Dijk *et al.* 2013), they often relied on conventional support organization techniques (van Dijk *et al.* 2014). Given the complexity of evolution toward innovative norms and practices, the 1-year

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study period may have been insufficient to capture intervention optimization and to detect effects on older people's health and well-being (Shiell *et al.* 2008).

Previous research has also demonstrated that integrated care initiatives regularly fail to achieve expected outcomes. Several recent reviews of integrated care programs have revealed unconvincing and inconclusive effects on care outcomes (Rummery 2009, Cameron *et al.* 2012, Petch 2012, RAND 2012, Miller 2014). Although these reviews focused on "conventional" components of integrated care, such as the integration of health and social care services and the use of multidisciplinary teams and preventive home visits, they did highlight the complexity of integrated care and support initiatives. Barriers associated with meeting the complex and varied needs of frail older people and those related to contexts characterized by competing economic and social pressures challenge the effectiveness of initiatives. These initiatives will not necessarily fail to meet expectations, but we are still in the process of learning which types of intervention are appropriate in different contexts and for which recipients (Miller 2014).

This study has several limitations. Although we matched intervention and control participants, the groups showed notable baseline differences. Differences in age, educational level, income, living situation, morbidity, and many outcome measures (well-being and three of five [health-related] quality of life subscales) favored the control group. Adjustment for baseline measures may not have been sufficient to account for unobserved differences. The suitability of the TFI as a matching tool is also uncertain; although it identifies frail older people and has shown predictive validity for disability and quality of life (Gobbens *et al.* 2012) it may not cover all aspects of frailty and thus should not be used in isolation. Furthermore, TFI administration differed between groups; it was self-administered in the control group and administered by community workers during home visits to intervention participants. INA community workers indicated that some older people appeared to mask the severity of their conditions in their presence (e.g., due to fear of institutionalization). Future research is required to establish whether TFI scores vary according to the method of administration.

The use of different recruitment methods may also have contributed to baseline differences between groups (O'Conner 2011, Wicks 2007). Community workers recruited intervention participants, whereas a random sample of control subjects was recruited by mail and telephone. Unlike in many other community-based integrated care interventions, which rely on systematic visitation of older people listed in GPs' registries, INA community workers depended on professionals and community members to identify frail older people. This difference in approaches may have affected the composition of the intervention group. Furthermore, older people's agreement to participate at

community workers' requests may have been based on personal or social desirability motivations. Postal questionnaires, such as that used for control group recruitment, may be especially sensitive to selective non-response, leading to overrepresentation of willing individuals who feel physically and cognitively capable of participation (Edwards *et al.* 2002). This possibility is supported by the lower response rates from less-advantaged neighbourhoods in our sample.

CONCLUSIONS

This thorough study, which included three measurements and a control group, demonstrated that the INA does not (yet) meet expectations. Given the complexity of the INA, the 1-year study period may have been too short for intervention optimization and detection of effects on outcomes in older people. Complex interventions such as the INA may require a "bedding-in" period before extensive evaluation of processes and outcomes is appropriate (Bardsley *et al.* 2013). Our findings also indicate the need to further improve and refine such programs before large-scale implementation. Although current demands require decisiveness, we must remain critical and carefully determine which interventions are most appropriate, considering local contexts and beneficiaries.

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Dag Mevr. van Dijk,

ik kreeg zojuist een form. om van alles over mijzelf en de
buurt in te vullen, aangezien ik aan de Boompjes woon....
is dat wat de buren aangaat best moeilijk... je zegt elkaar
gedag ik woon op een etage de 9 de waar iedereen
werkt.... ik ben 73 werk ook nog af en toe!!! gelukkig, ik
heb in mijn Toren 3 a 4 mensen waar ik op kan rekenen
als er iets met mij zou gebeuren daar blijft het ook bij.
Het wisselt ook veel mensen die gaan verhuizen en
komen weer nieuwe. Ik heb daar geen problemen mee
ben het gewend.
Ik heb gelukkig mijn bezigheden ben een geluksvogel dat
ik zo gezond mag zijn... moet mij voorstellen aan mijn
huisdokter en dat op mijn leeftijd ben ik
zeer dankbaar voor!!!!.

Ik doe heel veel dingen alleen sport veel in de sp,sch.
daar ken ik mensen doe ik dingen samen zoals spinning
ect. ga met 1 buurvrouw 1 x per maand ergens heen iets
leuks doen..... dat is ook de enige van mijn toren 22 verd.
hoog. Maar ik heb mijn uitzicht over de Maas ben dik
tevreden en kan heel goed alleen zijn.

Ik reis nog als eens computer doe ik veel wandel graag.
Ik heb niets te klagen.

Waarom schrijf ik U een mail? omdat de vragen niet zo
van toepassing zijn wat de buurt betreft.,..

Als U wilt dat ik het toch op stuur geen probleem! doe ik
dat.

CHAPTER 8

How to build an integrated neighbourhood approach to support community-dwelling older people?

ABSTRACT

Background: Although the need for integrated neighbourhood approaches (INAs) to achieve a better balance between supporting increasing numbers of care-dependent older people and reducing public spending is widely recognised, we lack insight into strategies like INA. In this case study, we describe diverse Dutch INA partners' experiences with collaboration to provide integrated person- and population-centred support to community-dwelling older people.

Methods: Twenty-one interviews with INA partners (including local health and social care organisations, older people, municipal officers, and a health insurer) were conducted and subjected to latent content analysis.

Results: Findings indicate that micro-level efforts were not supported by meso- and macro-level incentives, characterised by excessive reliance on professionals to achieve integration.

Conclusions: Top-down incentives should be better aligned with bottom-up initiatives. This study further demonstrated the importance of community-level engagement in integrated care and support provision.

BACKGROUND

Many Western countries face the challenge of meeting the needs of increasing numbers of care-dependent older people using limited health and social care budgets. The development of sustainable long-term care systems that adequately address these needs strains these countries' innovative capacities (Pavolini & Ranci 2008, Humphries & Curry 2011). As increasing numbers of older people continue to live at home, an integrated neighbourhood approach (INA) is needed (Anderson & Hussey 2011). INAs, consisting of collaboration among municipalities, health and social care, and informal care providers, are increasingly advocated as means to overcome current service fragmentation and co-ordinate care and support according to people's (complex) needs (Plochg & Klazinga 2002, Leichsenring 2004, Morikawa 2014). INAs aim is to use available neighbourhood resources effectively and increase responsiveness to citizens' specific needs, ensuring the provision of person- and population-centred support (Plochg & Klazinga 2002, Lowndes & Sullivan 2008). Although the need for INAs to achieve a better balance between supporting increasing numbers of care-dependent older people and reducing public spending is widely recognised, we lack insight into strategies like INA.

In this case study of an INA in Rotterdam, the Netherlands, we describe collaboration among diverse community partners to provide person- and population-centred integrated care and support to community-dwelling older people using an adapted version of Valentijn and colleagues' integrated care model (2013). Our main objective was to explore the experiences of municipal officers, health insurers, health and social care organisations, and older people with INA participation. We sought to increase understanding of the challenges facing these partners and identify factors facilitating and inhibiting integration within and among multiple levels.

An INA in Rotterdam

Health and social care services are widely available in Rotterdam, but are often fragmented and lack outreach activities that foster early identification of frail older people. The need to invest in (preventive) strategies facilitating older people's ability to continue living at home has increased with municipal legal responsibilities related to social services (e.g. home care and support of older people and informal support-givers).

In 2011, diverse partners in Rotterdam (the municipality, local health and social care organisations, Erasmus University Rotterdam, the University of Applied Sciences, and Geriatric Network Rotterdam) initiated an INA for community-dwelling older people to

reinforce networks among health and social care providers and informal support-givers in the community, based on recognition of their mutual dependence in efforts to optimise current services. The INA's success in providing person- and population-centred care and support required collaboration among formal and informal community partners on aspects of care ranging from the signalling of problems to prevention and support.

Within the INA context, professionals and residents were asked to watch over neighbours and report manifestations of frailty among older people to INA community workers (Fig. 1). These workers have health and social care backgrounds and have been temporarily reassigned to INA teams, which often include at least one social worker and one community nurse familiar with the neighbourhood. Community workers visit older people at home and map their wishes and needs *via* phased interviews. In consultation with older people, community workers seek appropriate solutions within (preferably informal) networks. The project's study protocol (Cramm *et al.* 2011a) contains more information on its scope and aims.

As INAs depend on stakeholders' continuous involvement and interdependence across multiple levels, gaining insight into factors that hinder or facilitate community-based integrated care and support is important. INA's success depends on integration within and among the micro-level (primary delivery of care and support), meso-level
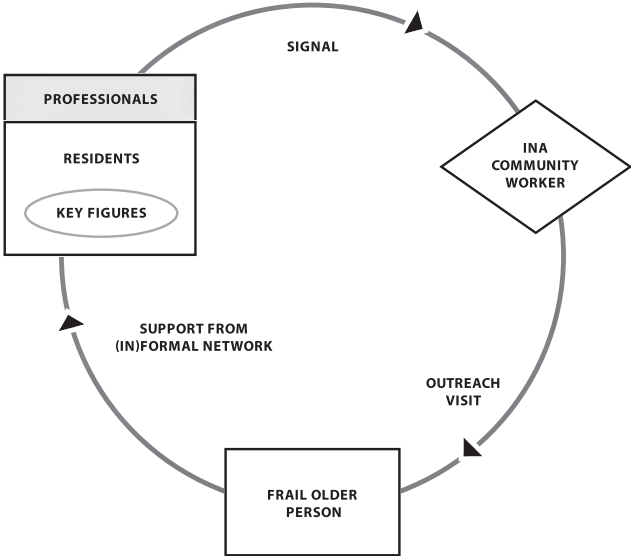

Figure 1: Working method of the integrated neighbourhood approach

(community, professional, and organisational contexts) and macro-level (broader policy context of care and support systems; Fig. 2) (Plochg & Klazinga 2002, Valentijn *et al.* 2013, Goodwin *et al.* 2014).

At the micro-level, personal integration involves a holistic and coordinated approach to an older person's health and well-being, requiring professionals' active engagement and support of his/her self-management abilities (Goodwin *et al.* 2014). Service integration ensures the provision of tailored and coherent services across time, space, and disciplines (Kodner 2009). To support a person-centred, rather than disease-oriented, approach, assessment tools and instruments should account for overall well-being (Valentijn *et al.* 2013). Micro-level integration thus requires collective actions of partners across the entire care and support continuum.

The meso-level encompasses structures that exceed community, professional, and organisational boundaries (Plochg & Klazinga 2002). Integrated care and support models often neglect the community level, which is crucial in increasing responsiveness to older people's needs and bundling resources available among formal and informal support-givers (Plochg & Klazinga 2002). Therefore, we added community integration to the meso-level in the adapted model. On a professional level, partnerships within and among health and social care organisations are needed. These partnerships ideally cover a range of specialist and generalist skills to enable a holistic approach to older peoples' needs. Organisational integration aims to overcome organisational boundaries
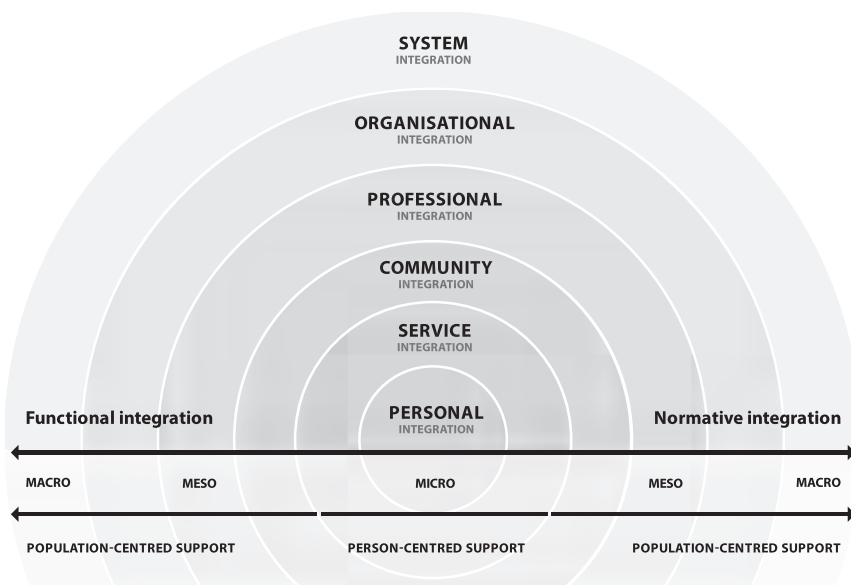

Figure 2: Integrated care model (adapted from Valentijn *et al.* 2013)

that may hamper collaboration among health and social care professionals. It provides structural activities that promote collaboration among organisations (Valentijn *et al.* 2013, Goodwin *et al.* 2014).

On the macro-level, the system should account for the complexity of issues that arise locally with respect to person- and population-centred support provision. It should thus provide regulatory, accountability, and financial incentives that stimulate integrated care and support realisation on the meso- and micro-levels (Valentijn *et al.* 2013).

Integration should also focus on the multilevel alignment of activities (Valentijn *et al.* 2013). Functional integration focuses on the coordination of support functions, such as information management, skilled leadership, and quality improvement. Normative integration is a less tangible, yet essential, dimension involving the creation of an integrated mind-set and common set of values (Petch 2013).

METHODS

Design and setting

This qualitative, descriptive study was based on face-to face interviews with 21 INA participants conducted in several districts of Rotterdam over a 4-month period in 2013: the INA project manager, three older people who received INA support, four INA community workers with health and social care backgrounds, four managers/directors of health and social care organisations, seven municipal officers, one health insurer, and one former politician who remained actively engaged in the field of long-term care. The first author also made field notes and audio-recordings at several INA-related meetings, ranging from those of community-based teams and civic steering committees to educational meetings for community workers.

The INA was initiated in two districts of Rotterdam in April 2011 and extended to two additional districts 1 year later. The project and evaluation are part of the National Care for the Elderly Programme, launched in 2008 and funded by the Netherlands Organisation for Health Research and Development (project no. 314030201). The ethics committee of Erasmus University Medical Centre of Rotterdam approved the project in June 2011 (MEC-2011-197).

Interviews

The first author conducted all interviews (60-90 minutes) at participants' offices or homes; one interview involved three municipal officers simultaneously. Interviews were audio-taped with participants' permission and transcribed.

The interviews aimed to elicit participants' reflections on their experiences with the INA from their (professional) perspectives. Because relevant research is sparse, performing interviews with a limited number of preconceived categories was most appropriate (Hsieh & Shannon 2005). To gain new insight, we allowed themes to arise from the data (Kondracki & Wellman 2002, Hsieh & Shannon 2005). Participants were encouraged to describe and reflect on their experiences with (collaborative or competitive) interaction among community partners and the perceived roles and responsibilities with respect to integrated care and support provision to older people.

Analysis

Latent content analysis of narrative text was performed (Graneheim & Lundman 2004, Hsieh & Shannon 2005). To avoid loss of nuance, participants' narratives were translated into English only in the report-writing stage. To obtain a holistic perspective, entire transcribed texts were first read open-mindedly several times. Transcriptions from each group were then read separately to comprehend overall meaning. Then, we read texts word by word, extracting 'units of meaning' that were coded and categorised using atlas.ti. Finally, the underlying meanings (i.e. latent content) of categories were formulated into themes (Graneheim & Lundman 2004).

Barriers to and facilitators of integration were identified within the framework of the adapted integrated care model [10]. Results are reported by integration level, with quotations identified by participants' backgrounds [community worker (CW), older person (OP), project manager (PM), health or social care director/manager (HCD/SCD/HCM), sub-alderman (SUBALD), municipal officer (MO), health insurer (HI), and head education team (HET)]. Elements contributing to functional and normative integration among levels were also examined.

RESULTS

Micro-level: personal integration

Gaining trust

Obtaining older people's trust was identified as a key prerequisite for the provision of person-centred support:

> *"Older people are very suspicious. And from that distrust they need trust, someone they can trust" (HCD).*

Continuity is a precondition for gaining trust. Rapid fluctuations in projects often have resulted in discontinuities in care and support co-ordination, rendering older people distrustful of new projects and faces. Their awareness of their frail condition exacerbates this distrust. INA community workers thus had to invest much time in becoming familiar faces in neighbourhoods. The use of business cards and posters with their photographs contributed to their familiarity, and older people reported that they kept these business cards at hand. Older people who built relationships with community workers felt reassured that they could confide in them and rely on them when in need.

