Person-centred communication with people with dementia living in nursing homes

A study into implementation success and influencing factors

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VRIJE UNIVERSITEIT

Person-centred communication with people with dementia living in nursing homes; a study into implementation success and influencing factors

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For reasons of consistency within this thesis, some terms and definitions have been standardised throughout the text. Therefore, the text in chapter two, three, four, five and six may differ in this respect from the published articles.

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Chapter 1
General Introduction

"All real living is meeting." Martin Buber (1958)

Dementia (major neurocognitive disorder)

In the 5th edition of the Diagnostic Manual of Mental Disorders (DSM) (2013) 'dementia' has been described as a 'major neurocognitive disorder (NCD)' with different etiological subtypes, such as Alzheimer's disease, vascular NCD, NCD with Lewy-Body dementia, NCD due to Parkinson's disease and frontotemporal NCD.

According to DSM-5, a major NCD is present when:

1. Significant cognitive decline from a previous level of performance in one or more cognitive domains (complex attention, executive function, learning and memory, language, perceptual-motor, or social cognition) is visible, based on:
   - Concern of the individual, a knowledgeable informant, or the clinician that there has been a significant decline in cognitive function; and
   - A substantial impairment in cognitive performance, as a result from standardized neuropsychological testing or another quantified clinical assessment.
2. The cognitive deficits interfere with independence in occupational or daily functioning.
3. The cognitive deficits do not occur exclusively in the context of a delirium.
4. The cognitive deficits are not explained by another mental disorder (e.g. depression, schizophrenia).

Although we realise that the overall term dementia syndrome as a diagnostic category may disappear in the nearby future, in this thesis, we decided to continue to use the term dementia, as it is still generally the term used in clinical practice and dementia care research.

Prevalence of Dementia

The World Alzheimer Report (2015) shows that 46.8 million people worldwide are living with dementia, and this number will almost double every 20 years, to 75.6 million in 2030 and 135.5 million people in 2050 (Prince et al., 2015). In the Netherlands, in 2017, there are around 270.000 people with dementia. Old age is the most important risk factor for the development of dementia, and with the increased life expectancy of the world population, longevity is the main cause for the growing prevalence of dementia. The second factor affecting the prevalence of dementia is the improvement of healthcare, contributing to the higher life expectancy for persons with one or more chronic conditions, including dementia. A third factor, with a protective effect on the incidence of dementia, is a healthy lifestyle pursued by a growing number of people (www.Alzheimernederland.nl). Of the 270.000 people with dementia in the Netherlands, an estimated 50,000 live in long-term care settings, such as care homes and nursing homes (www.volksgezondheidenzorg.info/onderwerp/dementie/cijfers-context/incidentie-en-prevalentie#node-aantal-mensen-met-dementie). This thesis focuses on people with dementia living in a nursing home and the communication with their professional caregivers.

Needs of people with dementia

Personal and meaningful contact with other human beings is an essential need of each person, and this also applies to people with dementia (Dröes et al., 2006; Hancock et al., 2006). Other needs reported are, pleasant daytime activities, company, adequate support

when feeling distressed, and preservation of self-esteem (e.g. being accepted for whom you are, feeling attached and being understood). People with dementia consider these needs as being very relevant to their quality of life (Dröes et al., 2006). In the first stages of dementia, people are still able to take initiative in contact and communication with other people, but in the later stages, due to the progressive cognitive dysfunctions, they become more dependent on other people with this regard. Van Haeften-Van Dijk & Boersma (2015) described this deterioration of the ability to communicate for the different stages of dementia, following the stages distinguished by Van der Kooij (2003) and the BUPA Foundation (www.bupa.co.uk/individuals/health-information/directory/d/hi-dementia).

Stage of dementia according to Feil (1992) and in Dutch according to Van der Kooij (2003)	**Stage of dementia according to BUPA Foundation**	**Capabilities to communicate**
Mal Orientation (Bedreigde-ik-beleving)	Loss of memory and confusion	The person with dementia still takes the initiative and there is reciprocity in the contact.
Time confusion (Verdwaalde-ik-beleving)	Behavioural changes	The person with dementia still takes the initiative and there is reciprocity in the contact..
Repetitive motion (Verborgen-ik-beleving)	Losing control of the present	It is still possible to have contact, there can also be reciprocity. However the initiative is not taken by the person with dementia.
Vegetation (Verzonken-ik-beleving)	Physical vulnerability and dependency	Initiating contact is not taken by the person with dementia and there is little or no reciprocity.

Table 1. Stages of dementia and opportunities for communication

Person-centered care interventions and the influence on the person with dementia and their caregivers

By the end of the previous century researchers realised a different vision on dementia was needed (Dröes, 1991; Feil, 1992; Miesen, 1990). Kitwood (1997) elaborated on this different vision on dementia and dementia care by focusing on people with dementia as 'being a person'. Instead of devaluing the person with dementia, he recognised them in their full humanity as unique persons being welcomed, embraced and heard. He explained the change of focus very clearly:

"Our frame of reference should no longer be person-with DEMENTIA, but PERSON-with-dementia."

Kitwood's paradigm shift comprised that not the disease dementia solely causes their problematic behaviours, but also the fact that the social environment surrounding the person has difficulty understanding their behaviours. According to Kitwood, people with dementia try to communicate via their so-called 'problematic' behaviours, in other words, by their behaviour they give us messages about their needs. Caregivers should try to understand these messages and engage with the perceptions of the people with dementia when their individual needs are not being met. In this way, formal and informal caregivers can have a significantly positive influence on the behaviour and well-being of people with dementia. Brooker (2004) built on the pillars Kitwood had placed and developed the VIPS model. The VIPS definition, an acronym, consists of four essential elements (Brooker & Latham, 2015):

- **Valuing** people with dementia and those who care for them: promoting their citizenship rights and entitlements regardless of age or cognitive impairment.
- Treating people as **Individuals**: appreciating that all people with dementia have a unique history, identity, personality and physical, psychological, social and economic resources, and that these will affect their response to cognitive impairment.
- Looking at the world from the **Perspective** of the person with dementia: recognising that each person's experience has its own psychological validity, that people with dementia act from this perspective and that empathy with this perspective has its own therapeutic potential.
- Recognising that all human life, including that of people with dementia, is grounded in relationships, and that people with dementia need an enriched **Social environment** that both compensates for their impairment and fosters opportunities for personal growth.

When care is provided with emphasis on these elements, people with dementia will feel acknowledged in their personhood and can maintain a sense of well-being (Brooker & Latham, 2015). During the past decades, many person-centred care methods (e.g. multisensory stimulation, movement activity, validation and reminiscence) have been developed for the use in psychogeriatric care, with the aim to respond better to the needs of people with dementia and thus positively influencing their well-being (Brooker & Duce, 2000; Dröes, 1991; Feil, 1992; Van Weert et al., 2005). Although, these methods have shown small to moderate positive effects on the behaviour (e.g. less disruptive behaviour, agitation and aggressiveness), mood (less depression) and / or quality of life of the people with dementia, there seems room for improvement. Reviews show that more effort is needed to optimise interventions, in order to confer more consistent benefits (Olazarán et al., 2010; Testad et al., 2014; Van Mierlo et al., 2010). Most likely people with dementia will benefit more from person-centred care when methods are combined.

Besides the fact that that people with dementia benefit from person-centred care, also their formal and informal caregivers may profit from providing person-centred care. Different studies report on positive outcomes related to how caregivers carry out and experience their work. For example, caregivers who were trained in providing person-centred care showed more autonomy in planning specific interventions in care plans of the residents

(Chenoweth et al., 2009), and were better able to handle difficult behaviour of clients with dementia by using psycho-social interventions (Deudon et al., 2009). Edvardsson et al. (2011) found a positive relation between providing person-centred care and job satisfaction of the caregivers. Though recent studies have shown that caregivers are able to provide person-centred care, thus positively influencing the behaviour and well-being of people with dementia as well as the working experience of themselves as caregivers, it also appears from these studies that providing good-quality person-centred care in daily nursing home care remains a challenge. Challenging factors are for example: the clinging to traditions, the low priority status of the dementia care, the driving forces of the medical profession and medicalisation of dementia. Last but not least: person-centred care requires a staff - resident ration of one to four and a continued investment in developing the caregivers' skills of interaction (Brooker & Latham, 2015).

The Veder Contact Method (VCM)

The original Veder method was developed in 2009 by Foundation Theatre Veder (www.theaterveder.nl/nl/). This person-centred method has two variants: the Veder method as a 'living-room theatre performance' (carried out by professional actors or trained caregivers) and 'the Veder Contact Method (VCM)' as delivered by caregivers in 24-hour care. Both variants aim to improve the communication with people with dementia in order to achieve reciprocity in the contact with them and to promote feelings of well-being, identity and self-esteem. Both variants also combine core elements of existing psychosocial methods, such as reminiscence, validation, integrated emotion-oriented care and neuro-linguistic programming, with theatrical elements (like characters, music, costumes, props and poetry), on the assumption that combining the different psychosocial methods more positively influences the person with dementia.

First, the Veder method as a 'living-room theatre performance' was developed, interactive theatre plays performed by professional actors at nursing home wards. Subsequently, also professional caregivers in nursing homes were trained to apply the theatre performance. Research by Van Dijk et al. (2012) showed that the 'living-room theatre performances' by professional actors had significantly more positive effects on the behaviour (laughing, confusing, alertness), mood (happy) and quality of life (social isolation, feeling at home) of people with dementia than a regular reminiscence activity or the living-room theatre performed by professional caregivers. Although the trained caregivers experienced pleasure in executing the Veder method as a group activity, it appeared also difficult for them to perform the theatre play with the same quality and intensity as professional actors (Van Dijk et al., 2011; Van Haeften-Van Dijk et al., 2015). When the trained caregivers discussed the Veder method as 'living-room theatre performance' in focus groups, they suggested the method could possibly have (more) added value by offering the key-elements, such as the use of theatrical elements and a more explicit use of the voice (e.g. intonation), timing and presentation (e.g. 'acte de présence'), in one-on-one contact during the daily care (Van Dijk et al., 2011; 2012). In 2012, therefore Foundation Theatre Veder developed the

Veder Contact Method (VCM). VCM teaches caregivers to combine different psychosocial methods with theatrical, poetic and musical communication, pursuing a focused interaction and reciprocity in the contact with the person with dementia in daily 24-hour care (www.theaterveder.nl/nl). An example is the use of reminiscence (the retrieval of memories) in combination with music, theatre and/or poetry. VCM is specifically developed for use during daily care tasks, e.g. during washing, going to bed, having meals, during coffee/tea breaks, and other activities in the living-room of the nursing home. The theatrical stimuli are applied to the (often apathetic) people with dementia, sometimes literally to wake them up, and tempt them into interaction. VCM follows, like the Veder method as group activity, a fixed procedure sequence. The consecutive steps are (1) greeting by one-on-one contact, (2) appealing to long-term memory, (3) communication about the present time (connection to short-term memory), and (4) saying goodbye. The relation between the procedural steps, the key elements of VCM, and the used communication strategies are described in Table 2. Central in this thesis is the Veder Contact Method (VCM), applied in daily nursing home care.

Procedural steps of VCM	Key elements of VCM	Examples of the communication strategies
Greeting by one-on-one contact	Theatrical communication	Presentation/act de présence, timing and intonation/tone
Appealing to long-term memory	Poetic communication	Rhythm, associating, intonation/sound
Communication about the present time		
Saying goodbye	Musical communication	Recognizable songs of the past, humming, intentional use of music

Table 2. Relation between the procedural steps, key elements and communication strategies of the Veder Contact Method (VCM) in daily care.

Implementation of person-centered methods in nursing home care

Much research has been conducted focusing on the effects of psychosocial and person-centred methods in dementia care, in particular with respect to behaviour and quality of life of people with dementia (Olazarán et al., 2010; Testad et al., 2014; Van Mierlo et al., 2010; Vernooij-Dassen et al., 2010). Far less attention was paid to aspects of implementation of psychosocial and person-centred care methods. One could see this as a limitation, given the fact that the effectiveness of these methods also depend on how well they are implemented in daily care over a longer period of time (Vernooij-Dassen & Moniz-Cook, 2014). In this thesis we are specifically interested in the process of implementation.

What exactly do we mean with implementation? Rabin et al. (2008) defined implementation as follows: 'Implementation is the process of putting to use or integrating evidence-based

interventions within a setting'. It is well-known that implementation of new methods in the care is generally complex (Glasgow et al., 2003; Grol & Grimshaw, 2003). This also applies to implementation of new methods in nursing home dementia care (Meiland et al., 2004; Van Haeften-van Dijk et al., 2015; Vernooij-Dassen & Moniz-Cook, 2014). It is naive to assume that these methods are always carried out according to plan. The multiple and competing demands of nursing home caregivers within routine care settings impact treatment fidelity to a large extent (Grol & Grimshaw, 2003; Vernooij-Dassen & Moniz-Cook, 2014). Before the year 2000 implementation research focused mainly on the transfer of knowledge and skills to caregivers. Less attention was given to other aspects of the process of implementation of the new method, such as motivation of personnel and organisational factors. From 2000 onwards changes became apparent, but still, only very limited research was carried out to evaluate the implementation of new methods in regular care settings (Burgio et al., 2001).
To contribute to new knowledge in this field, we carried out an implementation study. According to Grol & Grimshaw (2003), implementation studies provide a better understanding in factors that facilitate or impede the implementation process, and give insight into the efficiency of the used implementation strategy. We searched for a model which could support us in our study. Many implementation frameworks with different underlying theories exist (Tabak et al., 2012), for example theories focussing on the impact, the process, cognition, education, motivation, social interaction, organisational context, total quality management, and theories on the political and economic context (Grol et al., 2007). In this thesis we aimed to measure the successfulness of the implementation of VCM using a framework that reflectes the process of implementation (e.g. facilitators and barriers), but also provides insight into the implementation outcomes (changes in behaviour of caregivers and residents). Tabak et al. (2012) found in their review 61 existing implementation models (theories and/or frameworks) which enhance dissemination and implementation of existing and/or new interventions. Without devaluing other frameworks, we opted for the RE-AIM framework for monitoring the implementation process and outcomes of VCM. This framework is a basis for socio-ecological thinking and is compatible with evidence-based medicine (Glasgow et al., 1999). The RE-AIM framework focuses on three levels of socio-ecological thinking: the community, the organisation and the individual. The focus on the organisation and the individual are particularly important for our study. Although our study is an implementation study, we also wanted to gain insight in the effect of the intervention (evidence-based medicine) especially on the behaviour and quality of life of the people with dementia and the behaviour of the caregivers. 'Effectiveness' is one of the dimensions of the RE-AIM framework.