Acknowledging and strengthening older people's capabilities

The INA uses individualised support plans based on assessments of older people's physical and social needs *and* capabilities (e.g. housing, mobility issues, social activities). One community worker argued that filling in a support plan was itself an intervention, as it encouraged older people to articulate needs and reflect on their capabilities. Community workers felt that older people needed guidance in using and strengthening capabilities, taking responsibility for their own health and well-being (e.g. applying for a walker, learning to manage finances). Older people often felt entitled to health and social care services, which they *'had been working for all their life'* (OP). Community workers thus played important roles in generating awareness of and strengthening older people's capabilities before turning to (in)formal support, which required careful consideration of when (not) to intervene.

Overcoming resistance to informal support

Within the INA, informal support is sought before professional support for older people who cannot meet their own needs. Community workers, however, reported

that older people had difficulty relying on informal networks; they were reluctant to ask for help and strongly desired independence:

> "People first must drop dead so to speak, before they will turn to help, in other cases they feel you just shouldn't whine" (CW).

Older people especially struggle to ask for social support; despite recognising its importance, many avoid social contact:

> "When they have defined it, it becomes real and that's so confronting. They got used to being alone and isolated; it became part of their own structure, making them extremely afraid of any change" (CW).

Community workers play a crucial role in breaking through this structure and supporting them in seeking contact (Box 1).

Box 1: real-life case of an INA participant in Rotterdam

Mrs. Jansen, a 75-year-old, moved from a big house in a village-like neighbourhood to a senior apartment block in an adjacent neighbourhood at her children's encouragement after her husband's death 6 years previously. Although she initially enjoyed this new home, with nearby shops and well-organised activities, she had lost her sense of belonging and struggled to relate to newcomers: 'new people are moving in who don't even bother to say good morning or good evening[…]They pay so much attention to how you walk or how you dress your hair[…]I'm not like that. I'm just an ordinary woman'. After negative experiences (ridicule at coffee socials, avoidance of invitations to visit), Mrs. Jansen was reluctant to seek social contact, which she missed. She occasionally cried about her husband's death and longed for someone to talk to. Mrs. Jansen was thus positively surprised when a community worker approached her in the apartment lobby; they sat together and Mrs. Jansen was able to share her story with a neutral person. At Mrs. Jansen's agreement (and within a week), the community worker arranged for a neighbour to have coffee with her on Monday mornings, which pleases them both: 'She tells me how happy she is having me over and I also feel very comfortable around her'. Mrs. Jansen explained that the community worker was essential in setting up this contact. She also appreciated the community worker's updates about neighbourhood activities (e.g. social activities

After building relationships and familiarity, community workers are thus crucial in raising older people's awareness of their (social) needs *and* capabilities, encouraging self-management, and facilitating informal support-giving.

Micro-level: service integration

Engaging community resources

Rather than professional resources, INA community workers utilise locally available community resources and older people's social networks as much as possible. They engage the community in supporting older people and alerting them to potentially frail individuals. When required services are unavailable, community workers are expected to mobilise volunteers to set up services. In practice, such interventions are not always successful. Two community workers, for example, explained that an informal grocery delivery service they set up at older people's request remained unused because older people felt it would '*threaten their sense of independence*' (CW) and were anxious about having '*an unknown volunteer in their house'* (OP).

Service integration: what it takes from professionals

The previous example illustrates that community workers must set up *and* track responses to interventions to support frail older people's needs. They must play liaison roles at the personal (supporting and monitoring older people), professional (seeking a multidisciplinary approach to support), and community (establishing a well-functioning network and engaging informal support-givers) levels. The INA project manager emphasised the divergence of these tasks:

> *"Mobilising the community is completely different from assessing what older people are capable of, which again is different from seeking informal support-givers, without having to throw in a gift card so that they feel valued for what they do. So we expect quite a lot of them" (PM).*

Participants perceived generalist skills as indispensable, but a health care manager argued that older people may be more inclined to approach community workers based on their specialist, rather than generalist, backgrounds:

> *'I'm not sure whether the ease and trust with which you reach people increases when you position yourself as "being everything"[…]I notice that people talk more easily to a caretaker on safety in the neighbourhood than their care issues[..] The reverse is true as well; it's easier to talk with a nurse about your prostate disturbances than with a caretaker' (HCM).*

To ensure service integration, community resources must be integrated throughout the process of signalling and supporting older people. Moreover, integrated care and support provision requires community workers to operate simultaneously at multiple levels.

Meso-level: community integration

Building community awareness and trust

Within the INA, community integration relies on community workers' ability to generate community members' awareness and trust. Community workers often faced scepticism related to 'being yet another community project' and about the INA's main goals, as utilisation of older people's capabilities and informal networks was often perceived as a way to cut public spending. Moreover, participants wondered whether community members were ready to lose some personal autonomy '*in favour of doing something for or with others*' (HCD). Community workers noted that conveying the INA's message took time and that community members often hesitated to alert them to frail older persons, reluctant to interfere in someone's life. Community members, for example, shared only 'justified' concerns about very frail older people in great need with INA community workers, instead of signalling related to the INA's target population of those at risk of becoming (more) frail.

Familiarity with the neighbourhood

Neighbourhood-specific familiarity with the preferences of support-givers and those in need of support is crucial for the successful engagement of community members in providing support. One community worker described difficulties in finding a neighbour willing to deliver bread weekly to an older man estranged from society:

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'The whole flat ignored him completely. Although there are quite a few people in that neighbourhood supporting others, they seem unwilling to support a person living on the edge of society' (CW).

Neighbourhoods may have distinct preferences, standards, and values, which must be considered carefully when providing support to older people:

'Although Vreewijk is a very cohesive neighbourhood, along the way we learned that they uphold the principle of "not washing your dirty laundry in public", feeling most comfortable in leaving their concerns private' (PM).

Such norms may lead an older person to prefer a support-giver from a different apartment block or street due to fear of gossip. Furthermore, (cultural) differences between neighbours giving and receiving support (e.g. different expectations about support-giving intensity and tasks) may cause problems. One older woman in need of support explained that she knew the match would fail as soon as she saw her potential support-giver walking down the street. INA community workers must take the preferences, and sometimes prejudices, of support-givers and those in need of support into account. Once they find good matches, they notice improvements:

'People who previously spent their time in their homes now come alive in the neighbourhood. There was this isolated man, who now comes to our coffee morning every week' (CW).

Community integration: what it takes from professionals

The need for community integration requires professionals to reinvent their roles and serve as community workers. A health care organisation manager identified this challenge as her greatest concern, wondering whether professionals would successfully attract informal support-givers and perceive collaboration with the community as a self-evident part of their working methods. INA community workers admitted that they struggled to shift from *providing* to *facilitating* support:

'I find it very hard and contradictory to gain trust among older people on the one hand, while I should withdraw and facilitate support in the informal network on the other hand' (CW).

Community workers further argued that redirecting older people to professional networks or well-known volunteers was often less time consuming and more reliable than seeking informal support. Although they agreed that neighbours were willing to provide informal support, they emphasised the difficulty of appealing to this sense of willingness. Along the way, they have learned that people's willingness to support one another is best addressed by articulating concrete, clear requests (e.g. asking whether someone is willing to bring groceries or provide assistance in the garden, rather than whether he/she is willing to do 'something' for someone else) and by preventing the excessive formalisation of informal support, which would undermine its spontaneous and voluntary character.

Sustaining relationships as a prerequisite for community integration
To overcome these barriers to community integration, community workers perceived that sustaining relationships was crucial in gaining access to frail older people and adequately assessing potential support-givers:

> *'It's about sustaining relationships, that's why I go to the community centre every week, to connect with people, only then do they open up and become willing to collaborate' (CW).*

Community workers emphasised that relationships were often person-specific and not easily transferred to other community workers. They thus advocated minimal weekly working hours and project durations to allow professionals to invest in integration among community members and other professionals:

> *'At minimum it requires a year to get a grip on the neighbourhood, your own role within INA and the working method of INA. After that you're able to further refine it' (CW).*

Community integration was thus found to rely on community workers' ability to gain community members' trust and the extent to which they became familiar with the neighbourhood. Community integration further requires community workers to *facilitate*, rather than *provide*, support.

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Meso-level: professional integration

Individual skills

Professional integration starts with selecting appropriate people for the job. Although INA community workers were initially selected for their health and social care backgrounds and familiarity with neighbourhoods, the project team learned that entrepreneurial skills were most important. Given the INA's innovative and complex character, creative community workers who constantly tried new ways to actively reach frail older people and supportive community members most successfully established integration. Community workers' employment by health and social care organisations in addition to INA work sometimes hampered professional integration. For example, some professionals had to combine INA community work with other functions that necessitated more commercial approaches, which may '*lead to a schizophrenic situation in which community workers have to unite a neutral with a commercial attitude; only a few succeed in*' (HET).

   The question of whether INA community work could best be accomplished by allocating specific tasks -functionalities- to existing professions or by creating new, specific INA professions was a recurrent theme during meetings. Most partners agreed that community workers should combine a generalist scope with specialist backgrounds, enabling determination of when (another) speciality is required to support an older person and ensuring high-quality person-centred support.

Team skills

To facilitate professional integration, community teams must incorporate various specialities, '*combining their skills to ensure a generalist and holistic approach*' (PM). The availability of an appropriate range of skills and expertise on a team was perceived as a prerequisite for professional integration, and particularly relevant for the INA's focus on improving *overall* well-being. One community worker, for example, commented:

> '*I brought my knowledge about health care to the table and how to approach older people[…]And I taught the social worker how to cope with older peoples' sexual impulses[…]and the other community worker had great entrepreneurial energy, which I found very stimulating*" (CW).

Membership on a diverse community team seemed to generate more than the sum of its parts:

'soon I started to feel that we could conquer the world[...]you learn to recognise symptoms that up until then weren't natural for me' (CW).

Community workers, however, emphasised that team synergy could be achieved only when team members were receptive to professionals from other disciplines and were able to address relational issues that may hamper the establishment of mutual goals. Continuity within the team was thus perceived as a prerequisite for professional integration. One community worker explained that changes in team composition harmed collaboration:

'Every time we needed to start from scratch, how do we communicate, what are our intentions?' (CW).

Moreover, community workers perceived the imposition of output criteria and targets as the greatest threat to collaboration:

'If one of us generates a lot of clients, and the others don't, it sure causes friction' (CW).

Community workers expressed concern about meeting the target of identifying frail older people:

'Although we planned to go to a senior apartment block together, one of the community workers went there before; it sure makes you doubt whether there are any older people left for you' (CW).

The establishment of team, rather than individual, targets may overcome this barrier.

Recruitment of 'entrepreneurial' professionals with generalist and specialist skills to form diverse teams was thus found to be crucial for professional integration in the support of older people with varying and complex needs. Although teams may generate more than the sum of their parts, discontinuity and a lack of mutual goals were found to hamper professional integration.

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Meso-level: organisational integration

Conflicting organisational interests

Although health and social care organisations recognise the need to collaborate, professionals feel that cost containments are forcing the prioritisation of organisations' interests over the common good:

> *'in times of reforming a structure, in times of insecurity concerning the survival of organisations, you have to save your own skin, and that's when the power of the institute becomes way too large in the procedure' (HCD).*

Although INA directors and managers displayed a lack of confidence in achieving organisational integration on an institutional level, due to their need to meet organisational targets in order to 'survive', they *did* feel that collaboration succeeds on an operational level on the basis of mutual understanding and acknowledgement. Although they seemed confident, community workers constantly noted that competition among professionals hampered organisational integration. In addition to expressing the general fear of failing to meet their targets, professionals identified the 'blurring' of professional identities, i.e. lack of clear roles, as an important impediment to organisational integration; one community worker commented:

> *'I still find it very strange that community nurses [community workers with similar but more health care-related tasks] are getting all these extra tasks. They may say the former community nurse did the same, but then they're talking about the 50s, when the milkman put the bottles on the curb; it's a completely different and complicated world now' (CW).*

Ill-defined roles not only led to confusion among older people and professionals, it also encouraged INA community workers to constantly explain and justify their roles, even within their own organisations. This sense of competition hampered INA community workers' provision of support to older people; one community worker explained that she was opposed by an activity coordinator when she tried to organise activities in a flat that was crowded with isolated older people:

> *'We had put an INA folder in the mailbox, which made the activity supervisor very irritated. She argued that they didn't need it and that they had their own*

activities[...]but it's a three-by-three apartment with no balcony, it's like a prison'
(CW).

Lack of organisational commitment

Community workers were equally disappointed in their organisations' and managers' lack of engagement during the project. They were seldom asked about their INA experiences, and meetings called by management merely involved elaboration on practical issues, such as sick leave or investment of time in the INA. One community worker felt appreciated only *'for delivering clients through the project'*, whereas she had hoped her INA experience would foster innovation in her organisation. Similarly, the INA project manager stated that he had placed too much trust in health and social care organisations' commitment. Furthermore, he identified a lack of structural incentives that would generate organisational integration; during an advisory group meeting within the INA context:

> *'they kept going on about who was responsible for which domain and about the sense of competition or collaboration among health and social care[…]And suddenly it struck me that there was no other meeting where they encountered each other' (PM).*

Thus, successful partnerships often involved willing professionals or managers or depended on high levels of trust built through previous collaboration. This specifically accounted for the INA engagement only of general practitioners who felt affiliated with the need to support community-dwelling older people. Managers' active interference was felt to promote organisational integration. For example, when INA community workers indicated that community nurses from a similar but more health care-oriented programme perceived them as valuable only when no other way to support an older person had been found, both programme managers held a meeting to integrate services provided by community workers and nurses. The managers' expression of mutual commitment to collaboration, through organisation of this meeting and on-site articulation of their engagement, made community workers perceive collaboration as an indispensable part of their job. Moreover, regular discussion of clients or provision of feedback to professionals who had identified potentially frail older people to INA workers enabled professionals to see their complementary values.

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Within the INA, organisational integration was thus impeded by conflicting organisational interests and achieved only under favourable conditions, i.e. through a few willing professionals or managers and through high levels of trust built during previous collaborations. Structural incentives, such as the creation of opportunities for professionals to meet and gain insight in each other's added value, facilitate organisational integration.

Macro-level: system integration

Inadequate financial incentives
Participants identified divergent flows of funds as the main cause for the lack of adequate financial incentives, affecting health and social care organisations and municipalities:

> 'When the municipality performs its tasks regarding the Social Support Act [The Social Support Act took effect in 2007 and requires municipalities to meet increasing legal responsibilities regarding support of people (with disabilities)] well and arranges prevention properly, it won't benefit the municipality; it will only lead to lower expenditures among health insurers. Well, do you think that's of any interest to the average civil servant?' (HI).

The health insurer and municipal officers argued that incentives should ensure that incremental improvements bring economic benefits for all stakeholders, facilitating work toward the same goal, i.e. integrated care and support provision to older people. Current financial systems lack stimuli for innovation; the health insurer commented:

> 'I'd also prefer to build in a reward for innovative behaviour. And that's very complicated, what you basically see is that those who act last in this transition, or focus on its production, win this race financially' (HI).

During meetings held to discuss whether and how the INA could be sustained after project funding ended, partners looked to each other with the hope of (financial) commitment. Participants emphasised the need for broader (financial) commitment to sustain approaches such as the INA:

> 'On the content, we agree with each other, but there are other sides to consider as well. The question is whether we can commit ourselves jointly[…]if you ask

an individual organisation if they're willing to commit, while having to cut back intensely…it demands a broader approach in which all parties commit' (HCD).

Inadequate accountability incentives

Similarly, health and social care organisations urged the municipality to reconsider its accountability incentives, annoyed by the focus on *how* they do things:

'They use accountable performance indicators such as the amount of hours spent…because that's the most measurable aspect[…]When I'm talking with a municipal officer, 90% of the conversation turns to talking about a spreadsheet with the amount of hours of our employees' (SCD).

A sub-alderman argued that this focus compromised municipalities' interests, namely the need to innovate and empower citizens to participate:

'we currently steer on "fifteen minutes of this and fifteen minutes of that[…] and it should also meet these and these conditions"; so we're very much on the details of how to do it. But when the job is to attract as many volunteers to empower social networks, then you should provide them the necessary space to do so' (SUBALD).