RE-AIM framework

The RE-AIM framework supports program developers, program evaluators, funders and policy-makers to consider the different elements of an intervention, including external validity that can improve long-term adoption and implementation of effective, generalizable, evidence-based interventions. The RE-AIM framework was developed to support the planning and evaluation of the implementation of evidence-based health care interventions (Glasgow et al., 1999; About

RE-AIM, www.re-aim.hnfe.vt.edu/about_re-aim/what_is_re-aim/index.html). It consists of five constructs: Reach, Effectiveness, Adoption, Implementation and Maintenance (RE-AIM), and can be used to assess the level of implementation of interventions (Dzewaltowski et al., 2004). The impact of an intervention (I) was earlier described as Reach x Effectiveness (I = R x E) (Abrams et al., 1996). Glasgow et al. (1999) added three more dimensions (Adoption, Implementation, Maintenance - AIM). Effects on these five evaluative dimensions together lead to the ultimate impact of an intervention. Over the past decade the RE-AIM framework has also been used successfully in dementia care (Altpeter et al., 2013; Gitlin et al., 2010), which supports our assumption that this framework is an appropriate model to describe the process of implementation and to assess the implementation-effectiveness of psychosocial interventions in psychogeriatric nursing home care. We define implementation-effectiveness as 'the degree to which the implementation of the innovation has been successful' (Van der Kooij et al., 2013). Implementation-effectiveness should be distinguished from innovation-effectiveness, which indicates the (positive) effect of the application of a (successfully) implemented innovation. The definition of the different dimensions of the RE-AIM framework are presented in Table 3.

Dimension (level)	Original definition by Glasgow et al. (1999)
Reach (Individual)	Proportion of the target *population* that participated in the intervention.
Effectiveness (Individual)	Success rate if implemented as in guidelines; defined as *positive outcomes minus negative outcomes.*
Adoption (Organisation)	Proportion of *settings, practices, and implementation plans* that will adopt this intervention.
Implementation (Organisation)	Extent to which the intervention is implemented as intended in the real world.
Maintenance (Individual & Organisation)	Extent to which a *program* is sustained over time.

Table 3. Definitions of the five dimensions of the RE-AIM framework and definition in this review

Research questions and outline of the thesis

The goal of this thesis is to provide more insight in the complex process of implementation of psychosocial and person-centred interventions in daily nursing home care for people with dementia. With a systematic review we first aimed to get insight in the barriers and facilitators which come along with the implementation process of psychosocial interventions in daily nursing home care. Subsequently, we conducted an implementation study: Foundation Theatre Veder implemented VCM in six nursing home wards, taking into account the barriers and facilitators that were detected in earlier research about the Veder 'living-room theatre' method (Van Haeften-Van Dijk et al., 2015). During the three-year implementation study, we systematically evaluated, according to the RE-AIM framework,

if and how VCM was implemented effectively in the daily nursing home care for people with dementia.

The research questions of this thesis were:

1. What are, according to the literature, the strategies for successful implementation of psychosocial interventions as offered by professional caregivers in the daily residential dementia care?
2. How is VCM integrated in daily nursing home care, and what are the conditions for successful implementation?
3. How is the implementation of VCM reflected in:
   a) The communicative behaviour and attitudes of professional caregivers?
   b) The content of the care plan?
   c) The behaviour, mood and quality of life of people with dementia?
4. Does implementation of VCM on nursing home wards have a positive impact on the job satisfaction of professional caregivers who were trained in applying the method in daily care?

This thesis is structured as follows:

Chapter two presents the literature review. Here we mapped, following the five constructs of the RE-AIM framework, which psychosocial methods were integrated in daily 24-hour care for people with dementia in the last decades, how these were implemented, what facilitators and barriers were experienced and what the results were of the implementation.

Chapter three describes the study protocol of the implementation of VCM. In this chapter the design, setting and methods are displayed in detail. With a mixed model we researched the facilitators and barriers of the implementation of VCM and we also gathered quantitative data before and after the implementation of VCM on the behaviour of the caregivers and the residents, the care plans of the residents and the attitude of the caregivers.

Chapter four reports on the results of the process analysis, in which we studied to what extent the implementation of VCM was successful according to the five dimensions of the RE-AIM framework. Besides this, we explored the facilitating and hindering factors throughout the implementation of VCM in daily nursing home care.

In *chapter five* we report on our study into the implementation-effectiveness of VCM with various types of quantitative data (questionnaires, observations and analysis of care plans) which were collected among caregivers and residents in the experimental and control groups.

Chapter six describes the research in which the influence of the implementation of VCM on the job satisfaction of caregivers was studied by quantitative data (a self-report questionnaire) and qualitative data gathered during the process analysis from chapter four. The qualitative data provided understanding of the influence of implementing VCM on caregivers' job satisfaction.

Finally, in *chapter seven* 'General discussion' the main findings of this study are presented and discussed in relation to the literature. Methodological issues, as well as scientific and clinical relevance, recommendations for future research and implications for practice and policy are discussed.

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Chapter 2

The art of successful implementation of psychosocial interventions in residential dementia care: a systematic review of the literature based on the RE-AIM framework

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Abstract

Background

In the past decades many psychosocial interventions for elderly people with dementia have been developed and implemented. Relatively little research has been done on the extent to which these interventions were implemented in the daily care. The aim of this study was to obtain insight into strategies for successful implementation of psychosocial interventions in the daily residential dementia care. Using a modified RE-AIM framework, the indicators that are considered important for effective and sustainable implementation were defined.

Method

A systematic literature search was undertaken in PubMed, PsycINFO and Cinahl, followed by a hand search for key papers. The included publications were mapped based on the dimensions of the RE-AIM framework: Reach, Effectiveness, Adoption, Implementation and Maintenance.

Results

Fifty-four articles met the inclusion criteria and described various psychosocial interventions. A distinction was made between studies that used one and studies that used multiple implementation strategies. This review shows that to improve their knowledge, caregivers needed at least multiple implementation strategies, only education is not enough. For increasing a more person-centred attitude, different types of knowledge transfer can be effective. Little consideration is given to the adoption of the method by caregivers and to the long-term sustainability (*maintenance*).

Conclusion

This review shows that in order to successfully implement a psychosocial method the use of multiple implementation strategies is recommended. To ensure sustainability of a psychosocial care method in daily nursing home care, innovators as well as researchers should specifically pay attention to the dimensions Adoption, Implementation and Maintenance of the RE-AIM implementation framework.

Background

The increased life expectancy in the past century has resulted in an increasing number of people suffering from dementia. In 2013 the WHO estimated that a total of 35.6 million people had dementia worldwide (www.who.int/mediacentre/factsheets/en). Numbers are expected to double by 2030 and triple to 115 million by 2050 (Prince et al., 2013). The need for long-term care for people with dementia will therefore increase. The strong need for high-quality care to contribute to the quality life of people with dementia will be an ever growing challenge.

In the community, in psychogeriatric care and in residential care settings, past decades have shown a shift from standard offered care to demand-oriented care (Prince et al., 2013). Goals of demand-oriented healthcare are to provide means to meet the variety of wishes, needs and preferences of individual care seekers. This type of care is therefore also referred to as person-centred care (Kitwood, 1997). Person-centred care is expected to provide benefit to individuals with dementia as well as their caregivers. It is characterized by valuing the persons with dementia, treating them as individuals, seeing the world from their point of view, and creating a positive psychosocial atmosphere (Brooker, 2004). This requires an understanding of the needs, wishes and preferences of people with dementia (Dröes, 2007; Van der Roest et al., 2009), and specific caring skills (Van der Kooij, 2003). In the past twenty-five years many interventions have been developed and initiatives taken to shape this specific type of care (Dröes, 1997a, b; Finnema et al., 2000; Van Mierlo et al., 2010). Person-centred care is proven to be more favourable with regard to supporting the everyday functioning and quality of life of those who receive it than standard offered care (Edvardsson et al., 2010; Terada et al., 2013; Van Weert et al., 2005 a, b).

The main focus in past research has been on the effectiveness of person centred care, including different types of psychosocial interventions such as reminiscence, validation, movement activation and snoezelen, on behaviour, mood and/or quality of life of elderly people with dementia (Dröes et al., 2011; Olazarán et al., 2010; Vernooij-Dassen et al., 2010). Far less research has been conducted into the successful implementation of such psychosocial interventions in daily dementia care over a longer period. Several intervention studies, using process evaluations, demonstrate the importance of paying attention to implementation facilitators and barriers. These process evaluations determine whether the program was implemented according to plan and often conclude that implementation difficulties could possibly explain the (partial) absence of intervention effects (Burgio et al., 2001; Finnema et al., 2000; Schrijnemaekers et al., 2002). This implies that effective implementation of care innovations is not always obvious. Without an accurate assessment of whether the intervention was delivered as intended, conclusions regarding outcome measures of the intervention are questionable (Burgio et al., 2001). Furthermore, the act of evaluating the implementation can be an intervention itself, because it can stimulate the implementers to think more consciously about their work, which can in itself have an immediate effect on the implementation (Bliss & Emshoff, 2002). In addition to the fact that less research is conducted into the implementation of psychosocial interventions, the implementation of innovations in daily dementia care is very complex. The world of healthcare professionals, with their multiple and competing demands within routine care settings has obvious impacts on treatment fidelity and the assumption that

interventions are always carried out to plan is at best naïve (Grol & Grimshaw, 2003; Vernooij-Dassen & Moniz-Cook, 2014). Also, there is a lack of insight in the so-called 'implementation black box', which makes it difficult to know what facilitates an implementation in what context (Burgio et al., 2001; Finnema et al., 2000; Schrijnemaekers et al., 2002). Although up to the year 2000 most researchers focused on the transfer of knowledge and skills related to new interventions to professional caregivers, almost no attention was paid to the process of implementing psychosocial interventions. The extent to which the intervention changed the behaviour of caregivers determines whether the implementation was successful or not. After all, if the actions of the caregivers have not changed, there will be no effects on older people with dementia. From 2000 on researchers more often report on the evaluation of the implementation process. However, few intervention studies systematically evaluate the implementation of an intervention by the caregiver in a natural care setting (Burgio et al., 2001). This applies to community-based interventions and residential settings as well as isolated care interventions, individually or in groups, and interventions integrated in daily 24-hour care. Gaining more insight into the facilitating and impeding factors of implementation processes can contribute to a more successful implementation of new interventions, as well as gaining more insight into the efficiency of the used implementation strategy (Grol & Grimshaw, 2003). This knowledge may lead to the optimization of the context of the implementation (Craig et al., 2008), and, eventually, to the provision of better care.

The purpose of our study was to obtain insight into strategies for successful implementation of psychosocial interventions in the daily residential dementia care as offered by professional caregivers by means of a systematic review of the literature. We want to uncover how psychosocial interventions are implemented and which factors contribute to a successful implementation. To this end, we focus on behaviour changes in the caregivers and (organisation-related) facilitating and impeding factors. There are different implementation models available, like the Promoting Action on Research Implementation in Health Services (PARIHS) Framework (Kitson et al., 2008), the Implementation Model of Change (Grol et al., 2007) or the Consolidated Framework For Implementation Research (CFIR) (Damschroder et al., 2009). In this review, we choose for the RE-AIM framework to structure the different implementation factors that are considered important for implementation effectiveness (Glasgow et al., 1999). The RE-AIM framework consists of five dimensions, namely Reach, Effectiveness, Adoption, Implementation and Maintenance, and it is widely used to assess interventions with multiple process indicators (Dzewaltowski et al., 2004). In evaluating these dimensions, not only the strengths of a program but also its limitations can be identified (Lakerveld et al., 2012). Moreover, the RE-AIM framework is suitable for evaluations at an individual and an organisational level, which is important because each level provides valuable independent information on intervention impact. Reach and Effectiveness are individual levels of impact, whereas Adoption and Implementation are organisational levels of impact. Maintenance can be both an individual and an organisational level of impact (www.re-aim.org). Table 2 describes the definitions of the five dimensions of the RE-AIM framework, including the level of every dimension. To our knowledge, no previous review about the implementation of psychosocial interventions in the daily nursing home care has used the RE-AIM framework as a tool for analysis.

Methods

We reviewed papers of studies that met the criteria as defined and specified below.
The inclusion criteria were:

- Studies evaluating the psychosocial interventions aimed at people with dementia living in residential care settings and potentially giving a professional caregiver insight and/or tools to improve care. We defined the term 'psychosocial intervention' as a non-pharmacological intervention, aiming to improve quality of life and (non-verbal or verbal) communication or interaction between residents in different stages of dementia and their professional caregivers (Van Mierlo et al., 2012). This could be any (communication) training for professional caregivers, single or multi-component interventions, expressive or creative interventions.
- Studies in which a psychosocial intervention for people with dementia was implemented in daily care.
- Empirical studies aimed at the implementation-effectiveness of psychosocial interventions by professional caregivers.
- Studies in which implementation-activities to reach implementation of the psychosocial intervention, are described.
- Studies published in English or Dutch between January 1980 and December 2012.

A search strategy combining medical subject headings and text words relating to 'dementia', 'psycho-social intervention', 'daily care' and 'implementation' was devised and adapted for the electronic databases PubMed, PsycINFO and Cinahl. For every category a search strategy was developed based on keywords 'Mesh', 'Thesaurus' and free text words. Table 1 provides a summary of the search strings. The search started in PubMed, and we subsequently translated the search strings for the other databases. We augmented the electronic search by scanning reference lists (forward and backward searching), according to the so-called 'snowball-method'.

Psychosocial Intervention	Psychotherapy, complementary therapy, psychosocial intervention, person-centred care, validation, multi-sensory stimulation, snoezelen, simulated presence therapy, reminiscence therapy, warm care, gentle care, behaviour therapy, cognitive therapy, reality orientation, skills training, recreational therapy, psychomotor therapy, peer support intervention, social support, Veder Method, skills training, education.
Residential daily care	Hospice care, palliative care, respite care, psychogeriatric homes, nursing homes, daily care, after-hours care, 24-hour care.
Population – Residents	Residents with dementia, living in an institution.
Population – Caregivers	Caregivers who were taught the psychosocial intervention method.
Implementation	Implementation, innovation, effectiveness, guideline, intervention studies, adaptation, integration, process, evaluation studies, organisation and administration, acclimatization, efficacy, cost effectiveness.

Table 1. Summary of the search strings

Review procedures

The initial and inclusive search retrieved 268 articles. Two researchers independently screened the titles and abstracts. All abstracts of the papers were judged by the first author (PB), and two other researchers (JvW and RMD) each reviewed half of the abstracts as second reviewer.

Disagreements between the reviewers were resolved through discussion, this occurred in about two percent of the abstracts of the initial and inclusive search. Some disagreements were related to the abstracts not being clear about whether a study met the inclusion criteria. For example, the word 'implementation' was mentioned in the abstract but no results were described on the process of implementation or the extent to which the caregivers had applied the intervention. In these cases, a paper was judged on the full text and again discussed until consensus was reached. After the title and abstract screening, full text versions of the selected articles were screened by the first author (PB) and a final decision was made whether the manuscripts met all the inclusion criteria. If disagreement persisted, a second/third reviewer (JvW or RMD) was consulted. In total, 54 papers covering 47 individual studies were included in the data synthesis.