Instead of focusing on process, creating a bureaucratic accountability system, many participants would prefer the municipality to promote results and focus on result-oriented indicators.

Inadequate regulatory incentives

Paradoxically, professionals experienced similar restrictions. Community workers are told that the provision of high-quality support requires innovation and collaboration among community partners while being required to bureaucratically account for all actions and meet targets. A health care director and a health insurer expressed the wish that professionals would seek ways around these constraints, taking the system and its operational rules rather lightly. The health care director explained how he would like two community nurses from different organisations to collaborate in the community:

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'I actually hope they're being smart about it, like "you know what, I'll give you a hand, or I'll do it for you this time". Without having to send an invoice on either side' (HCD).

However, operational rules seem to restrain professionals' autonomy on such occasions.

On a macro-level, the INA was affected by the system's failure to provide adequate financial, regulatory, and accountability incentives. Current system incentives lack a clear division of tasks and fail to generate broad engagement. To enable successful integrated care and support efforts, incentives should carefully anticipate the needs for innovation and collaboration. This approach requires financial incentives that account for aligned incremental improvements and accountability measures that provide professional autonomy.

Functional integration throughout all levels

The risk of excessive professional autonomy
The INA's innovative character, specifically with respect to active community engagement, created a paradoxical situation. The project leader gave community workers autonomy to create their own working methods, with no guideline or restriction on how they spent their hours. This autonomy was a main motivation to become an INA community worker, as professionals missed it in their regular jobs. However, joint training conducted 1.5 years after INA initiation revealed a discrepancy between community workers' and project management's perspectives on core tasks. The trainer concluded that community workers did not yet perceive community engagement and a facilitating role as self-evident parts of their job. She stated that community workers remained *'bound by the conventional way of organising things, i.e. from the perspective of helping/ fixing problems'* (HET).

Lack of support tools
The lack of clear interventions or decision support tools paralysed community workers, forcing them to rely on usual working methods. They were expected to develop support plans, but the process had not been fine-tuned for everyday practice. Given the lack of tools and guidelines to support community workers' decision making, the plans became a formality instead of a supportive tool. Team meetings neither were a resource for aligning professional standards or gaining confidence in the value of

the work. Whereas most community workers needed to describe their struggles and discuss community issues, meetings were focused predominantly on practical issues (e.g. whether targets were being met):

> '*I have a strong need to get inspired and informed. I wonder why we don't discuss such things, I read stuff in the local newspaper which I think we should address and which is being addressed by residents in the community centres*' (CW).

Discussion of local and broader (e.g. transitions in municipal and central government) issues would also contribute to workers' understanding of the context in which they operated, fostering their sense of purpose. Encouraged by INA's education team, the project manager decided to include discussions of successful cases/situations and those with which community workers struggled in team meetings. For example, one community worker was reassured that she was allowed to spend 2 hours on a bench in front of the supermarket if it facilitated her acquaintance with the neighbourhood and its (older) inhabitants.

High touch, low tech

In exchanging information, community workers often applied a 'high touch, low tech' approach. Rather than using the web-based portal developed for the INA, community workers preferred to consult each other by telephone or in person. These '*short lines of communication*' (CW) were considered to be most valuable for team collaboration. One community worker, however, expressed her preference for a handheld tablet to assist with fieldwork:

> '*I can't bring all my paperwork on the street. Give me an iPad and I can access all the information: which volunteer is available, for example. I'm racking my brains out there*' (CW).

Professional autonomy provided by project management was at odds with guidance in adopting a new professional role that matched the INA's core principles. The INA's innovative character increased community workers' need for guidance and supportive tools. The lack of material (i.e. decision-support tools or guidelines) and immaterial (i.e. acknowledgement) resources hampered the creation of shared values and aligned professional standards.

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Normative integration throughout all levels

The dynamic environment in which the INA operated seemed to overshadow the urgency to facilitate an integrated mind-set. Rotterdam's use of competitive tender practices to appoint (new) providers and award contracts impacted INA organisations and community workers. Although these practices and other policy changes (mainly in home care) aimed to increase the efficiency of integrated care and support provision, they created marked insecurity, impeding the INA's ability to generate multilevel integration.

Insecurity and mistrust

For older people, tender practices and policy changes often implied the rationing of publicly funded health and social care services and discontinuity in service delivery. Older people thus have become insecure and feel that they are burdening society:

> *'in roughly one and a half years they restructured all home care services...And they may argue that volunteers will cover those things that remain to be done, but we must wait to see who's coming[…]It feels like we don't matter anymore' (OP).*

The INA's anticipation of these transformations by shifting responsibilities back to the community frightened older people and confirmed the idea that the INA was *'no more than a hidden economic measure'* (OP). Furthermore, based on previous experiences, older people associated the INA with a negative form of social control:

> *'The problem is that those of the younger generation are not familiar with a cohesive community and I think that those from the older generation who still remember that world can´t relate to it anymore' (HCD).*

Tender practices also generated mistrust among health and social care professionals. Many professionals commented that they did not understand *'why the municipality first imposed major cutbacks'* (CW), leading to community centre closures and job losses among very experienced community workers, and then forced them to rebuild services. These practices drew energy away from the support of older people through the INA. The project manager argued that this situation paralysed community workers and prevented the INA from making a real transition:

> *'It caused a standstill. The community workers were caught by insecurity and passivity for at least half a year. There was only room for bereavement' (PM).*

The INA's expectations concerning deprofessionalisation further increased professionals' mistrust, causing a conflict of loyalty toward the INA.
Municipalities were similarly affected by a high degree of insecurity:

> *'Until January 2015 we won't know how much money we'll get from the state[…] But what's even more fundamental, is that the Bill of the Social Support Act won't be ready until mid-2014, and that should provide us with the instructions and the conditions under which we must operate. But by that time our procurement should have long been realised. So that's a very strange situation' (MO).*

In an interview conducted 2 days before his resignation, a municipal officer described the resulting risk-averse culture within municipalities, which prohibited '*thinking out of the box and trying innovative approaches'* (MO). Although municipalities shift responsibilities to (social) care organisations and communities, they concurrently try to retain top-down control; the same municipal officer commented:

> *'we supposedly have marketed it, but on the other hand, we still held on to legislation, which makes no sense' (MO).*

Paradoxically, municipalities' constant tendency to control and prevent risks so that frail people don't 'fall through the cracks' causes mutual distrust, undermining collaboration and innovation; a municipal programme manager commented:

> *'We face very complex strategic decisions, and of course there is no mutual trust. It seems very simple, but trust in one another is a key driver in this sector; are we actually supporting people who are in need or are we just earning money on their backs?' (MO).*

The widespread culture of accountability thus causes organisations to focus on their own interests instead of committing to an integrated mind-set that focuses on the best interests of (frail) citizens.

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DISCUSSION

This study showed that integrated care and support provision through an INA is a complex, dynamic process requiring multilevel alignment of activities (Goodwin *et al.* 2014). The INA achieved integration at the personal, service, and professional levels only occasionally. Micro-level bottom-up initiatives were not aligned with top-down incentives, forcing community workers to establish integration *despite* rather than *because of* meso- and macro-level contexts. Functional and normative integration were lacking, with excessive reliance on professionals to achieve integration.

Incoherent macro-level policies have been identified as main barriers to the pursuit of integration. Current system incentives are not aligned to achieve collaboration and innovation and do not account for the complexity and nature of issues arising locally. In line with previous findings (Leichsenring 2004), health and social care partners identified divergent flows of funds and the lack of joint budgets as significant obstacles to collaboration. Current performance indicators prioritise accountability and control, rather than creating a learning environment that allows partners to try innovative approaches (Ham & Walsh 2013). Thus, health and social care partners advocate that the government is 'tight on ends and loose on means'. However, municipal officers and health insurers expressed concern that allowing local variations in means may cause (frail older) people (to whom they are legally required to provide support) to 'fall through the cracks'.

This tendency to control and prevent risks while being in need of innovation and collaboration affected the professional and organisational levels. Although managers and directors were confident that professionals would seek ways around system constraints, our research demonstrates that professional and organisational collaboration requires appropriate structural incentives. The creation of opportunities for professionals and managers to meet and gain insight into their complementary roles is crucial. Without an aligned macro-level policy narrative, bottom-up initiatives such as the INA will struggle to make impacts.

Overcoming these macro-level barriers is necessary - but not sufficient - for integration (Glendinning 2003, Cumming 2011, Petch 2013, Goodwin *et al.* 2014). The lack of normative integration fundamentally prevented the INA's integration of care and support. The rate and complexity of current reforms were detrimental to established community relationships and generated high levels of mutual distrust and insecurity throughout system levels. Professionals and organisations re-focused energy on individual interests (Cumming 2011, Hudson 2011, Demers 2013) rather than

working toward the common goal of improving care and support for older people. In line with previous findings, such dynamic environments hampered the development of an innovative culture (Nieboer & Strating 2012).

To promote normative integration, trust may be more determinant than streamlined structures (Williams & Sullivan 2009). Trust was a recurrent theme at the personal, community (as a prerequisite for older people's and community members' commitment) and professional (as a pre-existing factor built through previous collaboration that enabled professional integration) levels. These findings emphasise the importance of continuous relationships that allow the development of trust and social capital in pursuing integration (Nolan *et al.* 2006, Williams & Sullivan 2009, Humphries & Curry 2011, Petch 2013). Restructuring efforts may cause 'cultural damage' by undermining the importance of trust and relationships for normative integration (Hudson 2011).

Our study also revealed a lack of functional integration. Material and immaterial support tools were insufficient for the creation of shared values and aligned professional standards. Although a protocol-driven approach would conflict with the need to provide tailored care to older people with complex needs, the INA's innovative character increased the need to support change and direct professionals toward mutually agreed-upon objectives and practices (Leichsenring 2004). Support tools must be responsive to professionals' struggles and the need for innovation while respecting professional autonomy and diversity. Although not addressed in many integrated care and support models, the community level was found to be critical in engaging community members and resources when meeting older people's needs. Our study indicated the importance of community workers' understanding of community standards and norms. Furthermore, professionals struggled to perceive community members' roles as integral to the support-giving process (van Dijk *et al.* 2013); guidance of professionals in engaging informal support-givers is thus crucial in promoting community integration. Our study revealed clear barriers to informal support, suggesting that its provision and receipt require a paradigm shift toward more natural occurrence and self-evidence.

Although this study provides knowledge about factors that promote or hinder integration at the micro-, meso- and macro-levels, the context-specific nature limits the generalisability of its findings. However, we feel that our detailed and multi-faceted description of diverse INA partners' experiences provides useful insights for future research. The INA took place in a highly dynamic environment with intense external forces, which impacted the success of integrated care and support provision. Further research should account for interactions between external factors and local integrated care and support delivery processes. Successful integration within a complex programme

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such as the INA requires time, continuity, and broad commitment throughout levels, with evolution toward aligned norms and practices. Moreover, we demonstrate that the community level should be included in integrated care and support models, as specific (social) community characteristics must be considered when improving community-based integrated care and support. Future research should also focus on the development of validated measurement tools to assess the 'strength' of integration throughout levels and its impact on (cost) effectiveness.

CONCLUSIONS

This study enabled us to identify factors facilitating and inhibiting integration within and among levels defined by Valentijn and colleagues (2013). It provides a rich description of the experiences of older people, health and social care professionals and organisations, the municipality, and a health insurer with participation in an INA to support community-dwelling older people. These findings are especially important in a time of ageing populations and a general shift in the primary provision of (social) care from the state to the community.

Rotterdam, 12 maart 2012

Ref: SB/AB/br004 EMC enquete.doc

Geachte heer, mevrouw,

Graag licht ik het volgende toe. Ik klaag niet, maar ik heb last van:
1.   rheuma, vooral in de rechterhand;
2.   de energiedoorstroming;
3.   de nekspieren, hetgeen slaap in de pink en verder in de handen veroorzaakt;
4.   zoals ieder ouder persoon, om de twee uur plassen;
5.   de hersenen zijn prima maar lui (vergeetachtig).

Verder werk ik in mijn garage, zoals altijd sinds 1949, nu vijf dagen à zes uur en niet in het weekend. Dan doe ik de tuin bij mijn huis 250m2 en alles is prima.

Voor het warme eten ga ik naar Humanitas (prima). De rest koop en regel ik zelf. De hulp in de huishouding voor schoonmaakwerk en de was en kan ook niet beter.

Alles wat nog kan ontbreken regelt mijn dochter voor 100%, die woont vlakbij; geen enkele klacht.

Ik ga 1x per week naar   voor Electroacupunctuur (hier vlakbij aan het einde van de laan). Hij meet alles door. Daarna geeft hij een Electro-acupunctuur behandeling. Helaas kan hij de energiedoorstroming én de problemen in de nek nog niet goed krijgen. Longontsteking, oorontsteking, blaasontsteking en dunnere afgang (mineraal-gebrek) heeft hij altijd supersnel verholpen. Na zo'n behandeling loop ik weer een tijdje vlotter.

Ook ga ik 2x per week naar de overbuurman de heer   fysiotherapeut. Na een behandeling loop ik weer een tijd beter en vlotter.

Als ik een poos gezeten heb, moet ik na het opstaan alles weer los schudden en dan gaat het weer; je wordt bang van die dingen.

Dus niet klagen en verder.

CHAPTER 9

General discussion

When the integrated neighbourhood approach (INA) started in 2011, several kick-off meetings were held to introduce the project team members to the local community. The aims of these meetings were to inform local professionals, older people and neighbour support-givers about the INA and create support for its underlying motives. However, community members not always welcomed the project during these meetings and emotions sometimes ran high.

In Lombardijen, the project manager had not yet finished his opening speech about the INA's main aims when he was interrupted by an attendee: Ms. Vermeer, an 87-year-old woman with a long history of volunteering. Ms. Vermeer said, '*they already cut our social security pension by 174 euro a month. Your boss* [referring to the municipality] *fleeces us. And then you're here to supposedly advocate for our needs?*'. Another woman, Ms. Kroon, supported her view, mentioning that older people are forced to age in place, but her apartment does not allow her to do so and the municipality won't provide the (financial) support to move to an age-friendly home. When the programme manager tried to explain that the project is meant precisely to evoke broader discussion of older people's needs, Ms. Vermeer again responded, '*just end the whole thing right now. In my place, there are a lot of 55+ aged people for whom I get groceries*'. The chairman interrupted to compliment her, but she retorted, '*I don't want your compliments, I just do it because I want to. But he* [pointing at the INA programme manager] *throws parties and dinners: where does he get his money from?*'. The programme manager again explained that they were looking to expand involvement, with ready and willing neighbour support-givers acting as champions: '*You already provide support to your neighbours. The question is how can we make this general practice? How can we arouse curiosity, stimulate people to make chit-chats, and prevent things from getting worse?*'. Then, Ms. Vermeer asked, '*But who exactly are the professionals here?*'.

This exchange exemplifies the complexity of today´s challenge of providing support to increasing numbers of community-dwelling older people while effectively using formal and informal resources. The dominant policy-level response to this challenge is to adopt an ageing in place policy (Bettio & Plantenga 2004, Chan *et al.* 2008, Pavolini & Ranci 2008, Wiles *et al.* 2012). Enabling older people to continue living in their neighbourhoods is expected to bring economic and social value (Pavolini & Ranci 2008, Lui *et al.* 2009). However, ageing in place policies also fuel the need for *supportive* neighbourhoods that accommodate older people's needs.

Governments throughout the western world are thus seeking systems that ensure adequate support provision while reducing the demand on public resources. Many

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western countries have expanded the caring capacity of communities by encouraging greater citizen responsibility and informal care (Pavolini & Ranci 2008, Muehlebach 2012, Verhoeven & Tonkens 2013). INAs seek to combine these policy aspirations by engaging multiple community partners to share responsibility for the delivery of health and social care to (older) people (Barr *et al.* 2003, Harris & Boyle 2009, Lui *et al.* 2009).

Although the need for supportive neighbourhoods is currently widely acknowledged and INAs are increasingly perceived as means to achieve that goal, their value has yet to be properly assessed (Lui *et al.* 2009). Critics have expressed doubts about the assumed caring capacity of communities, especially in the context of current cost containments and changing family structures (Brown 2012). Despite growing interest in the development of supportive neighbourhoods and the establishment of INAs to support ageing in place, much of the literature leaves us ignorant about the processes and effects of such approaches (Lui *et al.* 2009). This thesis aimed to provide insight into the following research questions: a) *what are the characteristics of a neighbourhood that supports ageing in place?* and b) *what is needed to build an INA to promote ageing in place?*

PART A: NEIGHBOURHOODS THAT SUPPORT AGEING IN PLACE

Main findings

Based on the WHO framework for age-friendly cities, part A of this thesis gave insight into the importance of physical and social neighbourhood characteristics for (frail) older people. Our findings (chapters 2-5) clearly showed that both of these characteristic types are crucial in enabling ageing in place. Older people seem to evaluate neighbourhood characteristics in terms of the extent to which they contribute to their ability to retain a sense of control and autonomy. For example, frail and non-frail older people attached great importance to neighbourhood accessibility, adequate public transportation, and nearby facilities, indicating that these characteristics were prerequisites for their ability to retain independence. Furthermore, this research demonstrated the importance of neighbourhood safety (chapters 2 and 4). Positive perceptions of neighbourhood safety were not only perceived as prerequisites for independence, but were also found to contribute to social cohesion. Safe neighbourhoods are associated with close ties among neighbours, contributing to a sense of familiarity, which in turn improves older people's well-being (chapter 3). We also demonstrated that social neighbourhood

characteristics (e.g. social capital and social cohesion) may attenuate the adverse effects on well-being caused by increasing losses associated with ageing (chapter 3). Our qualitative research (chapters 2 and 5) further corroborated the importance of social relationships. This research identified several types of neighbour support, ranging from low-level 'monitoring' interactions to strong emotional bonds (chapter 5). In addition to providing instrumental and emotional support, older people carefully watched over each other, for example by checking on neighbours whose curtains remained closed during the day or by exchanging house keys. The main assets underlying this support include neighbours' proximity and awareness of their own and their neighbours' increasing frailty. However, this support is not the same type as that provided by professionals, who have an indispensable role in providing back up and accountable, specialised support and were thus found to be critical in substantiating and sustaining neighbour support. Strong interactions between formal and informal support-givers are thus needed to create adequate support networks that enable older people to age in place. Unfortunately, however, our study revealed that formal and informal support-givers often operate in distinct, non-collaborative spheres.

Interpretation of findings

In addition to being driven by economic motives, the widely adopted ageing in place policy conforms to the wishes of the vast majority of older people; our research revealed that 63% of frail older people preferred to age in place 'at any cost', 26% wanted to move to an older people or nursing home if 'there is no other way', and only 11% displayed little reluctance regarding institutionalisation (van Dijk *et al.* 2013). Although the significance of the neighbourhood is often questioned due to globalisation, increased mobility, and the use of the internet (Forrest 2000, Kearns & Parkinson 2001, van Alphen *et al.* 2009), this thesis research clearly demonstrated neighbourhoods' continuing importance for the well-being of community-dwelling older people and their ability to age in place.

The neighbourhood environment was found to compensate for losses that older people encounter due to increased social, physical, and psychological frailty. Previous research has demonstrated that older people, who increasingly face losses that may challenge their ability to preserve independence in everyday life, cling especially to those things that help them exercise their last remaining sense of control (Gilroy 2008). The ability to maintain daily routines seemed to assist older people in coming to terms with their present losses (Nicholson *et al.* 2013) and reassured them in their ability to live independently (Steverink 2001). The inability to provide for the basic necessities

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of life (*e.g.* dressing and washing or grocery shopping) was perceived as a prelude to institutionalisation. The availability of neighbourhood resources may determine how people experience and frame their losses. Once older people are caught up in a so-called loss frame and become very safety minded, their willingness to maintain and invest in resources may decrease (Nieboer 1997, Steverink *et al.* 2005).

The variety of available resources dictates the extent to which older people can compensate for their losses (Nieboer & Lindenberg 2002). In line with previous research (Walker & Hiller 2007, Lui *et al.* 2009), this study corroborated the notion that physical and social neighbourhood characteristics are important and *contingent* on each other. Physical neighbourhood characteristics often have a social dimension; in addition to providing necessary resources, for example, nearby grocery stores are important meeting places for older people. Small everyday interactions, such as those occurring on the sidewalks close to home, on a bench, or in the grocery store queue, may be key to older people's attachment to their neighbourhoods (Gardner 2011) and may be important sources of well-being (Nieboer & Lindenberg 2002). One participant in the Q-study described in chapter 2 noted that he derived status from these social interactions: '*When I'm walking in the town, you should see how many people wave at me'*. Another participant in the research discussed in chapter 8 clearly demonstrated the multifunctionality of neighbourhood resources in her description of current changes in home care: '*It's just too bad that my previous home helper, who worked for me for over 7 years, had to quit. Now the only thing I have left is the cleaning service'*. In other words, whereas her previous home helper had contributed to physical (comfort) and social (affection) well-being, her new helper was able to fulfil only her physical needs (Nieboer & Lindenberg 2002).

This social dimension underlying supportive neighbourhoods is often insufficiently addressed (Lui *et al.* 2009). This thesis emphasises the importance of social neighbourhood characteristics (*e.g.* social capital and social cohesion), showing that they contribute to older people's well-being. Social relationships with neighbours may take on different roles. Besides the provision of monitoring, instrumental, and emotional support, this research demonstrates the importance of what Granovetter (1973) denotes 'weak ties' and what Gardner (2011) and Latham (2004: p. 118) designate 'sociality': 'all those interactions with others through which individuals navigate their day-to-day world'. These interactions take place on a spontaneous basis and may involve friends, families, neighbours, service personnel, or strangers met on the street or in the supermarket. Although these interactions may feel trivial, they are key to older people's attachment to their neighbourhoods (Dines *et al.* 2006, Holland *et al.* 2007) and to the perceived

level of social cohesion (Knowles & Sweetman 2004). Given the rise of *community-dwelling* older people, recognition and promotion of these kinds of social interaction is increasingly important.

Although neighbour contact was perceived as an important source of social support, this research also clearly indicated variation in the preferred amount of neighbour contact (chapters 2 and 5). In line with the old saying 'good fences make good neighbours', many older people indicated a preference for no more than casual acquaintance with their neighbours, often expressed by a general reluctance 'to drink coffee with their neighbours once a week'. In accord with previous research, this perspective was often motivated by a strong desire to retain a sense of privacy (Blokland-Potters 1998, Linders 2010). Once older people acknowledge their dependence on others, often originating from an awareness of their own and their neighbours' increasing frailty, they more readily permit the physical and social proximity of neighbours. However, this contact seems to be instigated at an individual, rather than neighbourhood, level (Gooberman-Hill & Ebrahim 2006, Linders 2010).

Lastly, our study highlighted professionals' critical role in negotiating and sustaining neighbours' provision of support. As also indicated by previous research (Nocon & Pearson 2000, Barker 2002), neighbours' support may expand gradually and develop into complex emotional commitment, warranting professional back up to safeguard neighbour support-givers' well-being. Although this calls for collaboration between formal and informal care, this research revealed that formal and informal support-givers often operate in distinct worlds. Previous research also demonstrated that contact between formal and informal caregivers is particularly low in care networks that include informal caregivers living outside the recipient's home, creating limited meeting opportunities between formal and informal caregivers (Broese van Groenou *et al.* 2015).

Furthermore, our research demonstrated that barriers to collaboration between informal and formal support-givers originate from mutual dissociation; whereas informal support-givers criticised professionals 'formal' working procedures or felt counteracted by them, professionals demonstrated a reluctance to collaborate with informal support-givers and even displayed a fear of being replaced by them. Other research has also identified barriers to collaboration between volunteers and professionals; volunteers often feel undervalued and experience a lack of trust and understanding from professionals (Teasdale 2008, Naylor *et al.* 2013), and professionals struggle to perceive informal caregivers simultaneously as indirect clients of care and support *and* co-providers (Struijs 2006).

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PART B: AN INTEGRATED NEIGHBOURHOOD APPROACH TO PROMOTE AGEING IN PLACE

Main findings

In part B of this thesis, an INA initiated in 2011 for community-dwelling older people was evaluated by means of an effectiveness study (chapter 7) and process evaluation (chapter 8). INAs are characterised by collaboration among the municipality, health and social care providers, and informal caregivers, and aim to integrate available neighbourhood resources and increase responsiveness to citizens' specific needs. The INA that was evaluated in this thesis research combined components found to be effective for integrated care and support provision (e.g. the integration of health and social care services, a demand-driven and person-centred approach, the use of multidisciplinary and outreach teams, and preventive home visits), and incorporated increasingly promoted innovative components, such as the engagement of informal caregivers and the community and the strengthening of older people's self-management abilities (chapter 6). Our effectiveness study demonstrated that the INA had no effect on older people's (health-related) quality of life or well-being within the 1-year timeframe. Our process evaluation highlighted the complexity of an INA development. An adapted version of Valentijn and colleagues' (2013) integrated care model was used to identify barriers to, and facilitators of, integrated care and support (chapter 8). These findings indicated a lack of alignment between micro-level, bottom-up initiatives and top-down incentives in meso- and macro-level contexts, resulting in excessive reliance on professionals to achieve integration *despite*, rather than *because of*, the involvement of meso- and macro-level contexts. The findings also suggested that integration *between* levels was lacking. The lack of adequate material and immaterial support tools and structural incentives prevented the INA from integrating care and support, which made it more difficult for the project to reach its goals and improve the quality of life and well-being of participants.

Interpretation of findings

The inability of the INA to improve older people's (health-related) quality of life and well-being is not an isolated finding. Unfortunately, integrated care initiatives regularly fail to achieve expected outcomes. Recent reviews have demonstrated that such programmes have inconclusive effects on care outcomes (Cameron *et al.* 2012, Petch 2012, RAND 2012). This situation highlights the complexity of integrated care and support initiatives and calls for more insight into the appropriateness of interventions, with consideration

of local contexts and partners. Chapter 8 contains an interpretation of these findings through a detailed and multifaceted description of diverse INA partners' experiences. At the macro-level, system incentives were found to be detrimental to the achievement of collaboration and innovation. In line with previous research (Graneheim & Lundman 2004, Huby 2008), current performance indicators often prioritise accountability and control, instead of creating a learning environment that allows partners to try innovative approaches. Without adequate structural incentives that promote collaboration and innovation, professional and organisational integration will be difficult to achieve.

In addition to the need to overcome these macro-level barriers, consideration of relational and normative aspects is fundamentally necessary when trying to build INAs (Cumming 2011, Hudson 2011, Demers 2013, Goodwin 2014, Nies 2014). The lack of normative integration, *i.e.* an integrated mindset and common set of values, fundamentally prevented the INA's integration of care and support. The dynamic context - characterised by rapid and complex reform - in which the INA was initiated impeded the ability to create an integrated mindset. INA partners (the municipality, health and social care organisations, and professionals) re-focused energy on individual interests, rather than working toward the common goal of improving care and support for older people. To promote normative integration, trust may be more determinant than streamlined structures (Gilson 2003, Huby 2008). As also demonstrated in chapter 5, professionals often struggle to perceive community members' roles as integral to the support-giving process. They often think of them as co-clients, rather than co-workers. Community members, in turn, struggled to commit to the INA, as utilisation of older people's capabilities and informal networks was often perceived as a way to cut public spending. Trust was also a recurrent theme at the professional level, due to the imposition of output criteria and the lack of continuity in professional relationships. To overcome mutual distrust, the creation of meeting opportunities among and between professionals and community members, enabling them to gain insight into their complementary roles, may be crucial. Lastly, our study revealed that support tools are necessary for the creation of shared values and aligned professional standards. Support tools may direct professionals toward mutually agreed-on objectives and practices while allowing sufficient professional autonomy and, as a consequence, innovation (Leichsenring 2004). Overcoming these barriers may be crucial for intervention optimisation and detection of effects on older people's (health-related) quality of life and well-being.

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THEORETICAL AND METHODOLOGICAL REFLECTIONS

Theoretical reflections

In part A of this thesis, the WHO guide for age-friendly cities was used to research important neighbourhood characteristics. This framework enabled consideration of a wide range of important physical *and* social neighbourhood characteristics that promote ageing in place. The framework highlights the breadth of issues that affect supportive neighbourhoods (Lui *et al.* 2009). Because it was based on extensive research and takes a broad perspective on physical and social neighbourhood environments, it provides a strong empirical foundation for research on important neighbourhood characteristics. However, the framework does not provide insight into individual and contextual factors that may influence older people's neighbourhood preferences, or a theoretical basis for examination of the underlying relationships among and *comparative* importance of neighbourhood characteristics. Thus, this thesis research was conducted in response to the previously highlighted need to identify 'leverage points' that are particularly relevant in enabling older people to age in place (Stokols 1996, Menec *et al.* 2011). Our research highlighted the importance of the 'person-environment fit', *i.e.* the congruence between the needs and resources of older people and environmental conditions (Thomése & Broese van Groenou 2006, Eales *et al.* 2008, Menec *et al.* 2011, Keating *et al.* 2013). Findings showed that older people's dependence on the neighbourhood varied with their frailty status and associated physical, social, and psychological needs. Although frail and non-frail older people displayed similar desires for independence, security, and belonging, they ascribed meaning to these themes in very different ways (*e.g.* whereas frail older people may feel independent through the support of a home helper, non-frail older people may derive independence from their ability to clean their house by themselves). Our findings also demonstrated the existence of dynamic interplay among neighbourhood characteristics, which highlights the need to consider physical and social neighbourhood characteristics simultaneously. Our research led to the recognition that the supportiveness of neighbourhoods must not be perceived as a static concept, but should rather incorporate changes over time in neighbourhoods and people. Only when this dynamic interplay is acknowledged is the neighbourhood recognised as a setting that impedes or facilitates compensation for social and physical losses as people age, which is required in efforts to enable older people to age in place.

In part B of this thesis, we used an adapted version of Valentijn and colleagues' (2013) integrated care model (chapter 8: p. 125) to identify barriers to, and facilitators of, integrated care and support within the INA. This model enabled us to acquire a rich understanding

of the INA's underlying processes, which most integrated care and support initiatives fail to do (Lui *et al.* 2009, Nies 2014). Although this model, like most integrated care models, focuses predominantly on the improvement of *health* outcomes, instead of aiming to improve overall well-being, it was useful for the detection of contextual factors and mechanisms that may hinder or facilitate an INA. However, our findings highlighted the need for further refinement of the model by adding the community level. This level often is not 'incorporated in our theorising on integrated care', as Nies (2014: p. 3) and Goodwin (2014) recently remarked. Our study indicated that this community level is indispensable in engaging community members and resources to meet older people's needs. Given the general shift in the primary provision of (social) care from the state to the community, community engagement is increasingly essential. Our research identified several barriers to the pursuit of community integration. To overcome these barriers, neighbourhood-specific familiarity with the preferences of support-givers and those in need of support may be crucial for the successful engagement of the community. Our study also enhanced our understanding of the importance of *normative* integration in INA development. Relational and normative aspects may be best accounted for in what Goodwin (2014, p. 2) describes as a *culturally sensitive approach*; an approach that aims to build community awareness and trust among formal and informal partners. Through our multifaceted and thorough description of the experiences of diverse INA partners, we were able to test Valentijn and colleagues' (2013) integrated care model and provide a richer account of its implications.

Methodological reflections

The research for this thesis was conducted using a concurrent mixed methods design. The use of both quantitative and qualitative research methods was critical in gaining a richer understanding of the neighbourhood context (part A) and the processes and effects of INAs (part B). Many findings from the quantitative studies were substantiated or complemented by qualitative findings. For example, quantitative findings highlighted the importance of social neighbourhood characteristics for older people's well-being, and qualitative findings helped to provide a better understanding of the experiences of ageing in the neighbourhood, as well as insight into the mechanisms underlying the relationship between social and physical neighbourhood resources and older people's well-being and ability to age in place. Furthermore, the findings described in chapter 7 demonstrated that the INA had no effect on older people's (health-related) quality of life or well-being, and the discussion in chapter 8 helped to interpret these findings by providing a thorough description of the INA's processes. As the effectiveness of

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programmes often depends strongly on the implementation process (Øvretveit & Gustafson 2002), qualitative research was needed to provide a sound description of what precisely was done within the INA and the context in which it was done. We were thereby able to provide a richer account of the mechanisms and underlying contextual conditions that promote or limit the effectiveness of an INA, which most evaluation studies have failed to do (Øvretveit & Gustafson 2002, Curry *et al.* 2009).