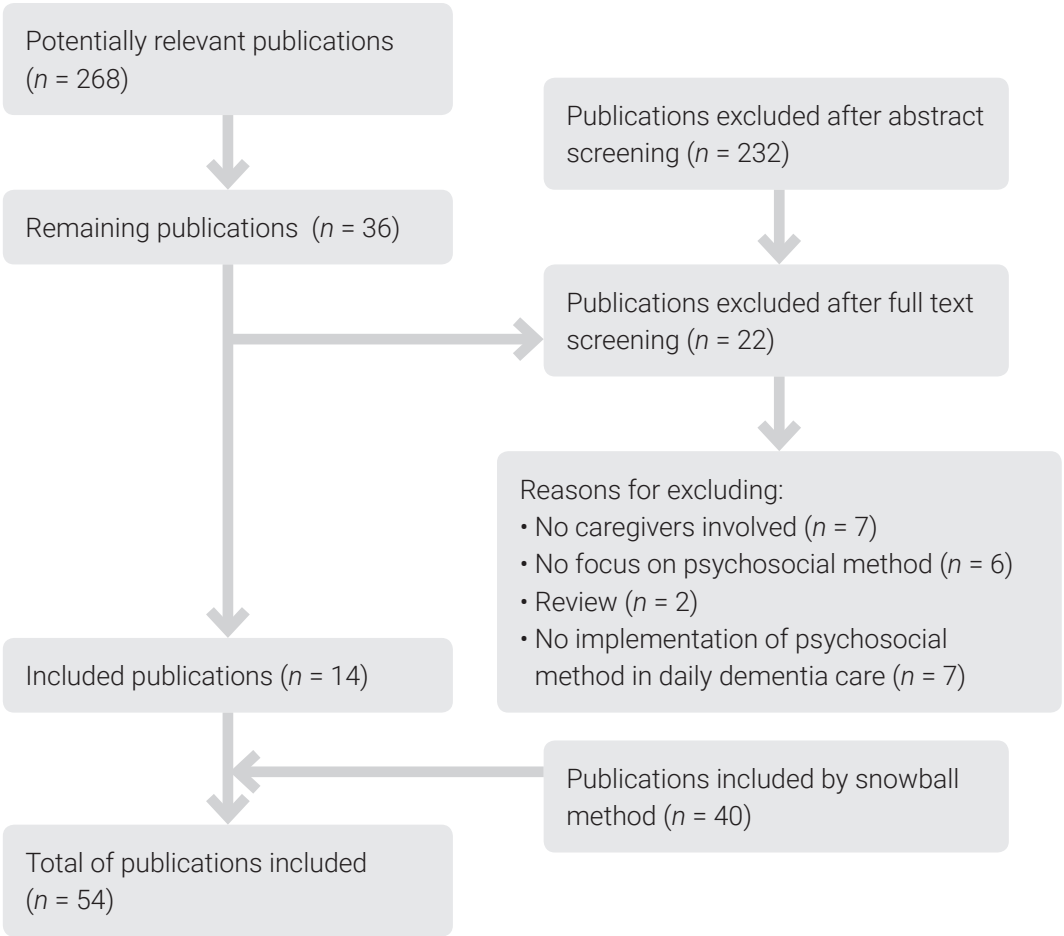

Figure 1. Flowchart of the search strategy

Of the 54 papers, 13 described qualitative studies, five used a mixed-method and 36 papers related to quantitative studies. The search results and selection process is shown in Figure 1.

Data extraction

Record data from the 54 papers were entered in tables and summarised using a qualitative narrative approach (Chalmers & Altman, 1995). As mentioned above, we used the RE-AIM framework to structure the different implementation factors. The degree of implementation of the psychosocial interventions was mapped by reviewer PB for the five dimensions of the RE-AIM framework (Glasgow et al., 1999). To ensure reliability of the results, a second reviewer (JL) mapped 15% of the 54 articles independently in the RE-AIM framework. The mapping of these articles was discussed in detail until consensus was reached.

RE-AIM Evaluation dimensions		
Dimension (level)	**Original definition by Glasgow et al. (1999)**	**Definition in this study**
Reach (Individual)	Proportion of the target *population* that participated in the intervention.	Proportion of caregivers in care settings that participated in the intervention during the study.
Effectiveness (Individual)	Success rate if implemented as in guidelines; defined as *positive outcomes minus negative outcomes.*	Outcomes (positive and negative) regarding *knowledge, skills* and/ or *attitudes* of the professionals in the study.
Adoption (Organisation)	Proportion of *settings, practices, and implementation plans* that will adopt this intervention.	Proportion of *caregivers that actually adopt* the intervention in the study.
Implementation (Organisation)	Extent to which the intervention is implemented as intended in the real world.	Extent to which the intervention in the study is implemented as intended in the real world, *including implementation barriers and facilitators.*
Maintenance (Individual and Organisation)	Extent to which a *program* is sustained over time.	Extent to which the *intervention* is sustained over time.

Table 2. Definitions of the five dimensions of the RE-AIM framework and definition in this review

Using the five dimensions of the RE-AIM framework (Reach, Effectiveness, Adoption, Implementation, Maintenance) enables us to provide a unique overview of a range of outcome parameters of a variety of psychosocial interventions in daily dementia care. Because the current study focused on the degree to which the implementation is carried out by caregivers, the execution of the RE-AIM framework has been slightly altered. We looked at outcomes with respect to the caregivers in all five dimensions, the outcomes of the residents with dementia were not considered. As such, the dimension 'reach' was defined as the proportion of the caregivers that were included in the study. In the dimension 'effectiveness', the effect of the intervention

on the knowledge, attitude and/or skills of the caregivers is described. The dimension 'adoption' summarises how many of the included caregivers adopted the intervention (e.g. followed the training or showed compliance with the intervention). The operationalisation of 'implementation' was not modified for this study; we also described the facilitating and impeding factors for successful implementation under this construct. Finally, we changed nothing in the dimension 'maintenance', which is the extent to which the intervention is sustained over time. In Table 2, we explain the use of the five different constructs from the RE-AIM framework for this study.

Results

Description of the interventions

The 54 included publications reported on 47 different studies, and described various psychosocial interventions. About half of the interventions concerned person-centred care in

Paper (type research design)	Intervention
1. Anderson et al., 2011 (4)	Snoezelen
2. Berkhout et al., 2009 (3)	Resident-oriented care
3. Berkhout et al., 2004 (2)	Resident-oriented care
4. Boumans et al., 2008 (2)	Integrated care
5. Boumans et al., 2005 (2)	Resident-oriented care (ROC)
6. Burgio et al., 2001 (1)	Communication skills training and use of memory book
7. Burgio et al., 2002 (1)	Formal staff management skills
8. Chang & Lin, 2005 (2)	Feeding skills training program
9. Christensson et al., 2003 (2)	Nutrition nursing care
10. Cohen-Mansfield et al., 1997 (3)	Training program on dementia
11. Davison et al., 2007 (3)	Dementia training and peer support program
12. Dijkstra et al., 2002 (2)	Communication training and use of personalised memory book
13. Finnema et al., 2005 (1)	Integrated emotion-oriented care
14. Galik et al., 2008 (2)	Restorative Care Intervention for the Cognitively Impaired (Res-Care-CI)
15. Gallagher, 2011 (3)	Individualized music protocol
16. Gerdner, 2005 (4)	Individualized music
17. Gould & Reed, 2009 (3)	Foundations of Dementia Care: enhancing skills, enriching lives (FDC)

general (13 studies) or an educational program aiming to gain knowledge on dealing with difficult behaviour of people with dementia (12 studies). Four publications focused on the application of music on elderly with dementia and three interventions on the use of the residents' biography in the care for elderly people with dementia. Five publications reported on the implementation of 'snoezelen', and another five about caregivers who were taught communication skills. The remainder of publications concerned the following interventions: restorative care, validation, palliative care, a feeding skills program, supervision, a nursing guideline for depression, non-pharmacological interventions in general and a minimal restraint program. Tables 3a and 3b give an overview of the different interventions studied and summarise on which of the five constructs of the RE-AIM framework information is provided in the papers. A more detailed description of this information, including the applied implementation strategies in the different studies, can be requested from the author.

Reach	Effectiveness	Adoption	Implementation	Maintenance
+	-	+	+	+
+	-	+	+	-
+	+	-	+	-
+	+	-	+	+
+	+	-	+	+
+	+	+	+	+
+	+	-	-	+
+	+	-	-	-
+	+	-	+	-
+	+	-	-	-
+	+	+	-	-
+	+	-	-	-
+	+	-	+	-
-	+	+	+	-
+	+	-	+	-
+	-	-	+	-
+	+	+	+	+

Paper (type research design)	Intervention
18. Goyder et al., 2012 (3)	Staff Training in Assisted Living Residence (STAR)
19. Hobday et al., 2010 (3)	CAREGIVERS program, an Internet training
20. Kuhn and Forrest, 2012 (3)	Palliative care
21. Kuske et al., 2009 (1)	Dementia care training
22. McAiney et al., 2007 (3)	PIECES curriculum
23. McCallion et al., 1999 (2)	Nursing assistant communication skills program (NACSP)
24. Nooren-Staal et al., 1995 (2)	Validation
25. Parks et al., 2005 (3)	Educational program (dignity in dementia)
26. Pellfolk et al., 2010 (1)	Restraint minimization program
27. Perry et al., 2005 (4)	Communication training
28. Peterson et al., 2002 (2)	Basic Care I
29. Ripich et al., 1995 (3)	Focused program
30. Speziale et al., 2009 (3)	Gentle Persuasive Approaches curriculum
31. Stevens et al., 1998 (3)	Behaviour skills training
32. Sung et al., 2008 (3)	Individualized music protocol
33. Thomson & Burke, 2008 (3)	Training program about the aging process and experiences of the elderly
34. Van der Kooij et al., 2012 (1)	Integrated emotion oriented care, IEOC
35. Van der Steen et al., 2011 (3)	Family information booklet
36. Van Weert et al., 2005a (2)	Snoezelen
37. Van Weert et al., 2005b (2)	Snoezelen
38. Van Weert et al., 2006 (2)	Snoezelen
39. Verkaik et al., 2011 (3)	Nursing guideline on depression in dementia
40. Visser et al., 2008 (3)	Staff education and peer support
41. Williams et al., 2003 (3)	Communication training
42. Cohen-Mansfield et al., 2012 (4)	Nonpharmacological intervention (NPI)
Total	

Table 3a. Provided information on implementation in the included quantitative and mixed intervention studies ordered by the dimensions of the RE-AIM framework

+ = criterion (partly) met; - = criterion not met

	Reach	Effectiveness	Adoption	Implementation	Maintenance
	+	+	+	+	-
	+	+	-	+	-
	+	+	-	+	-
	+	+	-	+	-
	+	+	-	+	+
	+	+	-	-	+
	+	+	-	-	-
	+	+	+	-	+
	+	+	+	-	-
	+	+	-	+	-
	+	+	-	-	-
	+	+	-	-	-
	+	+	-	+	-
	+	+	+	+	+
	+	+	-	+	-
	+	+	-	-	-
	+	+	-	+	-
	+	-	+	+	+
	+	+	+	+	-
	+	+	-	-	-
	+	+	-	-	+
	+	-	+	+	-
	+	+	+	+	+
	+	+	-	-	-
	-	-	-	+	-
	40	**36**	**14**	**26**	**13**

Type design: True experimental design (1); Quasi-experimental design (2); Pre-experimental design (3); Qualitative design (4)

The full description of the references of Table 3a can be found in Appendix A.

Paper (type research design)	Intervention
43. De Lange, 2004 (4)	Integrated emotion-oriented care (IEOC)
44. Emilsson, 2006 (4)	Supervision as pedagogy method
45. Froggatt, 2000 (4)	Palliative care
46. Galik et al., 2009 (4)	Restorative care philosophy
47. Gotell et al., 2002 (4)	Caregiver singing
48. Hansebo & Kihlgren, 2000 (4)	Patient life stories
49. Kellett et al., 2010 (4)	Family Biography Workshop (FBW)
50. Kemeny et al., 2004 (4)	Person-centred care
51. Kontos et al., 2010 (4)	Person-centred care using drama
52. McKeown et al., 2010 (4)	Life story work (LSW)
53. Schrijnemaekers et al., 2002 (4)	Emotion-oriented care (EOC)
54. Van Weert et al., 2004 (4)	Snoezelen
Total	

Table 3b. Provided information on implementation in the included qualitative intervention studies ordered by the dimensions of the RE-AIM framework
+ = criterion (partly) met; - = criterion not met

Outcomes of the implementation based on the RE-AIM framework

The constructs that were addressed in the included publications are depicted in Tables 3a and 3b. In order to interpret the quality of the securities described in the construct effectiveness properly, we included the type of study in Tables 3a and 3b (Shadish et al., 2002). In 6 papers – from a total of 54 papers – the research has been carried out with a true experimental design (6, 7, 13, 21, 26, 34). Further details on how the constructs were addressed are described in the following paragraphs.

Reach

An intervention's reach shows the proportion of the target population that participated in the intervention. Although all included publications had a clearly described target population, i.e. caregivers who provide psychosocial care to residents with dementia living in an institution, the studies differed in how they defined the proportion of the target population that actually participated in the intervention. Five of the 54 publications (9%) did not indicate the number of participating caregivers in their study (14, 31, 42, 50, 52). Twelve papers (22%) did specify the percentage of individuals who participated based on a valid denominator, for example total number of caregivers who worked in the participating nursing home or ward (2, 4, 6, 9, 17, 18,

Reach	Effectiveness	Adoption	Implementation	Maintenance
+	+	+	+	-
+	+	+	+	-
+	+	+	+	-
+	+	-	+	-
+	+	-	-	-
+	+	-	+	-
+	+	-	+	-
-	+	-	+	+
+	+	-	+	-
+	+	+	+	-
+	+	+	+	-
+	+	+	+	+
11	**12**	**6**	**12**	**2**

Type design: True experimental design (1); Quasi-experimental design (2); Pre-experimental design (3); Qualitative design (4)
The full description of the references of Table 3b can be found in Appendix A.

20, 28, 30, 33, 39, 46). The reach of these studies varied between 34% and 97%, with a mean reach of 60%.
According to the RE-AIM framework, studies should also describe the characteristics of participants of the target population compared to non-participants; none of the included studies did this. Thirteen publications (24%) did not provide information about the characteristics of the participating caregivers (8, 9, 14, 17, 25, 27, 30, 42, 49, 50, 52, 54). Finally, 15 publications (28%) described the qualitative methods that were applied to recruit participants and how this affected the reach of the studies (7, 9, 13, 18, 21, 24, 34, 36, 37, 38, 39, 40, 43, 46, 51).

Effectiveness
As mentioned above, the outcomes of effectiveness are divided into knowledge on the one hand and skills and/or attitudes on the other.

Knowledge
Twelve studies (60%) with a *quantitative* research design found a significant increase in knowledge of dementia care after the implementation of the intervention (7, 8, 14, 15, 19, 25, 26, 28, 29, 32, 34, 40). Of these twelve studies, three used a true experimental design. Eight

studies (40%) with a quantitative research design reported no increase in knowledge, or a non-significant increase in knowledge in the trained caregivers (10, 18, 20, 21, 23, 24, 30, 33). Of these eight studies, one used a true experimental design.

Of the twenty quantitative studies, eight used a *single implementation strategy*. This means that they executed one implementation activity, training, sometimes offered at different times and/or in different places. In three studies (38%) this led to significantly more knowledge among caregivers (19, 25, 28), in five studies (62%) the single implementation strategy did not lead to a significant increase in the caregivers' knowledge of dementia (10, 18, 21, 30, 33).

Twelve of the twenty quantitative studies followed a *multiple implementation strategy*. This means that they used two or more implementation activities, such as training with a follow-up or mono- / interdisciplinary conferences, a project leader who is responsible for the implementation or an individual care plan in which the intervention could be integrated. These studies investigated whether the use of implementation activities affected the knowledge of caregivers regarding dementia. In eight of these publications (67%) a multiple implementation strategy leads to a significant positive effect on knowledge acquisition (7, 8, 14, 15, 26, 32, 34, 40). In one publication (8%) the implementation strategy led to significant positive results on two of the five modules (29). Finally, in three publications (25%) the multiple implementation strategy did not yield significant results on caregiver knowledge (20, 23, 24).

Two *qualitative* papers described a single *implementation strategy*, and researched whether this increased the knowledge of caregivers: in study 49 is described that the intervention, supported the caregivers in managing difficult situations, and in study 45 the caregivers gained new knowledge of pain control. Finally, in study 44 is described that a group of caregivers asked for knowledge about dementia and medication during supervision. In this study a *multiple implementation strategy* was used. It is unknown if the caregivers actually learned more about dementia and medication.

In summary, the results seem to demonstrate it is important to apply a multiple implementation strategy to increase knowledge in caregivers. Furthermore, it also seems important to offer training at different times, so that more caregivers can follow the training. The studies that showed an increase of knowledge in caregivers all offered a follow-up after training and additional support by means of a project leader responsible for the implementation, and/or support regarding how to integrate the intervention in the individual care plan. No conclusions could be drawn regarding which additional implementation strategy besides training and follow-up leads to more knowledge.

Attitude and/or skills

Fourteen of the 28 publications (50%) with a *quantitative* research design described significant positive effects on attitudes and/or skills after implementation of the intervention (3, 4, 8, 11, 12, 16, 21, 25, 26, 29, 33, 36, 37, 38). Two of these used a true experimental research design. Six studies (21%) described few significant results on attitudes and/or skills (5, 6, 7, 22, 40, 41). Here, two studies also used a true experimental research design. Eight

studies (29%) with a quantitative research design found no significant results on attitudes and/or skills after implementation of the intervention (9, 10, 17, 20, 24, 30, 31, 34). One of these studies used a true experimental design. It should be taken into consideration that in 19 of the 28 articles (68%) the change in attitudes and/or skills is measured with a self-report questionnaire (3, 4, 9, 10, 11, 12, 16, 17, 20, 21, 22, 24, 25, 26, 29, 30, 33, 36, 40).

From the 28 quantitative studies, nine applied a *single implementation strategy* to influence attitudes and/or skills. This means that they executed one implementation activity. They offered training, sometimes at different moments. Five of these interventions (56%) led to a significant positive effect on change of attitude and/or skills of the caregivers (16, 21, 25, 26, 33). Four publications (44%) reported no change in attitude and/or skills of the caregivers (9, 10, 17, 30).

Nineteen of the 28 studies with a quantitative research design used a *multiple implementation strategy*, i.e. two or more implementation activities were executed, and investigated whether this affected the attitude and/or skills of the caregivers. In nine publications (48%) significant positive effects are reported (3, 4, 8, 11, 12, 29, 36, 37, 38). Four publications (21%) found no significant results on change in attitude and/or improved skills (20, 24, 31, 34). The six studies (31%) in which few significant positive results were found all used a multiple implementation strategy.

Twelve *qualitative* papers and one mixed method paper described to what degree the interventions influenced the attitude and/or skills of the caregivers. From the 13 surveys, seven applied a *single implementation strategy* (27, 45, 46, 47, 50, 51, 53) and six applied a *multiple implementation strategy* (43, 44, 48, 49, 52, 54). The themes in these 13 publications that reported positive changes as a result of the intervention, were 'knowing the needs of the residents' (43, 46, 48, 50, 51, 54), 'knowing the person behind the patient' (43, 46, 48, 49, 51, 52), more patience (46, 50, 51, 53), flexible scheduling and saving time (45, 46, 51, 53), less resistance to care (47, 51), various communication strategies (27, 45, 50, 52, 46) and overall attitude changes (43, 48, 49, 50, 53).

Three qualitative studies, which had applied a *single implementation strategy*, found no changes on some aspects of attitude and/or skills. A paradoxical effect was found in study 47: cooperation of care between caregivers and residents increased, but verbal communication decreased. No differences in interactions were found between caregivers and residents in study 53. The intervention palliative care had no effect on the organisational approach to care of the residents (45).

A number of qualitative papers which applied a *multiple implementation strategy* also showed no changes on attitude and/or skills. In study 43 no changes were found on 'resistance to care' or on 'social interactions'. The same applies to study 44, where also no changes were found on attitude. Despite the positive effects on attitude and/or skills some caregivers in study 48 stated that they did not see any favourable effect of the intervention on the quality of care.

Summarizing: the change of attitude and/or skills of the caregivers shows that applying a multiple implementation strategy at its best has minimal positive results. However, based on the conducted research no statement can be made on which combination of implementation strategies is most effective.

Adoption

In this review study we defined adoption as the proportion of caregivers that actually adopt the intervention. To achieve adoption various implementation strategies were applied in the included studies. In nearly all some type of training was offered (*n* = 48). Most of the provided courses were given at different times and/or several days in order to ensure all caregivers, who are usually working according to a schedule, could follow the training. In study 18 they offered staff that missed one or more workshop sessions additional individual teaching to provide them with an overview of the material. In some other studies it was decided to offer training via the internet after the first implementation (17, 35). Sometimes a project leader was appointed who was responsible for the implementation (*n* = 18). In addition, mono-disciplinary and/or interdisciplinary conferences and/or follow-up meetings were organised to support the implementation (*n* = 25). In many cases an individual care plan was used during the implementation (*n* = 26). The detailed implementation strategy from all studies can be requested from the author.

Some authors made remarks which component(s) of the implementation strategy were more or less effective. Two studies reported that the used implementation strategy, training, alone was not strong enough (9, 21). Although in study 40 they offered training at different times and/or in different places, they concluded that follow-up is desirable for a successful implementation. A positive boost to putting knowledge into practice was achieved by training on the job (2), role-play and video as a pedagogic tool (51), integration of learning into practice and on-the-job reinforcement of learning (22), and supervision and self-monitoring (31). The researchers of study 44 reported that supervision as a process-oriented model is less useful for putting knowledge into practice as it needs a long time for successful implementation. On the other hand, the use of an individual care plan in which the intervention is included, appears to be an effective implementation strategy (14, 39, 54). Finally, although the implementation strategy of an internet-based training has many benefits: in study 19, they concluded that it is useful to include a group component in the training and to deliver the training program in modules.

A minority of ten publications (19%) described the percentage of caregivers which participated in the offered training/intervention, ranging from 32% (11) to 100% (31) of the caregivers who had gone through the entire implementation process (6, 11, 14, 18, 25, 26, 31, 35, 36, 54). Study 35 describes the acceptability of a family information booklet using statistical testing between nurses and physicians in two countries. Nurses versus physicians in the Netherlands independently used the booklet significantly more. Ten other publications (19%) did not mention exact numbers, but gave an overall description of the adoption of the intervention by caregivers (1, 2, 17, 39, 40, 43, 44, 45, 52, 53). For example, study 40 describes that a minority of the staff attended the educational program, and study 43 describes that group sessions of emotion-oriented care were held at three of the four experimental wards.

In summary, little is reported on the adoption of the implemented interventions.

Implementation

The construct implementation includes a number of criteria. First to mention is that the publication shows the percentage or number of perfect delivery of the intervention. Seventeen of the 54 articles (31%) clearly indicated how often the intervention was performed (1, 2, 3, 4, 5, 6, 13, 14, 16, 21, 22, 30, 31, 32, 34, 53, 54). For example, Restorative Care was offered to residents 16 ± 8 days each month or 61 ± 40 minutes each day during the intervention phase of the study (14). One study described at two month follow up how often the memory book was in possession of the residents: during 77% of the morning and 80% of the afternoon checks (6). Another study showed that the adherence to the protocol increased from 0 at baseline to 72% on the post-test (32).

In one intervention study adaptations were made to the intervention during the study: the researchers describe that 41 additional staff members participated in a condensed version of the training program (20).

Seven publications (13%) give a rough indication of the costs that the intervention entailed: sometimes in time, sometimes in money (1, 15, 16, 19, 27, 31, 36).

The last criterion of the research of Implementation is to which extent the consistency of implementation across staff/time/settings/subgroups (focused on the process) is described. Sixteen of the 54 articles (30%) reported facilitating factors for a successful implementation, and 20 (37%) reported about the impeding factors. In Table 4 they are described divided into categories.

Influencing factor/theme of the implementation	**Facilitating**	**Impeding**
Opinion leader or management support	2, 20, 22, 31, 40, 43, 51, 54	2, 4, 16, 20, 22, 39, 42, 44, 53
Enthusiastic and or experienced team	2, 4, 43, 44, 46, 47	20, 43, 47, 53
Influence on quality of care	3, 14, 15, 39, 43, 49, 52, 54	20, 22, 39, 42, 53, 54
Material and/or immaterial conditions	2, 18, 20, 47	1, 18, 22, 42, 50, 54
Time required to learn and apply the intervention	15	1, 2, 4, 14, 15, 17, 18, 22, 39, 43, 44, 45, 47, 49, 50, 53, 54,
Learning culture in de organisation	45, 52	
Multiple innovations/projects running simultaneously		2, 4, 39, 40, 53, 54
Willingness of residents and/or family to participate in the intervention		15, 42, 47, 49

Table 4. Facilitating and impeding factors of the implementation of psychosocial interventions in daily dementia care.

Maintenance

Eleven of the 54 included publications (20%) described the primary outcomes at six- or more month follow up after implementation of the intervention. Seven of these showed that the outcomes of knowledge and/or attitude maintained at minimal six-month follow up (5, 7, 22, 31, 35, 38, 40). Four of the 11 publications reported that the outcomes at six or more months follow up were not (or hardly) maintained (1, 7, 22, 25).

Another topic concerning the construct of maintenance is whether there are measures, discussions or alignments to the organisation mission or whether another form of sustainability is realised in the organisation. In study 54 is described that four out of six experimental wards facilitated the intervention by designing and completing a long-term implementation plan. Three studies reported a form of long-term support for motivation of the caregivers, like consultation visits or a supporting program (6, 22, 50). One study indicated that monthly visits by the trainer to continue implementation of the intervention might not be sufficient (23). Another study (4) concluded that more attention should be paid to the process of change and the conditions that make the implementation of the intervention successful.

The last topic concerning the construct of maintenance is the question if and how an intervention program was adapted for long-term implementation, or which elements were retained after the implementation was completed. Two publications described how the program was adapted for long-term implementation, i.e. by offering it online via the internet (17, 35).

Conclusions and discussion

In this review, we analyse the research literature concerning the implementation of psychosocial interventions in the daily care of people with dementia living in residential care settings using the RE-AIM model as a framework. The RE-AIM framework focuses on five aspects of implementation, i.e. Reach, Effectiveness, Adoption, Implementation and Maintenance. From a total of 268 potentially relevant publications, 54 publications met all inclusion criteria. These publications were related to 47 individual studies/intervention programs.

To answer our question, we included effective and non-effective studies in the review. If we had excluded the ineffective trials we ran the risk of having less or no insight of the factors that may have an obstructing effect on the implementation. The focus in this review is therefore not on the effectiveness of the study, but how the intervention can be implemented in daily complex reality.

Results of this systematic review indicate that there is great heterogeneity with regard to implementation strategies in terms of duration, intensity and guidance. Some implementation studies focused mainly on knowledge transfer, others focused on skills training and change of attitude of the caregivers as well. However, the goal of all studies and training was to teach caregivers to work in a different, more personalised way with older people with dementia, resulting in a change of the caregivers' behaviour.

Whether an intervention is implemented successfully can only be evaluated by a proper evaluation process. One way to carry out a thorough evaluation process is the use of the RE-AIM framework. In this study, we used the five constructs of the RE-AIM framework

and it is striking that most implementation studies focus on the constructs Reach and Effectiveness, followed by Implementation. The constructs Adoption and Maintenance receive much less attention even though they are just as important when it comes to a successful implementation. In this review, *Adoption* is defined as the extent to which caregivers actually adopt the intervention and/or follow the training. It was described in 20 of the 54 (37%) publications in a more or less concrete way. It is definitely questionable whether effective implementation is possible if the caregivers lack the required skills to carry out an intervention. Vernooij-Dassen & Moniz-Cook (2014) mention the risk of the 'implementation error', which refers to low treatment fidelity, meaning that the application of the intervention differs considerably from the original plan. *Maintenance* is ultimately the most decisive construct for successful - long-term - interventions: it describes the degree to which the intervention becomes a relatively stable and enduring part of the behavioural repertoire of an individual or organisation. Even fewer publications, namely 15 out of 54 (28%), addressed Maintenance on an individual and/or organisational level. This is worth mentioning and confirms the expectations Glasgow et al. (1999) expressed more than a decade ago, that adoption and maintenance will be the most understudied constructs.

From the 54 included publications in this review only five elaborated - to some degree - on all five constructs of the RE-AIM framework (Burgio et al., 2001; Gould & Reed, 2009; Stevens et al., 1998; Van Weert et al., 2004; Visser et al., 2008).

To get an impression of possible selection bias, it is important to know how many caregivers participated in the study. Most of the studies included in this review did not provide information about the percentage of participating caregivers based on a valid denominator, e.g. the total number of eligible caregivers who work in the participating nursing homes. In 12 studies this percentage was provided or could be derived from the reported numbers. Contrary to our expectation, the *reach* in these 12 studies varied and in some cases was rather low. One would expect recruitment of the eligible caregivers in the nursing homes to be easy. Overall, these nursing home care studies did not routinely provide the reach in percentages. Reach also concerns the characteristics of the participants that provide an indication of the representativeness of the participants (Glasgow et al., 1999). Most of the included studies in this review described the characteristics of the participating caregivers.

The *effectiveness* of knowledge transfer is usually assessed by means of a questionnaire or quiz. The studies in this review show that training often, but not always, leads to a significant increase in knowledge of the intervention. This is in line with Eggenberger et al. (2013), who concluded that caregivers who follow a communication training acquire significantly more knowledge.

The *effectiveness* regarding change in caregivers' attitude or gaining more skills is more complex. Despite the fact that there is often an increase in knowledge, the results indicate that approximately half of the studies were unable to bring about a significant change in attitude and/or skills. Also, in most cases the change in attitude and/or skills is measured with a self-report questionnaire, which can lead to a more positive result compared with observational studies (Van de Mortel, 2008). Thus, it is possible, but also difficult to change the attitude of caregivers or to gain more skills through the implementation of an intervention. This is

in accordance with Eggenberger et al. (2013), who concluded that caregivers who follow a communication training not only acquire significantly more knowledge, but also acquire more skills and competencies. Our conclusion is that it is apparently easier to influence the level of knowledge than the behaviour, e.g. the attitude and/or skills of the caregivers. It is likely that the used didactic methods were simply not strong enough. Not all studies described the used didactic methods of the offered training. In studies where it was, the use of varied teaching methods, in which the caregivers practiced new behaviour, usually led to a positive change in behaviour. This is consistent with the results of Kuske et al. (2007), who state that the use of role-play, videos and vignettes in training appeared to be effective teaching methods to realise a change in attitude or to gain more skills. The difficult shift from knowledge to behaviour change may also be related to characteristics of the person himself. De Lange (2004) stated that not every caregiver is able to learn to offer person-centred care and Lawrence et al. (2012) concluded some caregivers were uncomfortable participating in the intervention.