However, several limitations need to be taken into account when interpreting the results of this research. First, a quasi-experimental design was used to examine the effectiveness of the INA. Although experimental studies and randomised controlled trials are considered to be most appropriate for the assessment of intervention effectiveness (Eccles *et al.* 2003, Bonell *et al.* 2012), such a design was not feasible because the intervention was instigated at the community level, which was inherent to the nature of the INA (*i.e.* engagement of the broader community in care and support provision to older people). We thus used a quasi-experimental design with pre/post measurement and a frailty- and gender-matched control group. Despite matching, the control and intervention groups in the intervention study showed notable baseline differences in age, educational level, income, living situation, morbidity, and many outcome measures. Although we adjusted for baseline measures, this process may not have been sufficient to account for unobserved differences. The suitability of the Tilburg Frailty Indicator (TFI) as a matching tool is also uncertain; although it enables the identification of frail older people and has shown predictive validity for disability and quality of life (Gobbens *et al.* 2012), it may not cover all aspects of frailty and thus should not be used in isolation. Lastly, TFI administration differed between groups; it was self-administered in the control group and administered by community workers during home visits to intervention participants. Administration by INA community workers may have generated socially desirable responses, as older people may have masked the severity of their conditions in the presence of these workers (*e.g.* due to fear of institutionalisation). Future research is required to establish whether TFI scores vary according to administration method.

The second limitation of this research pertains to the generalisability of our findings. All studies presented in this dissertation were conducted in Rotterdam and some of them were conducted specifically in the context of the INA (chapters 5-8). Because neighbourhood environments differ across regions and countries, neighbourhood characteristics and effects may be context specific (as underscored by the findings discussed in chapter 8). Furthermore, data collection took place in a dynamic social and political climate marked by an array of policy changes, mainly in home care, and

competitive tender practices. These characteristics of the macro- and meso-level contexts may have influenced our findings. The Netherlands has been categorised as a hybrid welfare state (Esping-Andersen 1999), combining elements of liberal social-democratic and conservative welfare states. Our results regarding informal support provision may not be generalisable to the context of a *conservative, corporatist* welfare state (*e.g.* Germany, France, or Italy) with weaker social services, but stronger dependence on the community and subsidiarity (Esping-Andersen 1999). Although the division of responsibilities among the state, market, and community may differ between welfare state types, all of these states currently face similar challenges (Pierson 2001, Esping-Andersen 2003, Leichsenring 2004, Pavolini & Ranci 2008, Verhoeven & Tonkens 2013). Although our research focused on a specific INA setting and case, we thus argue that the theoretical insights emerging from it carry broader significance.

Third, we relied on specific neighbourhood indicators (*i.e.* social cohesion, social capital, neighbourhood security and services, neighbourhood quality) to characterise the neighbourhood environment. Critics have argued that the neighbourhood level is often distilled into a few variables that may not account for the complexity of the neighbourhood environment (Tunstall *et al.* 2004). In line with Völker, Flap and Lindenberg (2007), we therefore suggest that insight into other conditions is needed to obtain a fuller understanding of the creation of (age-friendly) communities; such as neighbourhood solidarity, and the level of community as perceived by community-dwelling older people. Furthermore, we relied on self-reported measures only and did not use objective measures, such as actual crime rates, which have been found to be distinct from subjective perceptions of neighbourhood safety (Lindström *et al.* 2003, Piro *et al.* 2006). However, previous research has indicated that health outcomes are related more closely to subjective than objective measures (Wen *et al.* 2006, Weden *et al.* 2008).

RECOMMENDATIONS FOR PRACTICE AND RESEARCH

This thesis revealed several implications for practice and research. Our research demonstrated the importance of the micro-, meso-, and macro-level contexts in integrated care and support provision. Here, recommendations for each level are provided. The section ends with recommendations for future research.

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Interventions at the micro-level

This thesis research indicated that the current policy environment may render older people distrustful and insecure. Policy changes are often interpreted as (hidden) economic measures, frightening older people about whether they will receive adequate care and support in the future. As illustrated by the conversational excerpt from the INA kick-off meeting (see p. 151), older people often experience a lack of responsiveness to their needs. They further denote clear barriers to the provision and receipt of informal support. These findings indicate that today's policy aspirations are not yet aligned with older people's expectations. Although this research clearly demonstrated the existence and importance of social interactions between neighbours, findings also indicated that neighbours' support does not always develop naturally. Furthermore, neighbours who provide support on a regular basis are at risk of becoming overburdened and are in need of professional back up. This thesis thereby provides insight into the previously postulated question of whether formal interventions such as INAs undermine, rather than stimulate, supportive relationships, showing that formal structures - represented by the availability of trustworthy community workers - play a crucial role in guiding older people through today's policy changes. Community workers may lower older people's expectations regarding formal support provision and raise older people's awareness of their (social) needs *and* capabilities, encouraging self-management and facilitating informal support-giving.

Interventions at the meso-level

Just as older people are confronted with numerous policy changes, professionals are equally affected by current transitions. As tender practices often led to the dismantling of established community structures (*e.g.* the closure of community centres and job losses) (Cunningham & James 2014), professionals became cynical and distrustful of the broader policy context in which they had to operate. Meanwhile, professionals are urged to fundamentally reinvent their roles as community workers and transform their care and support provision. Our research shows that these innovative tasks require adequate support tools. Excessive professional autonomy poses the risk that professionals will depend on conventional ways of organising things (van der Aa & van Berkel 2012). Tools and guidelines that support community workers' decision making may help them to make innovative working methods general practice. In addition to 'material' guidance, professionals need 'cultural' guidance in embracing the mental legacy of projects such as INAs. Discussion of local and broader issues (*e.g.* transitions in municipal and central government) would contribute to professionals' understanding of the context in which

they operate, fostering a sense of purpose. Guidance is also needed in the transition toward informal support-giving. As illustrated by Mrs. Vermeer's utterance, quoted at the beginning of this chapter ('*But who exactly are the professionals here?*'), professionals and support-giving neighbours often operate in non-collaborative spheres and do not sufficiently acknowledge each other's added value. This situation may require sufficient training of professionals to acknowledge the efforts of neighbour support-givers as well as explicit organisation of meeting opportunities between formal and informal support-givers (Broese van Groenou *et al.* 2015). An appreciation of mutual dependence in professional networks is also warranted. Although managers and directors placed high trust in collaboration among professionals, these professionals felt hampered by a pronounced sense of competitiveness and ill-defined roles. Structural incentives that provide opportunities for professionals to meet and gain insight in each other's added value are required.

Interventions at the macro-level

This thesis research demonstrated that bottom-up initiatives are not aligned with macro-level incentives. A tension emerges between macro-level conditions (*e.g.* current use of performance indicators and accountability incentives) and micro-level conditions and complexities. System incentives do not yet produce the intended effects of generating collaboration and innovation, but rather lead to a large amount of distrust and insecurity among all health and social care partners. In line with previous research (Huby 2008), a macro-level context that is characterised by accountability and control undermines micro-level community relationships among older people, neighbour support-givers, and professionals. Macro-level incentives should thus carefully anticipate needs for innovation and collaboration and facilitate work toward the same goal, *i.e.* integrated care and support provision to older people. Although the INA helped to reduce the often-mentioned barrier of divergent flows of funds and lack of joint budgets, structural financial incentives are needed that ensure that incremental improvements bring economic benefits to all stakeholders.

The current lack of an integrated mindset also indicates the need for a broader discussion of the roles, responsibilities, and boundaries of formal and informal support-givers. Whereas discussions have tended to assume that informal support-giving by family, friends, and neighbours can substitute for formal services, the research conducted for this thesis indicates that formal and informal support-giving cannot replace one another. The option of substitution does not correspond to the complex challenges of long-term care (Gradener & Spiers 2006, Naylor *et al.* 2013). In fact, this study showed that

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formal structures such as INAs are crucial in providing the necessary preconditions that enable informal support-giving. Professionals may substantiate and sustain neighbours' support through their indispensable role in reaching frail older people, their liaison roles at the personal, professional, and community levels of care and support-giving, and their provision of specialised and back-up support. The diversity and complexity of these tasks requires the involvement of high-quality professionals; health and social care policies thus should ensure that adequate training and supervision is provided to guide professionals in adopting new tasks and roles.

Furthermore, discussions of current transitions toward informal support-giving require further nuancing with respect to the nature of care and support tasks. For example, discussions are often restricted to support-givers' anxiety about having to take on care tasks such as 'washing a neighbour's butt', ignoring the much broader spectrum of informal support-giving (*e.g.* grocery shopping and regular chit-chat with neighbours). The distinction between informal *care* and informal *support-giving* should thus be better recognised, as should the distinction between volunteers (*i.e.* those who voluntarily provide support in an *organised* context) and neighbours (*i.e.* those who provide informal support in a *non-organised* setting). Furthermore, in accord with previous research (Verhoeven & Tonkens 2013), the discussion of current welfare reforms may also benefit from different *framing;* instead of employing 'responsibility talk' - focusing on duties regarding care and support provision - 'empowerment talk' may lead to a more nuanced discussion of how people may contribute to support provision, with consideration of the whole spectrum of such services.

Recommendations for future research

This research used a concurrent mixed methods design to gain a rich understanding of the neighbourhood context (part A of this thesis) and the processes and effects underlying integrated neighbourhood approaches (part B of this thesis). Based on the findings reported in this thesis, several recommendations for future research can be given.

First, to assess the effectiveness of programmes such as INAs, study designs should entail careful attention to the matching process. The TFI, used for matching in this study, appeared to insufficiently account for (unobserved) baseline differences. Although the TFI has shown predictive validity for disability and quality of life (Gobbens *et al.* 2012), it may not cover all aspects of frailty and thus should not be used in isolation. We recommend that future research involve matching based on socio-economic characteristics (*e.g.* income and education levels), which proved to be important indicators of older people's well-being in our research (chapter 3) and that of others (Allen 2008, Cho *et*

al. 2014). Future studies may also further refine the conceptualisation and measurement of frailty (Metzelthin *et al.* 2015).

Second, this study did not demonstrate the INA's effectiveness in terms of its contribution to older people's (health-related) quality of life and well-being. Given the complexity of the INA, the 1-year study period may have been too short for intervention optimisation and the detection of effects on outcomes in older people. Such complex interventions may require a 'bedding-in' period before extensive evaluation of processes and outcomes (Bardsley *et al.* 2013). Measurements should ideally be performed over a longer follow-up period.

Third, this study was restricted to a specific country, a hybrid welfare state combining elements of liberal social-democratic and conservative welfare states (Esping-Andersen 1999). The themes that were central to this research [*i.e.* the (comparative) importance of different neighbourhood characteristics for community-dwelling older people and the effectiveness and processes of an INA] should be examined in different welfare states. The patterns of informal support provision and important neighbourhood resources that enable ageing in place are likely to differ in *conservative, corporatist* welfare states (such as Germany, France, and Italy) that rely more heavily on the community and subsidiarity (Esping-Andersen 1999). For example, weak state protection in Italy makes people more reliant on 'do-it-yourself' care, thereby sustaining informal support-giving and other privately arranged market transactions (Glucksmann & Lyon 2006, Pavolini & Ranci 2008). The Netherlands has a long history of professionalisation, which may undermine the development and maintenance of informal structures. Research conducted in the Netherlands, for example, has demonstrated a strong normative belief that family, friends, and neighbours are not to be held responsible for informal care and that reliance on informal care would undermine one's sense of autonomy (Grootegoed & van Dijk 2012).

A focus on within-country differences, for example through the inclusion of more rural areas, would also be useful in future research. Little research has been conducted among older people in rural areas, and findings related to ageing in place have differed (Joseph & Cloutier-Fisher 2005). Similarly, future research may pay specific attention to the importance of (social) neighbourhood characteristics among older people with other ethnic backgrounds. As suggested by previous research (Gelfand 2003, Wray 2003), health and social care needs, as well as informal support-giving patterns, may vary across ethnicities and cultures.

Lastly, the INA that was evaluated in this research mainly used *social* environments as catalysts for the development of supportive neighbourhoods and protection against

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(further) deterioration of older people's well-being. Future research may deepen our understanding of the interaction between physical and social neighbourhood characteristics. Although this thesis explored the underlying relationships between physical and social neighbourhood characteristics, further research may gain more insight into these relationships and may consider how physical and social neighbourhood characteristics could be integrated to support older people in ageing in place. Lastly, future studies should include more objective neighbourhood measures to capture the complexity of the neighbourhood environment.

CONCLUSION

This thesis has demonstrated that the neighbourhood is of great significance for older people's well-being and ability to age in place. Supportive neighbourhoods require an integrated social and physical environment, as well as strong interactions between formal and informal support-givers. INAs may integrate available neighbourhood resources and engage multiple community partners in health and social care delivery to (older) people. However, the INA examined in this research was not (yet) able to meet expectations. Micro-level initiatives are not aligned with top-down incentives, resulting in excessive reliance on professionals to achieve integration *despite*, rather than *because of*, the involvement of meso- and macro-level contexts. Local and national governments should seek to account for macro-level conditions that contribute to the micro- and meso-level complexities of integrated care and support provision. Lastly, policies should be sensitive to the importance of normative aspects of integrated care and support provision, appreciating delicate social processes that are crucial for the creation of an integrated mind-set.

R'dam, 26/2 '12.

Zeer geachte Mevrouw.

Graag wil ik even reageren op uw brief. n.a.v. de vragenlijst van n Erasmus.

Ik meld U. dat ik daarop niet zal reageren. Mijn leeftijd (92!) maakt dat het mij niet meer zon- veniveert mij nog ergens druk over te maken en zeker niet in deze emotionele tijd. i.v.m. Prins Friso's val.;

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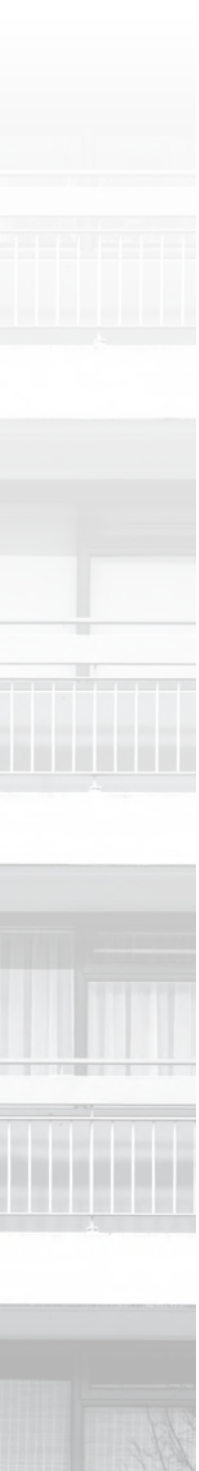
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18. Zijn er dingen waar u goed in bent?

1   2   3   4   5   6

Ja, wandelen op lange afstands
paden, en daarna vermoeid, maar
tevreden in slaap vallen in ons
kleine tentje die ik in mijn rugzak
mee draag.
En dan zelf ons potje koken

Summary

Many western countries struggle to find a balance between the provision of support for increasing numbers of care-dependent older people and effective use of scarce public resources. In response, western governments adopt ageing in place policies. Enabling older people to continue living in their neighbourhoods is expected to have economic and social value. Ageing in place policies thus fuel the need for *supportive* neighbourhoods that accommodate older people's needs. Currently, we lack insight into what exactly constitutes a supportive neighbourhood for older people. We also remain relatively ignorant about *how* to create neighbourhoods that support ageing in place. Although integrated neighbourhood approaches (INAs) are increasingly perceived as means to achieve this goal, the underlying processes and effects of such approaches have yet to be properly assessed. Thus, this thesis aimed to provide insight into the following research questions: a) *what are the characteristics of a neighbourhood that supports ageing in place?* and b) *what is needed to build an INA to promote ageing in place?*

Part A of this thesis addresses the first research question by examining older people's perspectives on ideal neighbourhoods for ageing in place. Based on the World Health Organization's framework for age-friendly cities (WHO 2007), **chapter 2** explores the *comparative* importance of physical and social neighbourhood characteristics from the perspectives of frail and non-frail older people. The Q-study described in this chapter revealed that physical and social neighbourhood characteristics are contingent on each other. Often, physical neighbourhood characteristics seem to underpin a social dimension; nearby grocery stores, for example, serve as important meeting places for older people in addition to providing needed resources. This study also revealed three distinct viewpoints each among frail and non-frail older people. Although both frail and non-frail older people strongly desired a neighbourhood enabling them to age in place, they have divergent views on such a neighbourhood. Older people's dependence on the neighbourhood seems to be dynamic, affected by changing social and physical conditions and levels of frailty.