Another important element in putting the knowledge into practice appears to be the application of a *flexible and multiple implementation strategy*. This means that caregivers are enabled to follow training at different times. In addition, it is important that more than one implementation activity is applied, for example in the shape of additional training features, such as follow-up meetings, observations, a promotion-group and consultations. Moyle et al. (2010) and Eggenberger et al. (2013) reported that these follow-up methods proved effective to consolidate the trained skills and intervention. Making a project leader responsible for the implementation often leads to a successful implementation. Lastly, the use of an individual care plan also supports the implementation of an intervention. In this context, Grol & Grimshaw (2003) concluded that multifaceted implementation is more likely to be effective in changing behaviour than single implementations.

Successful *implementation* of a psychosocial intervention depends on several factors that may promote or hinder implementation. Many of the interventions demanded extra work and reallocation of staff time. The caregivers were concerned about the workload and how to incorporate the psychosocial intervention in daily care. Lawrence et al. (2012) also found this to be a challenge to successful implementation. Organisational support is necessary to enable caregivers to sustain good practice, for example modifying work schedules, providing practice opportunities and changing policy of treatment guidelines (Aylward et al., 2003).

In the CFIR framework organisation-related issues that may affect its implementation in the 'inner setting' are further elaborated. These include the structural characteristics of the organisation, network and communication structures within the organization, organization culture and implementation climate, and can help get insight into the 'black box' of the Implementation of the RE-AIM framework (Damschroder et al., 2009). This also applies to the PARIHS framework whose elements 'context' and 'facilitation' focus on the barriers and facilitators within the organization (Rycroft-Malone, 2004).

Support of staff or administrator is often mentioned as crucial for successful implementation. This is in line with Lawrence et al. (2012) who state that it is essential to obtain the full support of administrators given their role in facilitating interventions and effectuating cultural change

within the nursing home. In the CFIR framework this is called 'engagement', which refers to the influence the formal and informal leaders or 'first users' have on the intended users (Damschroder et al., 2009).

For successful implementation it is important that no other innovation projects run simultaneously. Administrators must take this into account when implementing innovations. In addition,

"The innovation process is inherently so complex that it needs expert facilitation, where trained individuals (change agents, facilitators, consultants) simultaneously work with individuals, teams and the wider system to manipulate contextual factors and support the experiential learning of individuals and teams in managing the new knowledge, attitudes and skills." (Kitson, 2009)

This review was not without methodological limitations. To understand the extent to which an intervention is successfully implemented in the daily care, this review focused on reporting of the five constructs of the RE-AIM implementation framework. This is notably different from a typical efficacy-based review where quality ratings are based on factors such as adequacy of study design, sample size, validated metrics and statistical methods. It is conceivable that the included studies would have scored differently in an efficacy-based review. This review covers very diverse studies in terms of type of intervention and methodological design. Despite this different focus, this review is based on the essential elements of a systematic review, including a comprehensive search strategy, predetermined with clear inclusion criteria and a validated data extraction tool. This review shows that the RE-AIM framework provides an excellent tool for the description and assessment of studies into the implementation of psychosocial care interventions in daily nursing care homes for people with dementia.

Based on the analysis of the 54 included publications, recommendations for future implementation studies, regarding each of the five RE-AIM aspects can be made. With regard to the *reach,* we recommend that, for every innovation the denominator is defined. The denominator is the total number of health care providers who are potentially eligible for the innovation. Both caregivers participating as well as the health care providers who refuse (to participate) a comparison should be made based on demographic and educational background. Regarding the *effectiveness,* it is important that the study is designed so that the analysis performed provides insight into the robustness of the implementation effectiveness, such as the impact on the knowledge, skills and attitudes of health care providers. Researchers and innovators must also report potentially negative effects of the intervention. For a proper insight on the *adoption*, it is also important to report the absolute number of health care providers who have participated in the implementation strategy. For example, the number of health care providers who completed the offered training. And an indication of participation rate amongst delivery agents should be provided. With respect to *implementation* the execution of the content, the duration, the frequency and the cost of the intervention should be mentioned. It is also important to describe the used implementation strategy. Try describing some perfect 'implementations' of the intervention, preferably in percentages. And finally, it is important that the process of implementation, including facilitating and impeding factors

are reported, showing which factors under what circumstances are influential. To monitor the sustainability (*maintenance*) of the implemented intervention a follow-up evaluation of at least six months after implementation should take place during research. Give an account of the measures taken by the organization to implement a lasting intervention. And last but not least, report on the costs to maintain the intervention.

The strategies used to implement psychosocial interventions in daily care for people with dementia living in a residential care setting vary widely in terms of duration and intensity. Strategies range from a one-hour workshop to several days of training, under the responsibility of a project leader, with support from staff or administrator, and follow ups of coaching on the job. This review shows that to achieve a successful implementation of an intervention a multiple implementation strategy is advisable. Besides training for caregivers to learn how to use the intervention in daily care, there should be additional training features such as a follow up, on-the-job coaching or consultations to consolidate what is learned in practice. A project or opinion leader can boost the implementation, and a supporting individual care plan explaining where the intervention fits stimulates the actual application of the intervention. This is an important conclusion for innovators who want to stimulate person-centred care in nursing homes for people with dementia. Innovators as well as researchers have to keep in mind that it is of great importance to pay attention to the constructs *implementation*, *adoption* and *maintenance* of the RE-AIM framework. Innovators should report structurally on the caregivers who are intended to apply the intervention, and subsequently on the number of caregivers who actually adopt the intervention in their daily practice. While planning the implementation of the new person-centred care intervention, innovators also have to think about the sustainability of the intervention in the future. Therefore they can make an evaluation plan for minimal six months after the implementation, but they also should think about long-term sustainability on the organisational level; for example, how to integrate the new intervention in the vision of the organization. The same goes for researchers: to obtain real insight into the successful implementation of a new person-centred care intervention, the evaluation should obviously focus on the effectiveness of the intervention, but also on the *implementation* and more specifically the *adoption* and *maintenance* of the new person-centred care intervention in the daily care of people with dementia.

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Chapter 3

Study protocol: Implementation of the Veder Contact Method (VCM) in daily nursing home care for people with dementia: an evaluation based on the RE-AIM framework

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Abstract

Objectives

People with dementia in nursing homes benefit from person-centred care methods. Studies examining the effect of these methods often fail to report about the implementation of these methods. The present study aims to describe the implementation of the Veder Contact Method (VCM) in daily nursing home care.

Method

A process analysis will be conducted based on qualitative data from focus groups with caregivers and interviews with key figures. To investigate whether the implementation of VCM is reflected in the attitude and behaviour of caregivers and in the behaviour and quality of life of people with dementia, a quasi-experimental study will be conducted. Six nursing home wards implementing VCM will be compared with six control wards providing Care As Usual. Quantitative data from caregivers and residents will be collected before (T0), and nine to twelve months after the implementation (T1). Qualitative analysis and multilevel analyses will be carried out on the collected data and structured based on the constructs of the RE-AIM framework (Reach, Effectiveness, Adoption, Implementation, Maintenance).

Conclusion

By using the RE-AIM framework this study introduces a structured and comprehensive way of investigating the implementation process and implementation effectiveness of person-centred care methods in daily dementia care.

This study is registered in the Dutch Trial Registration, number NTR4248

Background

The person-centred care approach for people with dementia in Europe was developed by Tom Kitwood (1997). He suggested that behaviours of the person with dementia were not only caused by changes in the brain due to dementia, but were also influenced by the complex interaction between the person with dementia and her or his social environment. As many studies show, providing psychosocial and person-centred care interventions that are aimed at fulfilling the (unmet) needs of people with dementia living in nursing homes, such as reminiscence, music therapy and emotion-oriented care, positively influences the quality of life of people with dementia (Dröes et al., 2011; Olazarán et al., 2010; Testad et al., 2014; Van Mierlo et al., 2010; Whitaker et al., 2014). This is not surprising, as the experienced unmet needs in nursing home settings are frequently located in areas that people with dementia indicate being important for their quality of life (Dröes et al., 2006; Hancock et al., 2006). Hancock et al. (2006) reported the following most common unmet needs based on their research among people with dementia in care homes: lack of pleasant daytime activities, company, and adequate support when feeling psychologically distressed. These needs, as well as other needs, such as preservation of self-esteem, e.g. being accepted for who you are, feeling attached, being understood and having social contact with family and professional caregivers, are mentioned by people with dementia as very relevant to their quality of life (Dröes et al., 2006). At the same time, providing person-centred care also positively influences the job satisfaction of caregivers on psychogeriatric wards (Pol-Grevelink et al., 2012; Van Dijk et al., 2011a).

From the 'living-room theatre' Veder method to the Veder Contact Method in daily care

In the past 25 years many psychosocial interventions were developed, varying from 'multi-sensory stimulation' to movement activation, reminiscence and pet therapy, and many initiatives were taken to shape person-centred care (Finnema et al., 2000; Olazarán et al., 2010; Van der Kooij et al., 2013; Van Dijk et al., 2012; Van Mierlo et al., 2010). The Veder method is a new person-centred care method. It provides tools to improve the communication with people with dementia, in order to achieve reciprocity in the contact with them, and to promote feelings of well-being, identity and self-esteem (see also 'Intervention' section). The Veder method combines core elements of treatment from existing methods, such as reminiscence, validation, integrated emotion-oriented care and neuro linguistic programming, with the use of theatrical elements like characters, music, costumes, props and poetry. Combining these methods is expected to increase the effect. The Veder method was originally developed as a 'living-room theatre performance', an interactive theatre play, performed by professional actors. Subsequently, professional caregivers in nursing homes were also trained to apply the method. Research by Van Dijk et al. (2012) showed that these 'living-room theatre performances' by professional actors had significantly more positive effects on people with dementia than a regular reminiscence activity. Although they experienced pleasure in executing the Veder method as group activity, it was also difficult for the trained caregivers to perform the theatre play with the same quality and intensity as professional actors (Tol et al., 2011; Van Dijk et al., 2011a, b; Van Dijk et al., 2012). However, when the trained caregivers

discussed the Veder method as 'living-room theatre performance' in focus groups, they suggested that rather than using it as a group activity, the method could have (more) added value by offering the key-elements in one-on-one contact during the daily care, for instance the use of theatrical elements and a more explicit use of the voice (e.g. intonation), timing and presentation (e.g. 'acte de présence'). Integrating the Veder method in 24-hour daily care instead of offering it occasionally in a single theatre performance was expected to have two main advantages. First, caregivers would no longer have to develop and perform a complete theatre programme, but would learn how to successfully apply elements of the method in daily care. This would save time and improve the caregivers' communication skills in daily care. Second, although a previous study had shown that the Veder method theatre play provided by professional actors positively influenced the behaviour, mood and quality of life of people with dementia during the theatre play, with carryover effects until two hours after the performance (Van Dijk et al., 2011a, b; Van Dijk et al., 2012), caregivers and researchers expected long-term effects to be limited. The implementation of a more continuous and ongoing programme in daily care was expected to result in a more stable, continuous effect in the long term. Based on these expectations caregivers and managers of the nursing homes expressed the need to integrate the key elements of the Veder method as group activity during individual care moments in daily nursing home tasks, e.g. during meals, coffee/tea breaks, and other activities in the living-room, like reading the newspaper or washing the dishes together. Following these expectations and wishes of caregivers, Foundation Theatre Veder adapted the Veder method as 'living-room theatre performance' for application in 24-hour care. The adapted method is called Veder Contact Method (VCM). With VCM caregivers learn to apply theatrical, poetic and musical communication to stimulate a focused interaction and reciprocity in the contact with the person with dementia. An example of VCM is the use of reminiscence, the retrieval of memories, combined with music, theatre and/or poetry. In 2012, before the start of this implementation study, Foundation Theatre Veder successfully tried out the implementation of VCM on one nursing home ward. (This ward is not included in the present study.)

Aim of the study

Transferring and implementing person-centred care methods in daily dementia care is a very complex challenge (Grol & Grimshaw, 2003; Lawrence et al., 2012; Vernooij-Dassen & Moniz-Cook, 2014). Many studies report problems with the delivery of the intervention by caregivers, such as poor adherence and variation in practice (Low et al., 2013; Spijker et al., 2013; Wenborn et al., 2013). This may explain the absence of positive effects in comparison with usual care in many studies (Olazarán et al., 2010). Without an accurate assessment of whether the intervention was delivered as intended, conclusions regarding the outcome measures are questionable (Boersma et al., 2015; Burgio et al., 2001). It is therefore important to control for this 'implementation error' (Vernooij-Dassen & Moniz-Cook, 2014). An adequate understanding of which aspects of the intervention are successfully implemented is a prerequisite to be able to interpret the results correctly (Moniz-Cook et al., 2008). The present study investigates whether, and under what conditions, key elements from the original Veder

method as 'living-room theatre performance' are applicable and implementable as VCM in 24-hour daily care. In addition, we investigate how this implementation is reflected in the communicative behaviour and attitudes of caregivers, the care plan and the behaviour and quality of life of people with dementia. The study aims to provide insight into the complexity of implementation of VCM in daily practice by structurally investigating the 'implementation effectiveness'. Implementation effectiveness refers to the degree to which the implementation of the innovation has been successful, in terms of execution of the intervention as aimed and integration of the intervention into daily practice (Van der Kooij et al., 2013). This study maps the implementation effectiveness of VCM in daily care in a structured way, guided by a widely used implementation framework (RE-AIM; see below). More concretely, with the aid of this framework, the present implementation study aims to give insight into: how many caregivers participate in the intervention, the outcomes of applying the intervention, the extent to which the caregivers adopt VCM in their daily work and to what extent they apply VCM in the long run. In addition to gaining insight into the facilitating and impeding factors of the implementation process, this study aims to provide knowledge about the effectiveness of the used implementation strategies (Grol & Grimshaw, 2003) and to contribute to a more successful implementation of this and other psychosocial interventions in daily care.

Research questions

This three-year implementation study aims to answer the central question 'Has VCM been integrated effectively in daily nursing home care?' The following research questions are formulated:

1. How is VCM integrated in daily nursing home care, and what are the conditions for successful implementation?
2. How is the implementation of VCM reflected in:
   a) The behaviour and attitudes of (professional) caregivers?
   b) The care plan?
   c) The behaviour and quality of life of people with dementia?
3. Does implementation of VCM on nursing home wards have a positive impact on the job satisfaction of professional caregivers who were trained in applying the method in daily care?

The RE-AIM framework

The theoretical model used in this implementation study to evaluate the implementation effectiveness, is the RE-AIM framework. The RE-AIM framework was originally developed to support the planning and evaluation of the implementation of evidence-based health care interventions (Glasgow et al., 1999; About RE-AIM, www.re-aim.hnfe.vt.edu/about_re-aim/what_is_re-aim/index.html). It consists of five constructs: Reach, Effectiveness, Adoption, Implementation and Maintenance (RE-AIM), and is widely used to assess the level of implementation of interventions (Dzewaltowski et al., 2004). In a recent review, Boersma et al. (2015) systematically examined the degree of (successful) implementation of psychosocial interventions in nursing homes based on the RE-AIM framework. The review confirmed that the RE-AIM framework is a suitable model to assess the implementation effectiveness of

psychosocial interventions in psychogeriatric nursing home care. Details of the RE-AIM framework are presented in Table 1.

RE-AIM Evaluation dimensions		
Dimension (level)	**Original definition by Glasgow et al. (1999)**	**Definition in this study**
Reach (Individual)	Proportion of the target *population* that participated in the intervention.	Proportion of caregivers in care settings that participated in the intervention during the study.
Effectiveness (Individual)	Success rate if implemented as in guidelines; defined as *positive outcomes minus negative outcomes*.	Outcomes (positive and negative) regarding *knowledge, skills* and/ or *attitudes* of the professionals in the study.
Adoption (Organisation)	Proportion of *settings, practices, and implementation plans* that will adopt this intervention.	Proportion of *caregivers that actually adopt* the intervention in the study.
Implementation (Organisation)	Extent to which the intervention is implemented as intended in the real world.	Extent to which the intervention in the study is implemented as intended in the real world, *including implementation barriers and facilitators*.
Maintenance (Individual and Organisation)	Extent to which a *program* is sustained over time.	Extent to which the *intervention* is sustained over time.

Table 1. Definitions of the five dimensions of the RE-AIM framework and definition in present study

Table 2 explains how the research questions of the present study into the implementation of VCM are related to the five constructs of the RE-AIM framework.

Research question	Definition of the research question	Construct of the RE-AIM*	Measuring instrument (measuring moment)
1.	How does the integration of VCM in daily nursing home dementia care take place, and what are the conditions under which VCM can be successfully implemented?	R, A, I, M	Focus groups (T1) Interviews (T1)
2	How is the implementation of VCM reflected in:		
2a.	Behaviour of (professional) caregivers;	R, A, I	Observation caregivers: (T0, T1) - Observation list Veder method - Quality of Caregivers' Behaviou in dementia care (QCB) Self-report questionnaire: (T0, T1) - Approaches to Dementia Questionnaire (ADQ)
2b.	The care plan;	R, I, M	Care plan analysis (T0, T1) Focus groups (T1) Interviews (T1) Implementation score (T1)
2c.	Behaviour and quality of life of people with dementia.	E	Observation person with dementia: (T0, T1) - QUALIDEM - INTERACT
3.	Did implementation of VCM in nursing home wards have a positive impact on the job satisfaction of professional caregivers who were trained in applying the method in daily care?	R, E, A	Self-report questionnaire: (T0, T1) - Leiden Quality of Work Questionnaire - Focus groups (T1) - Interviews (T1)

Table 2. Summary of the used measuring instruments

*R = Reach; E = Effectiveness; A = Adoption; I = Implementation; M = Maintenance

Method

Design

We will use a mixed method design, a combination of qualitative and quantitative methods, to provide a more elaborated understanding of the implementation of VCM in the complex context of nursing home care and to gain a greater confidence in the conclusions drawn from the study (Johnson et al., 2007). Another reason for using a combination of methods is the different nature of the research questions. For answering the first research question a qualitative approach is most appropriate. We want to understand the complex process of implementing VCM in the daily nursing home care on six wards, and will therefore conduct

a process analysis. Here the emphasis will be on describing the implementation process according to the RE-AIM framework and tracing facilitators and barriers during implementation. Conditions for successful implementation will be derived from this process analysis. The second research question requires a quantitative method to obtain objective data on behaviour changes. A quasi-experimental design (pre- and posttest control group) will be carried out, using existing and valid observational instruments that are developed for quantitative analysis. Six wards from four nursing homes on which VCM is implemented (experimental groups) will be compared with six (control) wards from the same four nursing homes where Care as Usual (CAU) is provided. Matching takes place on type of ward (open or closed), number of residents in the ward and applied care method (e.g. small-scale living or conventional residential living). This will provide insight into whether the implementation of VCM is reflected in attitude and behaviour changes of the caregivers and behaviour changes and quality of life of the people with dementia. This same design will be used to answer the third question. The idea is that the effective application of VCM will result in more contact with people with dementia and as a consequence increased job satisfaction. Additionally, qualitative research will be conducted to gain a deeper insight into the influence of VCM on job satisfaction. Both on the wards where VCM will be implemented and on the control wards where CAU is provided, measurements will be carried out on two occasions, on T0 (baseline, before the implementation of VCM) and on T1 (nine months after the start of the implementation). (See figure 1)

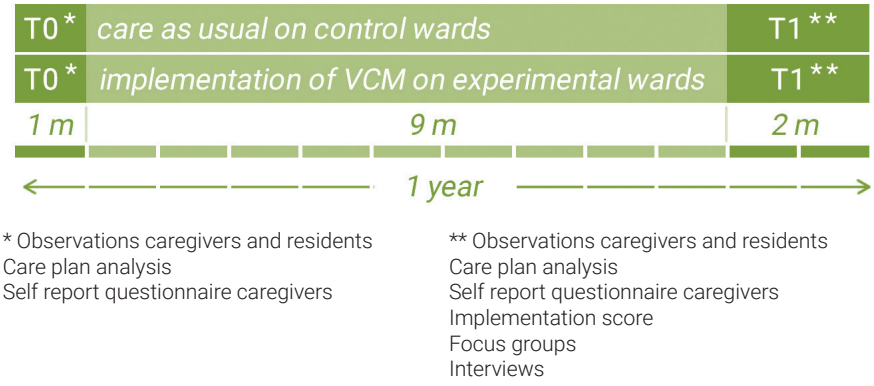

Figure 1. Design and timeline of the implementation study on each of the experimental and control wards

Implementation of VCM in daily care

Intervention

Both the Veder method as 'living-room theatre performance' and VCM for daily care combine components from existing psychosocial methods in dementia care (see introduction). With VCM the caregivers apply *theatrical, poetic* and *musical communication* in daily care to stimulate a focused interaction and reciprocity in the contact with the person with dementia. The theatrical stimuli are applied to the (often apathetic) people with dementia, sometimes literally to wake them up, and tempt them into interaction. Both the Veder method as group activity and VCM follow a fixed procedure sequence. The consecutive steps are (1) greeting by one-on-one contact, (2) appealing to long-term memory, (3) communication about the present time (connection to short-term memory), and (4) saying goodbye. The caregivers applying VCM are taught to apply these different steps during daily care moments. The relation between the procedural steps, the key elements and the communication strategies of VCM are described in Table 3.

Procedural steps of VCM	Key elements of VCM	Examples of the communication strategies
Greeting by one-on-one contact	Theatrical communication	Presentation/act de présence, timing and intonation/tone
Appealing to long-term memory	Poetic communication	Rhythm, associating, intonation/sound
Communication about the present time	Musical communication	Recognizable songs of the past, humming, intentional use of music
Saying goodbye		

Table 3. Relation between the procedural steps, key elements and communication strategies of the Veder Contact Method (VCM) in daily care

Implementation strategy

The implementation of VCM consists of several components. Table 4 outlines the implementation activities. First Foundation Theatre Veder started with a try-out of VCM on one ward (this ward did not participate in the research). Next Foundation Theatre Veder establishes agreements with the staff of the participating nursing homes. The agreements made with the staff of the nursing homes are respectively described in the section 'Settings and sample'.

Used implementation strategy of VCM in 24-hour daily dementia care
Try out
Performing try out Veder Contact Method
Evaluation and adjusting VCM
Contract with the participating nursing home wards
Lay out the possible impeding and promoting factors of the implementation (for example appointing a project leader)
Staff agrees with creating conditions to implement VCM
Staff insures that caregivers can participate in the different components of the implementation process
Training to teach caregivers to apply VCM in their daily work
Team meeting
Observation caregivers with Dementia Care Mapping method
Feedback meeting with caregivers and staff of the ward
Three training sessions of three hours during three months
After three and six months, two three-hour follow-up sessions
Coaching on the job (three hours) preceding the second, third and fourth training session
Evaluation of the implementation with the caregivers and staff

Table 4. Overview of the implementation strategy of VCM

The VCM training starts with a team meeting to inform the caregivers about the method and the implementation trajectory. Experienced observers start with an observation using the method Dementia Care Mapping (Beavis et al., 2002; Brooker & Surr, 2005), which highlights what is going well and on what points the caregivers can improve contact and meet the wishes and needs of the residents. In the following feedback meeting the observations are 'mirrored' to, and discussed by, the team. Together with the team learning objectives are formulated for the training programme: 'What are the practical problems we want to work on, how can we use VCM in this and how do we link VCM to the care plan'. Afterwards, feedback is given to the management aiming to support the team to achieve their learning objectives. These implementation activities together take about one month.

Next, trainers of Foundation Theatre Veder offer each team of a ward, with a maximum of 20 caregivers, three training sessions of three hours. Each team has one trainer:

1. The first training session focuses on the course of dementia, the function of the long-term memory during the course of dementia, reminiscing and one-on-one contact.
2. The second training session focuses on theatrical communication, learning to use

intonation, appearance (acte de présence) and timing in the contact with the residents. The relation between long-term memory and the present time, and the importance of a 'saying goodbye' ritual (as a closure of the contact) is discussed.
3. The third training session focuses on theatrical communication, with the use of poetic communication and musical communication. Also, a connection is made with the life histories of the residents.
4. After three months a fourth session (follow-up) of three hours takes place: a training which focuses on repeating the information from the first three sessions and on experiences of the caregivers using theatrical, poetic and musical communication in their encounters with the resident. Also, the caregivers learn to use feedback to coach each other using VCM in their work and to improve their quality of care.
5. After six months a fifth session (follow-up) of three hours takes place: a training in which VCM is connected to the 'authentic strength' of the caregivers. Together the caregivers learn to start up a communication with the residents with the use of theatrical, poetic and musical communication. Also, a link is made to the care plan. This training ends with an evaluation of the training programme. In conclusion consultation takes places with the administrator of the ward about how to maintain the implementation of VCM.

Preceding the second, the third and the fourth training session, three three-hour 'coaching on the job' sessions are provided. The trainers coach the caregivers on multiple areas of VCM and observe the behaviour of caregivers and residents. The observation results are discussed during the training sessions, and role-play is used to learn the skills needed to apply VCM.

Settings and sample

Twelve nursing home wards in six nursing homes will be involved in the study: six experimental wards and six control wards. To recruit wards, Foundation Theatre Veder will search for nursing homes located in different parts of the Netherlands, who have used the 'Veder method as living-room theatre performance', and ask them if they are willing to implement VCM in daily care and to participate in the study. When an experimental ward agrees to participate, a comparable ward, within the same nursing home but preferable on another location, where CAU is provided, will be asked to participate as control ward. The staff of the six nursing home wards will have to agree to create the preconditions for implementation of VCM on the experimental wards, e.g. active engagement of the administrator and management during the implementation trajectory; willingness to solve organisational and logistical bottlenecks during the implementation; availability of an appropriate training location and willingness to engage in, and reflect on, long-term implementation of the method, e.g. by means of a long-term implementation plan. Also the head nurses of the experimental wards will be asked to actively participate in the implementation process, e.g. they have to ensure that caregivers can participate in all components of the training programme. When they agree to all of this, they will be invited to participate in the study. Commitment to the conditions and participation in the implementation will be laid down in a contract. The staff of the control wards (n = 6) have to ensure no new psychosocial interventions are implemented during the

study. Included caregivers who change workplace during the study cannot be included on another ward later on in the study.
A total of 80 caregivers from the experimental wards and 80 caregivers from the control wards are to be included in the study. Inclusion criteria are: the caregiver has to work on the ward with a permanent contract; volunteers who take care of people with dementia at regular times may also participate in the study. Temporary staff, students and caregivers who only work night shifts were not eligible to participate.
The aim is to recruit 86 people with dementia in the experimental group and 86 people with dementia in the control group. The planned sample size of 64 will yield 80% power to show an effect size of d = 0.6, assuming two-sided testing at a significance level of 0.05 (Cohen, 1977). The sample size is corrected for clustering of residents within wards, where we assumed an average number of eight participating residents per ward and an intra-class correlation coefficient of 0.05. In Dutch nursing homes 57% of the residents are deceased two years after admission (Koopmans et al., 2003). Because the study period lasts 12 months per nursing home, a loss of 25% of participating residents must be taken into account. The desired sample size per group (experimental and control) is therefore 86 people with dementia. Residents with dementia will be included in the study after the legal guardian of the residents' grants permission for their participation in the study.

Procedure

Caregivers

During a ward meeting the head nurses of the participating six experimental wards and/or the researcher will inform all caregivers verbally and via written information (brochure) about the implementation of VCM and the study. All employees from the participating teams who are involved in the daily care of people with dementia, will take part in the implementation process and are to be trained in the application of VCM. The researcher and/or the head nurse will inform all caregivers from the control wards verbally and via written information about the study. All caregivers from the experimental and control wards will be assured that the collected data are treated confidentially. They will be asked to sign an informed consent form if they agree to participate in the study.

Residents

The legal guardians of the residents from the participating experimental and control nursing home wards will be informed by means of a letter and asked to sign the informed consent form if they agree with the participation of the resident in the study. A stamped addressed envelope will be included to return the informed consent form. Legal guardians are contacted by telephone if the informed consent form is not returned in time. Before the start of the observations, the persons with dementia who are able to communicate verbally will also be asked for their (verbal) permission to participate in the study and to be observed.

Data collection

In the present study both qualitative and quantitative data are collected on caregivers and residents. Table 2 describes the measurement instruments/tools and measurement

moments for each research question, as well as the applicable constructs of the RE-AIM framework (Boersma et al., 2015).

Methods research question 1

Focus groups

To gain insight into the implementation of VCM in daily nursing home care, focus groups will be used to discuss and explore the facilitators and barriers to implementation. After the implementation of VCM (T1) focus groups with caregivers are held on every experimental ward to gain insight into their personal perceptions, the usability of VCM, and opinions and attitudes towards VCM. Also, the observed reactions of the residents when caregivers apply elements of VCM and the influence of the implementation of the method on their job satisfaction will be discussed. Based on the RE-AIM framework and with use of the results of the process analysis of the implementation of the Veder method as 'living-room theatre performance' (Van Haeften-Van Dijk et al., 2015), a TOPIC list and interview protocol will be developed for the focus group and interviews. Eight focus group sessions (one per trained team) will be held, each with five to eight caregivers. The focus groups are guided by a moderator while an observer takes notes. All focus groups are tape-recorded.

Interviews

To trace facilitators and barriers to the implementation of VCM, which are related to the five constructs of the RE-AIM framework, semi-structured interviews with key figures involved in the implementation of VCM (directors and administrators, supervisors, nursing staff, staff and trainers of Foundation Theatre Veder) will be conducted at T1 on the experimental wards. The interviews will be conducted by the researcher and will focus on the following topics:
(1) the application and use of elements of VCM (implementation effectiveness); (2) the perceived usefulness of VCM in daily care and integration in the care plan; (3) the impact of VCM on the work experience of the caregivers and the responses of the residents; (4) the implementation process, including promoting and impeding factors when implementing VCM, on a micro (operational) level, meso (organisational) level and macro level (financing, regulation); (5) evaluation of the various implementation activities, such as training, job coaching and feedback; (6) human and material conditions for the implementation and continuation of the application of VCM in the daily care; (7) finally, themes that emerged from the focus groups and require further clarification in the interviews.