Chapter 3 describes further examination of the social dimension underlying supportive neighbourhoods. A cross-sectional study involving 945 independently living older (aged ≥ 70 years) people in Rotterdam was conducted to examine the importance of neighbourhood characteristics (*i.e.* social cohesion, social capital, neighbourhood security, and neighbourhood services) for older people's well-being. Multilevel analyses demonstrated that individual social capital and the quality of neighbourhood services, but also neighbourhood social capital and social cohesion, were significantly and

independently associated with older people's well-being. These social neighbourhood characteristics seemed to buffer against the adverse effects of being single and poor on well-being in this population. Social relationships within neighbourhoods thus may attenuate the adverse effects on well-being caused by increasing losses associated with ageing. This study led to the important insight that policy makers should extend beyond consideration of individual characteristics, which are often difficult to take into account in health promotion, to also account for social neighbourhood characteristics in efforts to maintain or prevent further deterioration of older people's well-being.

As current research has not provided evidence for the *predictors* of these social neighbourhood characteristics, especially among *older* people, **chapter 4** aims to provide insight into individual and neighbourhood characteristics that contribute to social cohesion, *i.e.* social interactions among neighbours and the associated process of building shared values. The multilevel study described in this chapter indicated that - beyond individual characteristics (age, ethnic background, years of residence, income, and self-rated health) - neighbourhood characteristics (neighbourhood security) affect social cohesion among community-dwelling older people. The findings of this study corroborated the importance of safety, showing that positive perceptions of neighbourhood security contribute independently to social cohesion. The *subjective* (perceived) dimension of neighbourhood safety seems to be very powerful and thus should be considered by policy makers aiming to enhance social cohesion in neighbourhoods.

Although the research described in chapters 2-4 provided valuable insight into important physical and social neighbourhood characteristics for ageing in place, further insight was required to deepen our understanding of the supportiveness of social relationships among neighbours, as well as collaborative efforts between formal and informal support-givers. The study described in **chapter 5** thus examined neighbours', volunteers', and professionals' support-giving experiences. This qualitative research identified several types of neighbours' support. In addition to providing instrumental and emotional support, older people carefully watched over each other, for example by checking on neighbours whose curtains remained closed or by exchanging keys. However, this study also revealed clear variation in the preferred amount of neighbourly contact; some older people indicated a preference for no more than casual acquaintance with their neighbours, often expressed by their reluctance 'to drink coffee with their neighbours once a week'. Lastly, this study explored collaborative efforts between formal and informal support-givers, who were found to often operate in distinct, non-collaborative

spheres. This lack of collaboration originates from mutual dissociation; informal support-givers criticised professionals' 'formal' working procedures, felt counteracted by them, or simply were not aware of their presence, and professionals demonstrated a reluctance to collaborate with informal support-givers and even displayed a fear of being replaced by them.

Part B of this thesis comprises the evaluation of an INA that aimed to improve older people's health-related quality of life and well-being via strengthened integrated social support systems in the neighbourhood. INAs consist of collaboration among municipalities, health and social care providers, and informal caregivers with the aims of integrating available neighbourhood resources and increasing responsiveness to citizens' specific needs. **Chapter 6** discusses the study protocol for our evaluation of an INA in Rotterdam. This INA incorporates conventional components of integrated care provision (*e.g.* the use of multidisciplinary teams and preventive home visits) with increasingly promoted innovative components, such as engagement of the community and the strengthening of older people's self-management abilities. Given the lack of evaluation studies of programmes such as INA, no existing analytical method was available. In the study protocol, we propose a concurrent mixed (qualitative and quantitative) methods design to evaluate the INA's processes, effects, and costs. The adoption of a wide range of scientific methodologies allowed us to gain a rich understanding of the mechanisms and underlying contextual conditions that promote or limit the effectiveness of INAs.

Chapter 7 presents findings on the INA's effectiveness. Using a matched quasi-experimental design, we followed INA participants and control subjects (*n* = 186 each) for 1 year, obtaining measurements at baseline and 6 and 12 months. The findings demonstrated that the INA had no effect on older people's (health-related) quality of life or well-being. Several factors may help to explain these results. Barriers associated with the ability to meet the complex and diverse needs of frail older people and those related to contexts characterised by competing economic and social pressures challenge the effectiveness of initiatives. Moreover, despite matching, the intervention and control participants in this study showed notable differences at baseline, calling into question the suitability of the Tilburg Frailty Indicator (TFI) as a matching tool. Although the TFI can be used to identify frail older people and has shown predictive validity for disability and quality of life (Gobbens *et al.* 2012), it may not cover all aspects of frailty and thus should not be used in isolation.

To gain further insight into the mechanisms and underlying contextual conditions that may have limited the effectiveness of the INA, **chapter 8** provides a detailed and multi-faceted description of diverse INA partners' experiences. Based on an adapted version of Valentijn and colleagues' (2013) integrated care model, barriers to, and facilitators of, integrated care and support were identified. The results of this study revealed a lack of alignment between micro-level, bottom-up initiatives and top-down incentives at the meso- and macro-levels. These findings highlight the need to overcome macro-level barriers, such as current system incentives that promote competition and accountability, rather than collaboration and innovation. This study also demonstrated the existence of a fundamental need to consider relational and normative aspects when attempting to build an INA. The dynamic environment in which the INA was initiated impeded the ability to create an integrated mindset. Without such a mindset, INA partners focused on individual interests instead of working toward the common goal of improving care and support for older people.

In **chapter 9**, the general discussion, the main findings of this thesis are presented and discussed, theoretical implications are reflected upon, and the strengths and limitations of the models used in parts A (*i.e.* the WHO framework for age-friendly cities) and B [*i.e.* an adapted version of Valentijn and colleagues' (2013) integrated care model] of this thesis are addressed. The limitations of our research, such as the quasi-experimental research design and generalisability of the findings, are also described. Next, practice implications for the micro-, meso-, and macro-level contexts of care and support provision are discussed. I argue that formal structures such as INAs are needed to address current policy aspirations and engage community partners in care and support provision. Without adequate preconditions at the meso- and macro-levels, informal support provision and (improved) self-management abilities will not develop (sufficiently). The discussion ends with recommendations for future research, such as further examination of matching tools and extension of these research topics to different contexts.
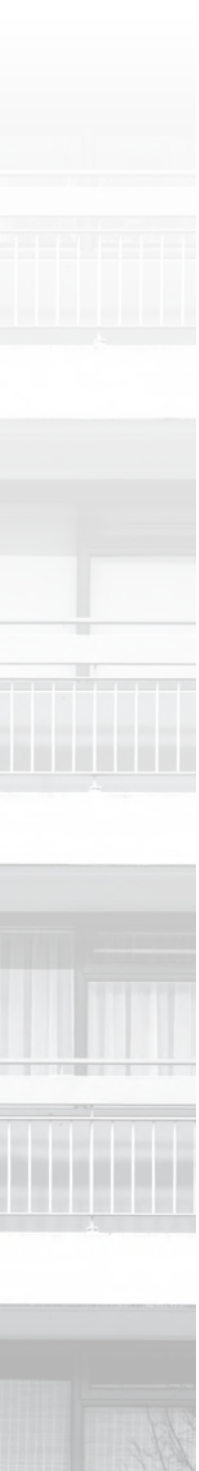
This thesis demonstrated that the neighbourhood carries great significance for older people's well-being and ability to age in place. Supportive neighbourhoods that incorporate social and physical neighbourhood characteristics and enhance collaborative efforts between formal and informal support-givers are required. INAs may integrate available neighbourhood resources and engage multiple community partners in health and social care delivery to (older) people. This thesis demonstrated that the INA

examined was not (yet) able to meet expectations. Micro-level initiatives are not aligned with top-down incentives, resulting in excessive reliance on professionals to achieve integration *despite*, rather than *because of*, meso- and macro-level contexts. Local and national governments should seek to account for meso- and macro-level conditions when considering the micro-level complexities of integrated care and support provision. Lastly, policies should be sensitive to the importance of normative aspects of integrated care and support provision, appreciating delicate social processes that are crucial for the creation of an integrated mindset.

Ik ben zoveel mogelijk boodschappen bij AH
halen met lift naar beneden met een zak met
was goed enz. enz. Ik kook zelf. Kan niet stof
zuigen heb 3 uur in de week een hulpje 3 uur
D.e andere bewoners vragen vaak of ze iets
kunnen doen; daar heb ik geluk bij

Samenvatting

Veel westerse landen staan voor de uitdaging om met beperkte publieke middelen een groeiende groep zorgafhankelijke ouderen te ondersteunen. Zij kiezen hierbij voor een beleid waarbij ouderen zo lang mogelijk zelfstandig thuis blijven wonen ("ageing in place"). Dit beleid van extramuralisering heeft naast economische voordelen ook in sociaal opzicht de voorkeur. De toename van het aantal *zelfstandig* wonende ouderen vergroot evenwel de nood aan ondersteunende buurten, die tegemoetkomen aan de (complexe) behoeften van ouderen. Dit roept de vraag op aan welke kenmerken een buurt moet voldoen om ouderen voldoende te kunnen ondersteunen. Tot op heden is hierover nog weinig bekend. Integrale wijkaanpakken worden steeds vaker gezien als manier om een ondersteunend klimaat te bieden aan zelfstandig wonende ouderen met een (complexe) hulpvraag. Er is echter nog weinig inzicht in de effectiviteit en onderliggende processen van dergelijke werkwijzen. Dit proefschrift probeert deze lacune te vullen door antwoord te geven op de volgende twee onderzoeksvragen: a) welke buurtkenmerken stellen ouderen in staat om zo lang mogelijk thuis te blijven wonen? en b) wat is ervoor nodig om een integrale wijkaanpak voor ouderen mogelijk te maken?

Deel A van dit proefschrift richt zich op de eerste onderzoeksvraag door te verkennen hoe ouderen zich hun ideale buurt voorstellen. In **hoofdstuk 2** wordt het relatieve belang dat (kwetsbare) ouderen toekennen aan zowel fysieke als sociale buurtkenmerken onderzocht met behulp van het raamwerk van de Wereldgezondheidsorganisatie voor 'leeftijdsvriendelijke' buurten (framework for age-friendly cities; WHO 2007). De hier gepresenteerde Q-studie geeft inzicht in het samenspel tussen zowel fysieke en sociale buurtkenmerken als persoonskenmerken van de ouderen zelf. Uit de resultaten blijkt dat fysieke buurtkenmerken ook vaak een sociale component hebben; supermarkten in de buurt voorzien niet alleen in de noodzakelijke levensmiddelen, maar fungeren ook als belangrijke ontmoetingsplekken. Deze studie laat bovendien zien dat kwetsbare en niet-kwetsbare ouderen verschillend aankijken tegen hun ideale buurt; in beide groepen vonden we drie verschillende perspectieven. Hoewel zowel kwetsbare als niet-kwetsbare ouderen zo lang mogelijk zelfstandig thuis willen blijven wonen, hebben zij verschillende ideeën over de buurt die hen daartoe in staat stelt. De mate waarin ouderen afhankelijk zijn van hun buurt is een dynamisch proces dat beïnvloed wordt door sociale en fysieke condities en de mate van kwetsbaarheid van ouderen.

Hoofdstuk 3 gaat verder in op de sociale dimensie van ondersteunende buurten. Door middel van cross-sectioneel onderzoek bij 945 zelfstandig wonende ouderen (≥ 70 jaar)

in Rotterdam wordt de invloed van buurtkenmerken (sociale cohesie, sociaal kapitaal, veiligheid en kwaliteit van de buurt) op het welzijn van ouderen in kaart gebracht. Multilevel analyses laten zien dat naast individueel sociaal kapitaal en kwaliteit van de buurt ook sociaal kapitaal en sociale cohesie in de buurt significant en onafhankelijk van elkaar gerelateerd zijn aan het welzijn van ouderen. Deze sociale buurtkenmerken lijken de nadelige gevolgen van alleenstaand zijn of het hebben van een lager inkomen te compenseren. Sociale relaties in de buurt kunnen een buffer vormen voor de verliezen waarmee ouderen geconfronteerd worden naarmate zij ouder worden. Deze studie laat zien dat beleidsmakers naast individuele kenmerken - die nauwelijks te beïnvloeden zijn als het gaat om gezondheidsbevordering - ook rekening zouden moeten houden met buurtkenmerken om (verdere) achteruitgang in het welzijn van ouderen te voorkomen.

Tot op heden is nog niet onderzocht wat voorspellers zijn van deze sociale buurtkenmerken bij ouderen. **Hoofdstuk 4** geeft dan ook inzicht in de individuele kenmerken en buurtkenmerken die bijdragen aan sociale cohesie -de onderlinge relaties tussen buren en de hieraan gerelateerde totstandkoming van gemeenschappelijke waarden. Deze multilevel studie toont aan dat in aanvulling op individuele kenmerken (leeftijd, etnische achtergrond, het aantal jaren dat men in de buurt woont, inkomen en zelf-gerapporteerde gezondheid) ook buurtkenmerken (mate van ervaren veiligheid) de sociale cohesie in de buurt volgens ouderen beïnvloeden. Deze bevindingen duiden op het belang van veiligheid; positieve percepties van de veiligheid in de buurt dragen bij aan de sociale cohesie. Beleidsmakers die de sociale cohesie in buurten proberen te versterken, moeten rekening houden met het belang van de *subjectieve* (gepercipieerde) beleving van de veiligheid in een buurt.

Het onderzoek dat in hoofdstuk 2 tot en met 4 is beschreven biedt belangrijke inzichten in fysieke en sociale buurtkenmerken die ouderen in staat stellen om zo lang mogelijk thuis te blijven wonen. Er is echter meer verdieping nodig om de ondersteuning die uitgaat van sociale relaties tussen buren te duiden en om de mate van samenwerking tussen formele en informele zorgverleners in kaart te brengen. De studie in **hoofdstuk 5** inventariseert daarom de ervaringen van buurtondersteuners, vrijwilligers en professionals op het gebied van zorg en ondersteuning aan ouderen. Dit kwalitatieve onderzoek laat zien dat buurtondersteuners verschillende vormen van steun aan elkaar bieden. Naast het geven van instrumentele en emotionele steun, blijken buren een belangrijke bijdrage te leveren door een oogje in het zeil te houden. Hierbij valt

te denken aan het letten op gordijnen en het uitwisselen van sleutels. Deze studie laat echter ook zien dat de wensen van ouderen ten aanzien van het contact met buurtbewoners uiteenlopen. Sommige ouderen gaven aan niet meer dan oppervlakkig contact te willen met hun buren en zeggen 'niet elke week op de koffie te willen'. Tot slot verkent deze studie de samenwerkingsverbanden tussen formele en informele zorgverleners. Hieruit blijkt dat zij vaak in gescheiden werelden opereren. Dit gebrek aan samenwerking is ingegeven door wederzijdse dissociatie. Enerzijds bekritiseren informele zorgverleners de formele procedures van professionals, voelen zij zich door hen tegengewerkt of zijn zij niet bekend met hun aanwezigheid. Anderzijds vertonen professionals weerstand om met informele zorgverleners samen te werken en geven zij zelfs aan bang te zijn door hen te worden vervangen.

Deel B van dit proefschrift bevat de evaluatie van een integrale wijkaanpak (IWA). Deze IWA beoogt via versterking van integrale en ondersteunende sociale netwerken bij te dragen aan de (gezondheidsgerelateerde) kwaliteit van leven en welzijn onder ouderen. Binnen een IWA werken gemeente(n), zorg- en welzijnsorganisaties en informele zorg samen met als doel de beschikbare bronnen uit de buurt te integreren en deze te laten aansluiten bij de specifieke behoeften van (oudere) buurtbewoners. **Hoofdstuk 6** bevat het studieprotocol van de evaluatiestudie naar een IWA in Rotterdam, genaamd Even Buurten. Even Buurten omvat 'conventionele' elementen van integrale zorg, zoals de inzet van multidisciplinaire teams en preventieve huisbezoeken. Deze worden gecombineerd met steeds vaker gepropageerde innovatieve elementen, zoals de inzet van buurtondersteuners en de versterking van zelfmanagementvaardigheden van ouderen. Gegeven het gebrek aan evaluatiestudies naar projecten zoals Even Buurten, was er op voorhand geen reeds bestaande analytische methode beschikbaar voor de evaluatie. In het studieprotocol wordt een mixed method design (een combinatie van kwalitatief en kwantitatief onderzoek) gepresenteerd om de processen, effecten en kosten van Even Buurten in kaart te brengen. Het gebruik van diverse methoden stelt ons in staat om een goed beeld te krijgen van de onderliggende mechanismen en contextuele condities die de effectiviteit van een integrale wijkaanpak bevorderen of beperken.