Methods research question 2

Quantitative data are gathered via non-participating observations from caregivers and residents, a self-report questionnaire filled in by caregivers, and by analysis of the care plans of the residents. The instruments that will be used are described below in more detail. The aim of the observations is to determine to what extent VCM is actually applied by the caregivers in daily dementia care and how people with dementia respond to the intervention. These observations of the caregivers and residents will be carried out in the living room during two time periods: from 10:00 am until 1:00 pm (around coffee and lunch time) and from 3:00 pm until 6:00 pm

(around tea and dinner time). Two observations on one day will be obtained for the residents (a total of six hours of observations). For the caregivers one observation (morning or evening) is obtained (maximum of three hours of observation), because the caregivers work in shifts.

Instruments caregivers

Baseline information: information will be gathered at baseline on demographic characteristics of the caregivers' age, gender, nationality, education, current position, work experience in current job, number of hours working according to the contract.

Communication and behaviour of the caregivers (Quality of Caregivers' Behaviour in dementia care (QCB)): the QCB is a 25-item observation instrument with four answer categories (four-point Likert scale from 'not at all', 'a little', 'moderately' to 'maximally') based on the dialectical framework developed by Kitwood (1997). The dialectical framework describes a variety of interactions (communicative behaviour of caregivers) that have a positive or negative impact on the wellbeing of residents. Interactions that have a positive effect on the individual 'personhood' and wellbeing of the residents are called 'positive person work' (PPW). Negative interactions undermine the individual's 'personhood' and are called 'malignant social psychology' (MSP). The QCB provides an overall assessment of the extent to which caregivers show 12 positive and 13 negative behaviours during a defined period of time. In Appendix B (*Quality of Caregivers' Behaviour in dementia care*) the original scheme of Kitwood (1997), the adapted scheme of Van Weert et al. (2006), and the slightly modified scheme that will be used for the present study are described in detail. One negative interaction 'ignoring feelings and emotions' is added because this is behaviour the VCM aims to change. Two positive interactions are deleted: 'respecting privacy' because this interaction is not applicable in the living room and 'stimulation' is deleted because it refers to the use of multisensory activities, e.g. the use of aromatherapy or massage, which are not part of VCM. In this way the two subscales are constructed as the sum of the items of PPW (range 0-36) and MSP (range 0-39). The higher the scores, the more positive (PPW) or negative (MSP) interactions the caregivers show. The internal reliability of the original subscales 'positive behaviour' and 'negative behaviour' is good (Cronbach's alpha 0.88 and 0.78, respectively) as is the inter-rater reliability (mean Pearson's r 0.77 and. 0.79, respectively) (Van Weert et al., 2006).

Observation list Veder Contact Method (VCM): The observation list Veder Contact Method is an instrument with 16 items and four answer categories (range 1–4) related to different components of the Veder Contact Method. This instrument determines the extent to which caregivers apply elements and techniques of VCM. The observation list with 34 items was developed in an earlier study (Tol et al., 2011) to measure the quality of the execution of the 'living-room theatre performance'. For the present study the observation list was adapted for VCM to make it applicable in daily dementia care. Items concerning the performance of the 'living-room theatre performance' are deleted (24 items) because they are not applicable for VCM in daily care. Six items that measure components of VCM in daily care are added. An example of a question in this instrument is: 'Is the communication (in terms of body language, tone of voice, speed of speech and voice expression), adjusted to the individual? In addition the number of offered theatrical stimuli and the way the resident(s) responds will be

scored. The inter-rater reliability of the original observation list 'Veder method as living-room theatre performance' was 71.9% (Van Dijk et al., 2012).
Attitudes towards dementia (Approaches to Dementia Questionnaire): In order to investigate whether the caregivers have a different attitude towards people with dementia after the VCM training, they are requested to fill in a self-report questionnaire: the Approaches to Dementia Questionnaire (ADQ) (Lintern et al., 2000). This 19-items questionnaire has a five-point Likert scale and was used before in dementia care research in the Netherlands (Hattink et al., 2015, b; Lauriks et al., 2008). The scale contains two attitude dimensions of nursing staff towards people with dementia: 'hope' and 'person-centred'. The hope dimension shows the optimistic/pessimistic beliefs of the caregiver in the (future) possibilities of a person with dementia. The person-centred dimension reflects the extent to which the caregiver recognises the person with dementia as a unique, conscious and valuable human being (Lauriks et al., 2008). Earlier research showed the subscales of the ADQ had good reliability (Cronbach's α = 0.76 for hope and 0.85 for orientation to person) (Lintern, 2001).

Instruments residents
Baseline information: information will be gathered at baseline on demographic characteristics, age, gender, marital status, education, years living on the nursing home ward, years with diagnosis dementia, current use of psychopharmaca, and scores on the Mini Mental State Examination (MMSE), or alternatively on the Brief Cognitive Rating Scale if the resident is not able to answer the questions of the MMSE.
Quality of Life of people with Dementia (QUALIDEM): The QUALIDEM is an observation instrument to assess the quality of life of people with mild to severe dementia (Bouman et al., 2011; Ettema, 2007; Ettema et al., 2007a, b). The instrument consists of 37 items with four answer categories (never, rarely, sometimes, always) and nine subscales: caring relationship, positive affect, negative affect, restless/nervous behaviour, positive self, social relationships, social isolation, feeling at home and having something/activities to do. With these subscales a quality of life profile can be obtained. The (subscales of the) QUALIDEM was examined in a previous study for scalability, intra-rater reliability (ICC = 0.73 - 0.89), inter-rater reliability (ICC = 0.47 - 0.79), internal consistency (0.60 - 0.90), convergent and discriminant validity, and concurrent validity (Ettema et al., 2007a, 2007b).
Mood and Behaviour of persons with dementia (INTERACT): INTERACT is an observation instrument designed to measure mood, behaviour and interactions of nursing home residents that was successfully used before in intervention studies into psychosocial methods for people with dementia, e.g. the Veder method and multisensory stimulation (Baker et al., 2001; Baker et al., 1997; Van Diepen et al., 2002; Van Dijk et al., 2012; Van Weert et al., 2004; Van Weert et al., 2005a, b). The instrument consists of 34 items that assess mood, speech, interaction with others, relating to the environment, need for prompting, alertness/activity. The items identify both positive and negative behaviours of residents. Using a five-point Likert scale a score is given regarding the extent to which the relevant conduct was present during the three hours of observation in the living room ('not at all' to 'almost all the time'). The adapted 24-item scale of Van Weert et al. (2005a) is taken as the basis. Taking into

account the findings of the research into the effect of the Veder method by Van Dijk et al. (2012) nine items were added: three items were added in the subcategory 'mood': 'laughing', 'enthusiasm' and 'confused'; two items were added in the category 'relating to person': 'touching' and 'co-operated'; three items were added in the category 'relating to environment: 'attentive to/focused on activity/objects, 'responding to activity (songs etc.) or objects' and 'comments or questions about activities/objects' and one item was added in the category 'alertness/activity': 'relaxed/content'. Reported inter-observer reliability in previous studies is medium to high (Kappa (κ) is 0.33) (Van Dijk et al., 2012) and mean Pearson's r ranging from 0.83 (Van Weert et al., 2005a) to 0.99 (Baker et al., 2001).

Face expression scale (FACE): 'Overall mood' of the residents with dementia is measured with the FACE, based on a three-point Likert scale (Van Weert et al., 2005a):

☺ if smile predominated;

😐 if the expression was neutral;

☹ if frown predominated

The inter-rater reliability of FACE was 0.84 (mean Pearson's r) in the study by van Weert et al. (2005a) and 0.48 in the study of Van Dijk et al. (2012).

Care plan analyses

Care plan analyses will be carried out to determine whether the principles of VCM are concretely elaborated in the resident's care plan. By means of a checklist, we will analyse whether the personal preferences of the resident, for example regarding music, social contacts, activities, habits, are described in the residents' care plan. Also, information about the life history, the mental and emotional wellbeing of the residents in the care plan is analysed.

Implementation score according to Foundation Theatre Veder

On the experimental wards the trainers of Foundation Theatre Veder will assess the degree of successful implementation by giving a score between 0 and 10. Zero means 'no activities done to implement VCM, caregivers followed no training'; 10 means 'VCM is optimally implemented, all caregivers followed the training programme and received 'coaching on the job' on the ward, VCM is used by all caregivers'. In other words: the higher the score, the better VCM is implemented.

Methods research question 3

Job satisfaction (Leiden Quality of Work Questionnaire): The validated self-report questionnaire Leiden Quality of Work Questionnaire (LQWQ) (Van der Doef & Maes, 1999) will be used to investigate whether the work is experienced differently by caregivers after the VCM training. The LQWQ consists of 23 items, has five subscales and has been applied earlier in research among caregivers in dementia care (Te Boekhorst et al., 2008). The subscales are: work and time pressure (five items; Cronbach's alpha 0.78), job satisfaction (six items; Cronbach's alpha 0.86), autonomous decision making (four items; Cronbach's alpha 0.72), social support from colleagues (four items; Cronbach's alpha 0.82) and social support from supervisor (four items; Cronbach's alpha 0.90) (Te Boekhorst et al., 2008).

Data analysis

Qualitative analysis

To answer the first research question only qualitative data will be used. All stakeholder interviews and focus groups will be audio-taped and transcribed verbatim. The transcripts will be analysed and categorized on text fragments. A deductive method will be used to analyse text fragments on the predetermined 'TOPIC list' consisting of the five constructs of the RE-AIM framework (Braun & Clarke, 2006). For this thematic analysis, text fragments about the same theme will be classed as 'meaning units'. These meaning units will be coded using the 'TOPIC list'. Analysing the data in this way increases the reproducibility of the study. To ensure reliability of the results, two researchers will independently code 25% of the interviews and focus groups. When they disagree about what code to assign to a text fragment, discussion will take place until consensus is reached. The rest of the interviews will be coded by one researcher. Using a qualitative analysis computer software programme (NVivo) the data will be categorized into the categories of the TOPIC list, based on the five constructs of the RE-AIM framework.

Quantitative analysis

To answer the second research question ('how the implementation of VCM is reflected in the attitude and behaviour of caregivers, in the care plan of the people with dementia and in behaviour and quality of life of people with dementia') and the third research question ('the impact of implementation of VCM on the job satisfaction of professional caregivers'), the quantitative data shall be used first. Relevant baseline characteristics will be descriptively summarised using frequencies, means and standard deviations or median and interquartile ranges, depending on the frequency distribution of the data. This will be done for the experimental and control groups and separately for residents and caregivers. Baseline characteristics of experimental and control groups will be compared using the chi-squares test or Fisher's exact test for dichotomous or nominal variables and the independent samples t-test or Mann-Whitney *U*-test for interval or ordinal variables. To examine if the means on continuous outcome measures at T1 differ between control and experimental groups, a multilevel analysis will be carried out that will take into account clustering of residents and caregivers within wards. The following independent variables will be included in the first model: group (control or experimental) and baseline measurement (T0)-value of the outcome measure. Next, a more elaborate model is generated, with degree of implementation, type of ward and variables on which the groups differ at baseline as additional independent variables, to see whether the treatment effect changes when corrected for possible confounders. A random effect for ward will be included in the model (two-level model). For the dichotomous outcomes the same procedure will be used, but the analysis will be done with the general estimating equations. An exchangeable correlation structure will be used to take into account the clustering within wards. All statistical tests will be conducted two-sided with an alpha level of 0.05.

Qualitative data from the interviews and focus groups will be used to interpret the results of the multilevel analysis of the quantitative data.

Discussion

This implementation study, which will take three years (final results expected to be published in autumn 2016) is executed to clarify whether the implementation of VCM as a communication method can help caregivers in their daily caring tasks to meet the frequently experienced unmet needs of people with dementia, especially for having social contact and company, maintaining or improving self-esteem, being accepted for who they are, feeling attached and being understood. When these needs are met by the use of VCM, the quality of life of people with dementia will improve (Dröes et al., 2006; Hancock et al., 2006). Most studies, including those in the field of dementia care, focus on the effectiveness of new methods. The way the method is implemented in its complex natural setting, the daily dementia care, receives insufficient attention (Burgio et al., 2001). In this respect Hulscher et al., (2005) and Vernooij-Dassen & Moniz-Cook (2014) refer to the type III error, the so-called implementation-error, which should be given similar attention as the attention given to the type I and type II errors in research. The implementation error is a threat to the internal validity, i.e. the study shows no effects because of a poorly implemented intervention. In that case conclusions drawn from the research on the effectiveness of the intervention will have little value (Moniz-Cook et al., 2008) and thus are in fact a waste of money and effort (Glasgow et al., 2006). The present study is designed as an implementation study, and aims to provide more insight in the implementation effectiveness of VCM and other new psychosocial methods in daily dementia care. The qualitative information from the interviews and focus groups will help to understand and explain possible causes and contextual factors associated with the change of attitude and behaviour of the caregivers. This information will provide more insight on how to prevent the implementation error. Having the implementation error under control will help to draw more valid conclusions from intervention studies in dementia care and care in general.

This study aims to contribute to the successful implementation of psychosocial methods in daily dementia care. The degree of implementation effectiveness will be determined in a structured way by using the RE-AIM framework. The RE-AIM framework has proved to be a suitable model to evaluate the literature on the implementation effectiveness of psychosocial interventions in the daily nursing home dementia care (Boersma et al., 2015). To our knowledge, the implementation effectiveness of a newly implemented psychosocial intervention in the daily nursing home dementia care has never been mapped comprehensively in an empirical study by means of the RE-AIM framework. We expect that the operationalisation of the five constructs of the RE-AIM framework will be very useful for implementing new psychosocial interventions in daily dementia care in nursing homes. As such, this research will contribute to the field of implementation research and will help innovate dementia care.

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Chapter 4

Implementation of the Veder Contact Method in daily nursing home care for people with dementia: a process analysis according to the RE-AIM framework

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Abstract

Aims and objectives

To perform a process analysis of the implementation of the Veder Contact Method for gaining insight into factors that influence successful implementation.

Background

Research showed that the original Veder method, which is a 'living-room theatre performance' provided by actors, positively influenced mood and quality of life of people with dementia. Training caregivers to execute such 'performances' and accomplish the same effects as actors proved difficult. However, key elements of the method were considered suitable for application in daily care, resulting in the development of a modified version of the method, named the Veder Contact Method. The Veder Contact Method combines elements from existing psychosocial interventions, e.g. reminiscence, validation, and neuro-linguistic-programming with theatrical, poetic and musical communication, and applies this into daily care.

Design

For this process analysis a multiple case study design was used with the nursing home ward (n = 6) as the unit of analysis.

Methods

Eight focus groups with caregivers (n = 42) and twelve interviews with stakeholders were held. Using the Reach, Effectiveness, Adoption, Implementation, Maintenance framework, a thematic analysis was conducted.

Results

The reach of the intervention (43 – 86%) and aspects of implementation-effectiveness (e.g. increased experienced reciprocity in contact with residents) facilitated implementation. For adoption and implementation, both facilitators (e.g. development of competences, feasibility of the Veder Contact Method without requiring extra time investment) and barriers (e.g. insufficient support of management, resistance of caregivers against the Veder Contact Method, organisational problems) were identified. Little effort was put into maintenance: only one nursing home developed a long-term implementation strategy.

Conclusions

The Veder Contact Method can be applied in daily care without additional time investments. Although adopted by many caregivers, some were reluctant using the Veder Contact Method. Organisational factors (e.g. staffing and management changes, budget cuts) impeded long-term implementation.

Relevance to clinical practice

The findings from this study can be used for the development of successful implementation strategies for the Veder Contact Method and other person-centred care methods.