Hoofdstuk 7 presenteert de bevindingen van de effectiviteitanalyse van Even Buurten. Door middel van een gematcht quasi-experimenteel design volgden we Even Buurten-participanten en controle-ouderen ($n= 186$ in beide groepen) gedurende één jaar, met meetmomenten op baseline, na zes en na twaalf maanden. De bevindingen

laten (nog) geen effecten zien van Even Buurten op de (gezondheidsgerelateerde) kwaliteit van leven en welzijn van ouderen. Er kunnen verschillende factoren worden aangewezen ter verklaring van deze bevindingen. Barrières veroorzaakt door de complexe, uiteenlopende behoeften van kwetsbare ouderen en barrières als gevolg van het dynamische politieke en sociale klimaat zetten de effectiviteit van een integrale wijkaanpak onder druk. Daarnaast bleek dat de interventie- en controle-ouderen ondanks matching significante verschillen vertoonden bij aanvang van Even Buurten. Dit trekt de geschiktheid van de Tilburg Frailty Indicator (TFI) als matchingsinstrument in twijfel. Onderzoek laat zien dat de TFI gebruikt kan worden om kwetsbare ouderen te identificeren en predictieve validiteit heeft voor functionele beperkingen en kwaliteit van leven van ouderen (Gobbens *et al.* 2012). Onze studie wijst echter uit dat de TFI mogelijk niet alle aspecten van kwetsbaarheid dekt en daarom niet als een op zichzelf staand matchingsinstrument gebruikt zou moeten worden.

Om nog meer inzicht te krijgen in onderliggende mechanismen en contextuele condities die de effectiviteit van Even Buurten mogelijk hebben belemmerd, biedt **hoofdstuk 8** een gedetailleerde beschrijving van de ervaringen van diverse betrokkenen bij Even Buurten. Op basis van een aangepaste versie van het integrale zorgmodel van Valentijn en collega's (2013) worden belemmerende en faciliterende factoren van integrale zorg en ondersteuning geïdentificeerd. De resultaten van deze studie laten zien dat ontwikkelingen op microniveau (nog) niet corresponderen met randvoorwaarden die nodig zijn op meso- en macroniveau. Deze bevindingen onderstrepen het belang van het slechten van barrières op macroniveau. Hierbij valt te denken aan prikkels in het systeem die vooral competitie en verantwoording afdwingen in plaats van samenwerking en innovatie. Deze studie benadrukt de fundamentele rol van relationele en normatieve aspecten bij het opzetten van een integrale wijkaanpak. De dynamische omgeving waarin Even Buurten werd geïnitieerd, belemmerde de mogelijkheid om een integrale mindset te creëren. Zonder een dergelijke mindset concentreren IWA-partners zich op individuele belangen, in plaats van toe te werken naar het gemeenschappelijke doel om de zorg en ondersteuning van ouderen te verbeteren.
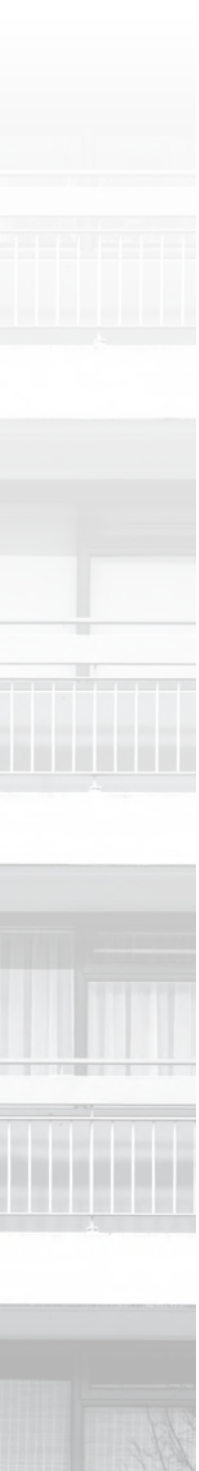
De algemene discussie in **hoofdstuk 9** presenteert en bediscussieert de belangrijkste bevindingen van dit proefschrift. Ook wordt gereflecteerd op de theoretische implicaties van dit proefschrift en de sterke en zwakke punten van de modellen die gebruikt werden in deel A (het WHO-raamwerk voor 'leeftijdsvriendelijke' buurten) en deel B (het aangepaste integrale zorgmodel van Valentijn en collega's). De beperkingen van dit

onderzoek, zoals het quasi-experimentele design en de generaliseerbaarheid van onze bevindingen, worden ook besproken. Vervolgens worden de praktische implicaties op micro-, meso- en macroniveau van zorg en ondersteuning uiteengezet. Ik stel daar dat formele structuren zoals IWA nodig zijn om de huidige beleidsambities het hoofd te bieden en partners in de wijk te betrekken bij het verlenen van zorg en ondersteuning. Zonder passende voorwaarden op meso- en macroniveau zullen informele zorgverlening en zelfmanagementvaardigheden onvoldoende of niet tot stand komen. De algemene discussie eindigt met aanbevelingen voor toekomstig onderzoek, zoals een verdere verkenning van geschikte matchingsinstrumenten en een uitbreiding van de in dit proefschrift bestudeerde onderwerpen naar verschillende contexten.

Dit proefschrift toont aan dat de buurtcontext van invloed is op het welzijn van ouderen en op de mate waarin zij zelfstandig kunnen blijven wonen. Om deze reden zijn ondersteunende buurten nodig die sociale en fysieke buurtkenmerken integreren en samenwerkingsverbanden tussen formele en informele zorgverleners verbeteren. Integrale wijkaanpakken zijn een middel om de aanwezige bronnen in een buurt te integreren en om verschillende partners in de buurt te betrekken bij het bieden van zorg en welzijn aan (oudere) mensen. Dit proefschrift laat zien dat Even Buurten (nog) niet in staat was te voldoen aan de verwachtingen. Ontwikkelingen op microniveau worden nog niet geflankeerd door prikkels van bovenaf. Dit legt een grote last op de schouders van professionals om integratie te bereiken *ondanks* in plaats van *dankzij* de meso- en macro-context. Lokale en nationale overheden moeten meer rekening houden met condities op meso- en macroniveau wanneer zij de complexiteit van geïntegreerde zorg en ondersteuning op microniveau willen aanpakken. Beleid moet tot slot inspelen op het belang van normatieve aspecten voor geïntegreerde zorg en ondersteuning. Hierbij moet rekening gehouden worden met delicate sociale processen die cruciaal zijn voor de totstandkoming van een geïntegreerde mindset.

Dankwoord

Het is bij het schrijven van een proefschrift heel verleidelijk om vooral het einddoel voor ogen te houden -zeker als dat in de (Rotterdamse) aard van het beestje zit. Nu realiseer ik me dat het vooral kleine momenten zijn die het schrijven zo bijzonder hebben gemaakt. Met dit dankwoord wil ik stilstaan bij deze momenten en bij de mensen die hiervan deel uitmaakten.

In de eerste plaats ben ik alle ouderen die ik heb mogen interviewen dank verschuldigd. Vaak was dat -naast het contact met studenten- mijn primaire bron van energie. De inkijk die jullie mij toestonden in jullie belevingswereld was voor mij ontroerend. Er zijn veel momenten die ik altijd met me mee zal dragen. De uitgebreide kerstverlichting die ik bij jullie aantrof tijdens de winterperiode; een partytent die een meneer in zijn tuin had opgezet zodat hij "gezellig met de buren" kleine feestjes kon vieren; de anekdotes over het contact met buren (waarbij ik o.a. leerde dat ook oudere buurtbewoners nog toespelingen maken naar elkaar); de vele keren waarop jullie indringend aangaven "écht zo lang mogelijk thuis te willen blijven wonen" en het afscheid waarbij sommigen zo ontroerend zeiden "het was gezellig, jammer dat je weer weg moet". Het gaf me een (klein) beeld van hoe het moet zijn om oud(er) te worden.

Anna en Jane, mijn promotor en co-promotor, ik ben blij dit met jullie te hebben mogen doen. Ik kan me het sollicitatiegesprek met jullie nog goed herinneren en eigenlijk tekende dat de contouren al af voor hoe onze samenwerking er later uit zou zien. Jullie waren als begeleiders soms verschillend, maar zaten toch vaak op één lijn en hadden allebei dezelfde no-nonsense mentaliteit. Dat heeft er ongetwijfeld toe geleid dat het proces vaak soepel liep. Anna, je bent echt mijn leermeester in het doen van goed onderzoek, het schrijven van papers, maar vooral in het bespreken van de essentie van data, de kern van theorie en de vereniging van beide. Ik denk dat er weinig mensen zijn die zo'n analytische blik weten te combineren met oog voor detail én beide op de juiste momenten weten af te wisselen. Bedankt ook voor het vertrouwen dat je me hebt gegeven -o.a. door me SMW te laten coördineren- en voor het uiten van dat vertrouwen op cruciale momenten. Jane, al snel kwam bij ons de gewoonte om wanneer je bij iBMG was in de vroege ochtend een glas water te drinken en bij te kletsen over de voorbije week. Die gesprekken zijn voor mij belangrijk geweest. Naast het inspreken van moed wanneer je zag dat ik dat nodig had, voorzag je me van inhoudelijke adviezen waardoor ik nooit onnodig lang ben vastgelopen. Je bezit de kunst om ingewikkelde zaken te structureren en te vereenvoudigen waardoor ik weer wist hoe verder te gaan. Ook via de mail en telefoon heb ik op de dagen dat

je er niet was vaak een beroep op je gedaan. Ik denk dat het me nooit is overkomen dat ik niet binnen een uur (gem.=5 minuten) antwoord van je kreeg. Bedankt voor je constante toewijding.

Daarnaast wil ik alle 'spillen' en de projectleiding van Even Buurten bedanken voor het van dichtbij mogen volgen van zo'n spannend project. Vaak zat dat meisje van de Erasmus er nieuwsgierig bij (tijdens de wijkoverleggen, sleutelfiguur-bijeenkomsten, adviesgroepen, opleidingsbijeenkomsten enz.) én stalkte zij jullie ook nog via de mail wanneer zij nog ouderendossiers miste of andere vragen had. Gelukkig stonden jullie dat als vanzelfsprekend toe en heb ik me altijd welkom gevoeld om mee te kijken. Bedankt daarvoor!

   Ook wil ik graag alle leden van de stuurgroep van Even Buurten (Arnaud, Sikko, Mirjam, Bob, Dini, Marleen, Marieke en Aad) bedanken voor de prettige samenwerking. Het was voor mij heel leerzaam om van dichtbij te zien hoe belangrijk (en soms ook lastig) het is om bij dergelijke interventies de verschillende werelden van onderwijs, onderzoek en praktijk te integreren.

Beste Erwin en Job, ik vond het heel fijn dat jullie bereid waren om met mij (voor mij onbekende) analyses te doen en mee te schrijven aan een artikel. Ik heb hierbij veel van jullie geleerd. In zeker opzicht lijken jullie qua werkwijze ook op elkaar: allebei heel secuur en deskundig, allebei een nieuwsgierig 'onderzoekershart' en vooral ook allebei heel betrokken en altijd in voor *small talk* tussen de bedrijven door. Bedankt dat jullie hier in jullie drukke agenda's tijd voor maakten.

   Beste Freek, ook dank voor jouw rol binnen Even Buurten. Het was altijd prettig samenwerken met jou; of het nu over de tijdregistraties ging of over het project als geheel, je was altijd even betrokken.

Beste SMW-collega's (Anna, Anne, Anushka, Erwin, Gerrit, Jane, Lotte, Marleen, Wim en natuurlijk ook Liza), het was fijn om onderdeel te zijn van een ietwat eigenwijze, maar vooral ook betrokken en deskundige groep. In mijn onderzoek zie ik dat juist (ogenschijnlijk) kleine sociale interacties heel waardevol kunnen zijn. Er zijn veel 'kleine' interacties met jullie die ik koester, zoals bijvoorbeeld de grappen en grollen van Gerrit die elk SMW-overleg meer kleur gaven en de kleine tussendoor gesprekjes -vaak op de gang of bij de snoepjespot- met ieder van jullie. Anne en Lotte; we vormden maar een klein clubje als aio's, maar dat was gelukkig wel een heel fijn clubje met de nodige gesprekken, appjes en lunches/ijsjes tussendoor. Lieve Annemarie, het is jammer je te

moeten missen bij SMW. Ik kwam altijd heel graag 'Even Buurten' bij je. Bedankt dat je zo'n fijne 'buuf' voor me was!

Voordat de SMW-sectie was 'herrezen', was ik onderdeel van de sectie HSMO. Graag wil ik alle HSMO-collega's bedanken voor de fijne start die ik bij jullie heb kunnen maken. In het bijzonder ook dank aan alle aio's voor de gezellige etentjes, ouderwetse lunchmomenten en sinterklaasavonden. Het was fijn dat ik ondanks mijn 'verhuizing' nog steeds welkom was bij jullie.

Lieve Willemijn, lief 'boerinnetje met bovengemiddeld IQ' zoals je zelf gekscherend zegt, ik ben blij dat je tijdens de grote dag aan mijn zijde staat. We startten een maand na elkaar bij iBMG. Al snel werd duidelijk dat we elkaar vaak zouden opzoeken: we hadden allebei een sociologie achtergrond, een lichte verslaving aan cola light, een aversie tegen omhooggevallen mensen en dezelfde behoefte om te duiden wat we bij iBMG om ons heen zagen. Met die overeenkomsten kan het eigenlijk al niet meer mis gaan, maar ik denk dat onze band na al het lief en leed dat we deze vier jaren met elkaar hebben gedeeld wel verder gaat dan deze gelijkenissen. Bedankt voor al je steun de afgelopen jaren, bedankt voor je kleine attenties waarmee je me eraan herinnerde dat ik iets te vieren had. Ik had het niet zonder je willen doen. Op naar jouw promotie!

Ik heb het getroffen met mijn kamergenoten over de jaren heen: Jacqueline, Anne en Anushka. Jullie droegen allen bij aan mijn *sense of belonging* bij iBMG. Jacqueline, het voelde eigenlijk meteen vertrouwd met jou. Jouw lieve lach en stralende aanwezigheid maakte elke dag een beetje vrolijker. Anne, we hebben heel wat afgelachen samen. De combinatie van jouw humor (relativering) en vastberadenheid is bijna paradoxaal en bewonder ik. Bedankt ook voor de keren dat je me hielp typisch Nederlandse uitspraken uit interviews te vertalen naar het Engels. Anushka, al snel bleek dat onze manier van kijken -op het onderwijs, maar ook op het leven- vaak overeenkwam. Het voelde fijn daarin gekend te worden. Ook je directheid heb ik gewaardeerd en hield me soms een spiegel voor. Ik hoop dat we nog veel overdenkingen mogen delen.

Lieve Kees, je wordt gemist! De kleine gebaren die je uitte maakte jou voor mij groots; (ogenschijnlijk) boos opkijkend wanneer ik weer eens hard met mijn hakken kwam aan denderen, even je kop om het hoekje wanneer we beiden al vroeg in de weer waren op iBMG en de gesprekken die we voerden waarin je provocerend zei dat ik echt

nog ''te jong was voor vriendjes''. Hoewel je er fysiek niet meer bij bent denk ik nog geregeld aan je en doe ik af en toe een schietgebedje als ik vastloop met onderwijs.

Dank aan alle professionals en vrijwilligers van het hospice 'De Regenboog' en natuurlijk aan Anne-Fleur en Hannie van Leeuwen die me daar naartoe hebben geleid. Uit mijn onderzoek weet ik dat de samenwerking tussen vrijwilligers en professionals niet vanzelf tot stand komt. Ik vind het daarom extra mooi om te ervaren hoe beiden elkaar binnen de Regenboog zo goed versterken. Karin Bakker en Renske Boogaard zijn daarin heel belangrijke spillen. Bedankt voor alles wat ik mag leren binnen de Regenboog; over het geven van goede en menswaardige zorg, maar vooral ook breder over dat wat belangrijk is in het leven en bij de dood.

Lieve moeder, bedankt voor je enorme betrokkenheid. Bedankt dat je altijd de moeite doet om (door) te vragen, krantenknipsels te verzamelen die raken aan mijn onderzoek -ik heb er denk ik wel 200 van je gekregen- en appjes te sturen wanneer je weet dat er iets spannends op het program staat. Ook bedankt voor al je (onderwijs)adviezen die je me de afgelopen jaren gaf. Ik heb me altijd hevig verzet tegen jouw voorspelling dat ik net als jij docent zou worden, maar misschien wordt het tijd om daaraan toe te geven. Een betere leermeester in het onderwijs kan ik me niet wensen. Helaas leren we door je ziek zijn de gezondheidszorg ook vanuit een ander perspectief kennen. Het geeft me in ieder geval veel persoonlijke motivatie om aan meer kennis over kwaliteit van zorg bij te dragen. Lieve Ernst, met mijn sociologie achtergrond was het best weleens wennen bij het iBMG, maar door al jouw kennis en kunde uit de praktijk hielp je mij de stof iets dichterbij te brengen. Bedankt dat je nooit te beroerd was om me daarbij te helpen en bedankt dat je er altijd bent en klaarstaat. Lieve Marieke en Jorrit, Tess en Emy, we zien elkaar helaas niet vaak, maar dat maakt de etentjes, verjaardagen en weekendjes weg des te leuker.

Lieve vader, zonder jou was ik deze weg denk ik nooit ingeslagen. Je bracht me op het idee om sociologie te studeren. Het ''duiden van de onderstromen in de samenleving'' waar je altijd over sprak leek mij ook wel wat. Als bijbaantje mocht ik notuleren bij de focusgroepen die je hield en kon ik kennismaken met onderzoek. Je maakte me vertrouwd met het abstraheren van dingen om zo tot de kern te komen. Vaak begrijpen we elkaar daarin zonder al teveel woorden. Het maakt dat ik graag vertrouw op jouw oordeel, iets wat ook blijkt uit onze vele en late mailwisselingen in de laatste fase van mijn proefschrift. Ben je toch nog met de afronding van een proefschrift bezig geweest...

Lieve Marie Cécile, bedankt dat je in je drukke agenda tijd wilde maken om een foto te schieten voor de voorkant. Ik zal de MC Thijs foto met trots 'dragen'! Lieve Nadia, tijdens onze gezamenlijke vakantie op Ibiza hielp je me te ontsnappen aan de drukte op het werk. Wat was het leuk om weer wat langer aaneengesloten te kunnen genieten van je vrolijkheid en liefheid!

Lieve grote broer en zus, met de leeftijd groeit het besef hoe belangrijk jullie voor me zijn. Lieve Dan, jij hebt me door de lol die je met je meebrengt heel veel energie gegeven de afgelopen jaren. Bedankt daarvoor en bedankt dat je me altijd het gevoel geeft voor me door het vuur te willen gaan. Lieve Ruth, nog voordat ik iets kon doen of vragen had je het al gedaan. Bedankt voor al die keren dat ik mee mocht eten als ik druk was; bedankt voor je grenzeloze zorgzaamheid. Lieve Jade, of Jaja zoals je zelf nog zegt, wat was en is het bijzonder om jou te zien opgroeien. In jouw aanwezigheid is er even geen werk meer en verdwijnen de 'moetjes'.

Lieve Oma Riet van 11 hoog, ik had u eigenlijk gevraagd als paranimf, maar dat vond u bij nader inzien toch te spannend. Gelukkig staat u als compromis wel op de voorkant van het proefschrift. Het geeft aan hoeveel u voor me betekent. Al van jongs af aan was u daar om voor ons te zorgen. Altijd lief, altijd geduldig en zo af en toe een echte 'Scholse' grap ("Zullen we de ramen beschilderen met kerstversiering? Dat vindt mama vast leuk"). In de afgelopen jaren kwamen we op donderdag altijd een Hollandse maaltijd met gehaktbal eten, zelfs mijn collega's wisten dat donderdag 'omadag'/'gehaktbaldag' was. Naast oma was u ook een beetje mijn 'ouderenfluisteraar': u gaf me inzicht in wat de vele beleidswijzigingen met ouderen kunnen doen, u leerde me om tijdens de veldwerkperiode de telefoon extra lang over te laten gaan omdat het voor ouderen langer duurt om op te nemen en u leerde me ouderen altijd netjes met 'mevrouw' en 'meneer' (gevolgd door hun achternaam) aan te spreken. Zoals u laatst ook al zei, hoop ik zo dat u de volgende fases in mijn leven nog mee mag maken.

Lieve Berry en Nienke, Wilma en Leo, Lars, Rolinda en Imme, sommige familie krijg je er 'gratis' bij. Hoewel dat niet per se een zegen hoeft te zijn, ervaar ik dat in jullie geval wel zo. Bedankt voor alle betrokkenheid en gezelligheid die jullie me de afgelopen jaren boden. Aan Lars ook nog speciale dank voor het 'pimpen' van de figuren in mijn proefschrift. Rolinda: ik hoop dat onze documentaire over ouderen ooit werkelijkheid wordt.

Lieve vrienden en vriendinnen, hoewel ik jullie gezelligheid in de afgelopen jaren misschien vaker had willen opzoeken, voel ik me desondanks ook op de momenten dat we elkaar niet zien verbonden. Een paar vrienden wil ik in het bijzonder noemen.

Lieve Carlinde, bedankt dat je altijd zo trouw en betrokken bent. De appjes die je stuurde om me succes te wensen, de gesprekken waarin je je echt verdiept in wat ik doe en wat me bezighoudt en de lieve gebaren die je altijd maakt -zoals je cadeaupakketje na mijn eerste dag als coördinator van SMW. Ik voel me echt rijk met zo'n lieve vriendin.

Lieve HEMA'tjes, bedankt voor alle leuke uitstapjes, mooie gesprekken, spontane burenbezoekjes en de lekkere baksels die jullie langsbrachten. Ik vond het niet altijd makkelijk om nee te verkopen of eerder af te haken wanneer ik druk was met mijn werk. Bedankt voor jullie begrip en bedankt dat jullie me desondanks toch vaak achter m'n laptop vandaan wisten te trekken! Maarie, ook bedankt voor je kritische blik op mijn Nederlandstalige samenvatting. Alvast sorry voor de onvolkomenheden in dit dankwoord.

Lieve Allard, hoewel je zelf vindt dat de steun die je me de afgelopen jaren gaf vanzelfsprekend was en daarom geen expliciet bedankje verdient, kan en wil ik dat natuurlijk niet laten. Het is juist vanwege die vanzelfsprekendheid van je steun en toewijding dat ik je heel erg wil bedanken. Je hielp me wanneer ik het vroeg en je bood ruimte wanneer dat nodig was. Bovendien had ik aan jou een persoonlijke Professor in wijsheid en relativering, wat maakte dat ik de sleur van het dagelijkse af en toe kon ontstijgen -iets wat bij het schrijven van een proefschrift geen overbodige luxe is.

Tot slot nog het volgende:
Op veel vragen heb ik geen antwoord gegeven, omdat
ik niet goed wist, hoe mijn reactie er op moest zijn.
   Belangrijk voor mij is, dat ik nooit afhankelijk
zal worden van hulp van anderen. Dat is het
ergste, dat je kan overkomen.

Curriculum Vitae

PHD PORTFOLIO

Name: Hanna van Dijk
Department: Institute of Health Policy and Management (iBMG)
PhD period: 2011-2015
Promotor: Prof. dr. Anna P. Nieboer
Copromotor: dr. Jane M. Cramm

Presentations

Presentation at the Elderly Forum GENERO (Geriatric Network Rotterdam): "Ageing in Place", Rotterdam (the Netherlands)	2015
Presentation at (SECEUR) Social Enterprise Consulting Erasmus University Rotterdam: "Facilitating and impeding factors within an Integrated Neighbourhood Approach", Rotterdam (the Netherlands)	2014
Presentation at Sociology Day: "Facilitating and impeding factors within an Integrated Neighbourhood Approach", Antwerp (Belgium)	2014
Presentation seminar at Institute of Health Policy & Management: "Ageing in Place: the Importance of the Social Environment", Rotterdam (the Netherlands)	2014
Presentation at work conference from SONOR (social work organization): "Evaluation of an Integrated Neighbourhood Approach", Rotterdam (the Netherlands)	2013
Workshop at the National Care for the Elderly Programme, in collaboration with Marleen Goumans: "Demand-driven Care and Strengthening of Social Networks", Den Bosch (the Netherlands)	2013
Presentation at Knowledge Workplace Liveable Neighbourhoods: "Evaluation of an Integrated Neighbourhood Approach for community-dwelling older people", Rotterdam (the Netherlands)	2013
Presentation at Q-methodology congress in Amsterdam: "The ideal neighbourhood for ageing in place", Amsterdam (the Netherlands)	2013
Presentation for social work students at the University of Applied Sciences in Rotterdam: "Health and Social Care for Older people in Rotterdam", Rotterdam (the Netherlands)	2013

Presentation at the anniversary of ANBO (the Advocate for Seniors in the Netherlands): "Health and social care for older people in Rotterdam", Papendrecht (the Netherlands)	2012
Presentation at 1st world congress on healthy ageing: "Neighbour support for older people in the Netherlands", Kuala Lumpur (Malaysia)	2012
Poster presentation at 1st world congress on healthy ageing: "Evaluating an integrated neighbourhood approach to improve well-being of frail elderly in a Dutch community: a study protocol", Kuala Lumpur (Malaysia)	2012
Presentation seminar at Institute of Health Policy & Management: "Neighbour support for older people in the Netherlands", Rotterdam (the Netherlands)	2011
Poster presentation with Arnaud Brix at GENERO symposium "Older people and professionals: collaborating in health and social care", Rotterdam (the Netherlands)	2011

Teaching activities

Course coordinator Socio-Medical Sciences (premaster)	2015
Tutor workgroups and lecturer Socio-Medical Sciences (premaster)	2015
Course coordinator Socio-Medical Sciences (BA)	2014-2015
Supervisor and co-evaluator bachelor and master theses	2013-2015
Lecturer Patient-centered Care Delivery (MA)	2013-2015
Lecturer Minor Public Health (BA)	2013-2015
Tutor workgroups Quality and Efficiency in Health Care (BA)	2012-2015
Tutor workgroups and lecturer Socio-Medical Sciences (BA)	2014
Mentor first year students (BA)	2012-2014
Tutor workgroups Writing Skills (BA)	2012-2014
Tutor workgroups Quality of Care (premaster)	2012-2014
Tutor workgroups Qualitative Research Methods (BA)	2013
Tutor workgroups Organisation Science (BA)	2012-2013

Dutch publications and reports

Van Dijk H.M., Cramm J.M, Lötters F., van Exel J. & Nieboer A.P. (2015) *Even Buurten: De complexiteit van een wijkgerichte aanpak ["Even Buurten": The complexity of a neighbourhood-based approach].* Instituut Beleid & Management in de Gezondheidszorg, Rotterdam.

Van Dijk H.M., Cramm J.M., Goumans M., Brix A., Bakker S. & Nieboer, A.P. (2013) Klinische les: Belang van ondersteunende netwerken voor ouderen. *Nederlands Tijdschrift voor Geneeskunde* **4**, 53-57.

Cramm J.M., Van Dijk H.M. & Nieboer A.P. (2013) Het belang van sociale cohesie en sociaal kapitaal in de buurt voor het welzijn van ouderen. *Tijdschrift voor Gerontologie en Geriatrie* **44** (2), 50-58.

Van Dijk H.M., Cramm J.M, Lötters F. & Nieboer A.P. (2013) *Even Buurten: Een wijkgerichte aanpak voor thuiswonende ouderen in Rotterdam ["Even Buurten": A neighbourhood-based approach for community-dwelling older people in Rotterdam].* Instituut Beleid & Management in de Gezondheidszorg, Rotterdam.

International publications (published)

Van Dijk H.M., Cramm J.M, van Exel J. & Nieboer A.P. (2014) The ideal neighbourhood for ageing in place as perceived by frail and non-frail community-dwelling older people. *Ageing & Society.* doi: 10.1017/S0144686X14000622

Cramm J.M., Van Dijk H.M. & Nieboer A.P. (2013) The importance of neighbourhood social cohesion and social capital for the well-being of older people in the community. *The Gerontologist* **53** (1), 142-50.

Van Dijk H.M., Cramm J.M & Nieboer A.P. (2013) Social cohesion as perceived by community-dwelling older people: The role of individual and neighbourhood characteristics. *Journal of Ageing and Later Life* **8** (2), 9-31.

Van Dijk H.M., Cramm J.M & Nieboer A.P. (2013) The experiences of neighbour, volunteer and professional support-givers in supporting community-dwelling oldr people. *Health and Social Care in the Community* **21** (2), 150-158.

Cramm J.M., Van Dijk H.M, Lötters F., van Exel J. & Nieboer A.P. (2011) Evaluating an Integrated Neighbourhood Approach to improve well-being of frail elderly in a Dutch community: a study protocol. *BMC Research Notes* **4**, 532.

International publications (submitted)

Van Dijk H.M., Cramm J.M., Birnie E. & Nieboer A.P. (2015) Effects of an Integrated Neighbourhood Approach on Older People's (Health-Related) Quality of Life and Well-Being. *Submitted to: Health and Social Care in the Community*

Van Dijk H.M., Cramm J.M. & Nieboer A.P. (2014) How to build an integrated neighbourhood approach to support community-dwelling older people? *Submitted to: International Journal of Integrated Care.*

Courses

Thesis supervision	2014
Supervising written assignments	2014
Qualitative analysis (KWALON)	2014
Tutor Skills for Problem-based Education (PGO)	2014
Repeated measurements course (NIHES)	2014
Mentoring	2013
Supervising small work groups	2013
Assessing written assignments	2013
Assessment and feedback	2013
Academic writing for PhD students	2012
Ready in four years	2012

ABOUT THE AUTHOR

Hanna van Dijk was born in Rotterdam on the 16th of August 1988. She graduated at the University of Utrecht with a Bachelor's degree in Sociology and a Master's degree in Policy Studies (cum laude). During her master's programme she did an internship at Ferro Explore, a research company specialized in qualitative research. Her master thesis focused on the public's opinion towards political decision-making processes, for which she received the Peter G. Swanborn price. After working at the University of Utrecht as a junior researcher, she started working as a PhD-student at the Institute of Health Policy & Management in April 2011. Her PhD project focused on the evaluation of an integrated neighbourhood approach in Rotterdam (Even Buurten), which resulted in this dissertation. The evaluation study led to several publications in national and international peer reviewed journals. In addition, she has taught several courses at the Institute of Health Policy and Management, such as Quality of Care and Organization Science. Furthermore, she coordinates and lectures Socio-Medical Sciences in the Bachelor and Premaster programme of Health Sciences. In her free time, Hanna works as a volunteer at Hospice "de Regenboog" in Rotterdam.

Hanna van Dijk: hannavdijk@gmail.com

NEIGHBOURHOODS FOR AGEING IN PLACE

HANNA VAN DIJK

In their struggle to support growing numbers of community-dwelling older people with complex needs, western governments increasingly rely on ageing in place policies, and engagement of the community. However, we remain relatively ignorant about the feasibility and implications of these policy imperatives. This thesis therefore sheds light on a) important neighbourhood characteristics that support ageing in place and b) the effects and processes of an integrated neighbourhood approach (INA) that aims to promote ageing in place. The findings demonstrate that both physical and social neighbourhood characteristics carry great significance for older people's well-being and ability to age in place. This study further shows that the effectiveness of integrated neighbourhood approaches may be promoted by meso- and macro-level contexts that carefully anticipate needs for innovation and collaboration at the micro-level of care and support provision. Current policy aspirations also ask for careful consideration of normative and relational aspects of integrated care and support.

This thesis will be of particular interest to those researching, practicing or governing innovative ways to support community-dwelling older people.