What does this paper contribute to the wider global clinical community?

- This process analysis shows that the Veder Contact Method (VCM), which is a new person-centred care method, is feasible in daily dementia care. VCM is easy to apply and takes no extra time.
- VCM improved the contact between caregivers and people with dementia.
- By using the RE-AIM framework this paper provides a structured overview of facilitators and barriers regarding different aspects of implementation of VCM in nursing homes. This knowledge can be helpful for other nursing homes when preparing the implementation of VCM or other person-centred care methods.

Introduction

As the interaction in nursing homes between formal caregivers and people with dementia impacts the quality of life of people with dementia (Brooker & Latham, 2015; Kitwood, 1997; Vasse et al., 2010), many person-centred care methods have been developed and their effectiveness have been researched in recent decades e.g., emotion-oriented care (Finnema et al., 2005), validation therapy, multisensory stimulation, personalised music, personalised exercise and reminiscence (Olazarán et al., 2010; Testad et al., 2014). Presently, researchers and innovators are increasingly aware of the importance of adequate implementation of person-centred care methods (Lawrence et al., 2012; Vernooij-Dassen & Moniz-Cook, 2014). In a systematic review, Boersma et al. (2015) concluded that while implementing these type of interventions more attention should be given to the adoption of the intervention and to sustainable implementation in health care settings. We therefore conducted a process analysis during the implementation of a new intervention in daily nursing home care practice, i.e. the Veder Contact Method, with the aim to contribute to the knowledge on facilitators and barriers that come along with the implementation of new person-centred interventions. Conducting such a process analyses provides insight in the way an intervention is implemented in the natural context, including the factors affecting the implementation process (Gaglio et al., 2014; Leontjevas et al., 2012).

Background

Worldwide, the number of people with dementia increases rapidly, from 47.5 million today to 75.6 million in 2030 and almost tripled by 2050 to 135.5 million (World Health Organisation, 2015). In the Netherlands 260.000 people are diagnosed with dementia and 82.000 receive or have an indication for institutionalised care (Nationaal Kompas, 2014). In a more advanced stage of the illness behavioural problems, such as depression, agitation, anxiety, apathy and aggressive behaviour, often occur with people with dementia (Bakker et al., 2011; Zuidema et al., 2007). Together with decreased cognitive and sensory abilities, many caregivers experience difficulties to communicate with people with dementia. At the same time, caregivers can do much to improve the behaviour, mood and, eventually, the quality of life in people with dementia (Vasse et al., 2010), for instance by using person-centred care interventions with specific attention for personal preferences, needs and lifestyle of the people with dementia (Kitwood, 1997; Brooker & Latham, 2015). Person-centred care interventions are aimed at fulfilling the (unmet) needs of people with dementia living in nursing homes. The most common unmet needs related to their quality of life reported by people with dementia are lack of pleasant daytime activities, company, adequate support when feeling psychologically distressed, preservation of self-esteem, e.g. being accepted for who you are, feeling attached, being understood and having social contact with family and professional caregivers (Dröes et al., 2006; Hancock et al., 2006). The rationale behind person-centred care is that this type of care facilitates the interaction and communication between people with dementia and their formal caregivers, which is assumed to have a positive impact on functioning and quality of life of people with dementia, living in nursing homes (Levy-Storms, 2008; Vasse et al., 2010). In the past decades numerous psychosocial

and person-centred interventions, such as movement activation, reminiscence, music therapy, pet therapy and 'multi-sensory stimulation' (Dröes et al., 2010; Olazarán et al., 2010; Van Weert et al., 2004) were developed and implemented, aimed to provide personalised support and activities to the person with dementia and to optimise their quality of life (Finnema et al.. 2005; Van Mierlo et al., 2010; Testad et al., 2014). Recently, a new person-centred care method, the Veder Contact Method (from now on called VCM) was developed in the Netherlands by Foundation Theatre Veder (www.theaterveder.nl/nl/english). VCM combines core components from existing psychosocial and person-centred methods in dementia care, such as reminiscence, validation, integrated emotion-oriented care and neuro-linguistic programming, with the use of elements like theatrical, musical and poetic communication (Boersma et al., 2017). VCM is developed in response to research on the original Veder method, which has been developed as a 'living-room theatre performance', an interactive theatre play for people with dementia living in nursing homes performed by professional actors or trained caregivers. Both VCM and the original Veder method as 'living-room theatre performance' provide tools to improve communication in order to achieve reciprocity in contact and to promote feelings of well-being, identity and self-esteem for people with dementia (Van Dijk et al., 2012). The VCM-tools, procedural steps and key-elements of VCM, as well as communication strategies, are described in Table 3. Van Dijk et al. (2012) showed in their study (n = 143) that the Veder method as a 'living-room theatre performance' by professional actors had a significant positive effect on the quality of life, mood and behaviour of people with dementia living in nursing homes, compared to a regular reminiscence group activity. People with dementia who participated in the 'living-room theatre performance' felt less 'socially isolated' (p = 0.04; d = -0.54), felt 'more at home' (p = 0.04; d = -0.41), were happier (p = 0.04; d = -0.43), recalled more memories (p = 0.01; d = 0.54), were more alert (p = 0.03; p = 0.46), and listened better to voices and other sounds (p = 0.01; d = -0.70) compared to people in the regular reminiscence group. For trained caregivers, however, it proved difficult to perform the theatre play with the same quality and intensity as the professional actors. In contrast with the performance by actors, no significant positive effects on people with dementia were found when the caregivers conducted the living-room theatre performance (Van Dijk et al., 2012). Apart from the fact that caregivers found it difficult to develop and perform a whole theatre play, Van Haeften-Van Dijk et al. (2015) also reported various implementation issues which might have contributed to this lack of effects, such as high work pressure, limited management support, simultaneous running of other (care) innovation projects, and lack of funding. At the same time, caregivers and managers indicated that elements of the Veder method as 'living-room theatre performance' seemed to be very suitable for application in daily 24-hour care (Van Haeften-Van Dijk et al., 2015). Following these observations, Foundation Theatre Veder developed VCM with an additional methodology and training program for caregivers in long-term care facilities on how to use VCM in daily dementia care (Boersma et al., 2017). Both the Veder method as 'living-room theatre performance' and VCM for daily care were developed by the director of Foundation Veder. Being an actor as well as an experienced nurse in providing care to people with dementia she recognised how theatre

could be integrated in the care of people with dementia. VCM seeks to improve the contact between the caregiver and the person with dementia within the time available during daily care events such as washing, eating, having tea/coffee, living-room activities or going to bed. Compared to the Veder method as 'living-room theatre performance', VCM has several advantages for caregivers: they can use the method continuously in their daily contact moments without setting up a more difficult and time consuming theatre performance. Despite these advantages, adequate implementation of VCM is still required to achieve the desired outcomes in terms of communication skills of professionals and quality of life of people with dementia. Although caregivers do not need the skills of professional actors to set up a theatre performance they do need essential training and motivation to learn how to use theatrical, poetic and musical communication.

Caregivers need time to integrate the method in their daily caring tasks, and managers need to support caregivers, enabling them to perform the intervention effectively (Boersma et al., 2015; Van Haeften-Van Dijk et al., 2015) Several studies showed that implementing psychosocial interventions in daily dementia care is a road with often difficult hurdles to take (Boersma et al., 2015; Eggenberger et al., 2013; Lawrence et al., 2012). Suboptimal implementation often results in a lack or even complete absence of positive outcomes in effect studies (Olazarán et al., 2010; Testad et al., 2014; Vernooij-Dassen et al., 2010). Hulscher et al. (2005) and Vernooij-Dassen & Moniz-Cook (2014) refer to this as type III error, the so-called implementation error. To prevent this implementation error, it is crucial to understand whether the implementation was carried out according to plan and achieved the desired outcomes. Only then correct conclusions can be drawn about effects of staff training and implementation (Van Haeften-Van Dijk et al., 2015). Executing a process analysis helps to gain insight into how the intervention is implemented in its natural context (Gaglio et al., 2014; Leontjevas et al., 2012). We conducted a structured process analysis to provide insight into the process of implementation, including factors that facilitated or impeded the implementation of VCM in daily care. This process analysis is part of a larger study 'The implementation of VCM in daily nursing home care for people with dementia: an evaluation based on the RE-AIM framework'. In this larger study, in addition to the process analysis reported in the present article, the focus is also on the communication skills of caregivers who were trained in VCM, and on the perceived quality of life and behaviour of clients who were exposed to VCM (Boersma et al., 2017). The main research questions of this process analysis were:

1. How does the implementation of VCM in daily nursing home care take place?
2. What factors or conditions facilitate or impede successful implementation?

RE-AIM framework: the theoretical framework for analysis of the implementation process

To analyse the implementation of VCM and to find factors that facilitated or hindered the implementation process, we used the RE-AIM framework. The five constructs of the RE-AIM framework, Reach, Effectiveness, Adoption, Implementation, and Maintenance (Glasgow et al., 1999), that are considered important for effective and sustainable implementation,

formed the basis for the data collection and analysis in the present study. The RE-AIM framework enables a systematic description of all aspects of an implementation process and the relevant facilitating and hindering factors (Glasgow et al., 1999), e.g.: Are all caregivers reached? Do they perceive any impact on residents when applying VCM? Do they adopt the method in their daily caring tasks? Is VCM being implemented correctly, and do the nursing homes invest in assuring the continuation of the implementation? The RE-AIM framework has proven to be suitable to clearly specify the various aspects that play a role in the implementation of psychosocial interventions in nursing homes (Boersma et al., 2015). Table 1 explains the original definitions of the constructs of the RE-AIM framework as well as the slightly modified operationalisations as used in this process analysis. To avoid confusion regarding the dimension 'Effectiveness' (suggesting objective effectiveness of the intervention after the implementation process) we call this dimension Implementation-effectiveness. Implementation-effectiveness is defined as 'the perceived impact of VCM on the wellbeing and quality of life of people with dementia as experienced by caregivers during the implementation process'.

RE-AIM framework: original definition by Gaglio et al. (2014)	**Definition in present study**	**Results: related (sub)themes**
Reach is the absolute number, proportion and representativeness of individuals who are willing to participate in a given intervention or program	*Reach* is the proportion of caregivers in the selected nursing homes that participated in the training and follow-up meetings during the study	No related themes, reach is measured as a percentage
Effectiveness is the impact of an intervention on outcomes, including potential negative effects, quality of life, and economic outcomes	*Implementation-effectiveness* is the perceived impact of VCM on the wellbeing and quality of life of people with dementia as experienced by caregivers during the implementation process	- Residents having fun when applying VCM - Person-centredness: recognition of the person behind the resident with dementia
Adoption is the absolute number, proportion, and representativeness of settings and the individuals within those settings who deliver the program and who are willing to initiate a program. Use of qualitative data to understand setting level adoption and staff participation	*Adoption* is the willingness of caregivers of the nursing homes to initiate VCM and deliver the program, including use of qualitative data to understand *adoption* on the organisation level and staff participation	- Caregiver competence: development of awareness - Caregiver competence: development in contact with the residents (e.g. reciprocity in contact with residents) - Caregivers competence: development in contact with colleagues

Implementation is the fidelity to program protocol and adaptations made to intervention during study. Costs of intervention in time and money. Consistency of the implementation across staff, time, setting and subgroups - focus is on process -.	*Implementation* is the fidelity to VCM protocol and adaptations made to intervention during study. Costs of intervention in time and money. Consistency of implementation across staff, time, setting and subgroups - focus is on process -	- Application of VCM in daily care. - Time to apply VCM: • Enough time to apply VCM during daily care • Setting priorities • Saving time by doing other work in the presence of residents - Public relations - Costs
Maintenance is the extent to which a program becomes institutionalised or part of the routine of organisational practices and policies. If and how the program was adapted long term.	*Maintenance* is the extent to which VCM becomes institutionalised or part of the routine of organisational practices and policies. If and how VCM was adapted long term.	- Vision and strategy - Strategies for continuation - Ensuring long-term implementation - Long-term support of current employees and transfer to new employees

Table 1. Relation between the procedural steps, key elements and communication strategies of the Veder Contact Method (VCM) in daily care

Methods

Design

By using this multiple case study design and qualitative research methods, we aimed to explore and understand the complex process of implementation of VCM on six wards (i.e. the six cases) through detailed in-depth data collection from two sources of information: focus group interviews with professional caregivers (from now: 'caregivers') and individual interviews with managers, both working in these nursing home care settings (Creswell, 2013). With this strategy of data triangulation, we aimed to gain insight into the implementation process of these six cases. The detailed, in-depth focus groups and interviews were based on topics derived from the five constructs of the RE-AIM framework. We also used this multiple case study to gain a greater confidence in the conclusions drawn from the study (Johnson et al., 2007). We spoke with caregivers and managers from the six wards separately. Firstly, because caregivers and managers might have different expectations and interests regarding the implementation (Reid & Reid, 2005) and we considered it important that participants felt free to express their ideas, regardless being in conflict with their managers' ideas or not (Kitzinger, 1995; Krueger & Casey, 2009). Secondly, because we were interested in the opinions of the caregivers about the applicability of VCM on the ward, and in the opinions of the managers about the implementation barriers and facilitators on a more organisational level, thus separate interviews were more suitable (Reid & Reid, 2005). In the focus groups and interviews, all implementation aspects were extensively discussed. Also procedural issues were addressed in the interviews with managers and trainers of Foundation Theatre Veder, and to a lesser extent in the focus group interviews with the caregivers.

Ethical issues

This study was approved by the Medical Ethical Committee and the Scientific Committee of the EMGO Institute for Health and Care Research of the VU University medical center in Amsterdam. Prior to participation in the study the participants of the focus groups gave written informed consent to participate in the study. Prior to the interviews, all stakeholders gave oral informed consent. During the study no adverse effects occurred.

Sample and setting

Our sample consisted of six psychogeriatric wards of four nursing homes where VCM was implemented (Nursing home 1: Ward 1a & b, Ward 2a & b; Nursing home 2: Ward 3; Nursing home 3, Ward 4; Nursing home 4: Ward 5a & b, Ward 6a & b). Each ward was considered a separate case within our multiple case study. Foundation Theatre Veder recruited the first four nursing homes that were willing to implement VCM and to participate in the study, located in different parts of the Netherlands. These nursing homes had all previously used the Veder method as 'living-room theatre performance'. The management of the participating nursing home wards signed a contract with Foundation Theatre Veder giving permission for implementing VCM on their ward and for participation in this study. By signing this contract, the managers also agreed to create the required conditions for the team to participate in the implementation of VCM. The characteristics of the participating wards are described in Table 2. Both caregivers and managers were involved in the study (See procedure and data collection).

	Nursing Home 1		**Nursing home 2**	**Nursing home 3**	**Nursing home 4**	
Characteristics	Ward1a&b	Ward2a&b	Ward3	Ward4	Ward5a&b	Ward6a&b
Number of residents	23+23	23+23	16	6+6+6	6+6	6+6
Staff-resident ratio during the day	1:4	1:4	1:5	1:4	1:4	1:4
Staff-resident ratio in the evening	1:6	1:6	1:8	1:6	1:6	1:6
Type of care-organisation	Large closed wards		Large open ward	Small-scale open living-rooms	Small-scale closed living rooms	
Caregivers familiar with VM as 'living-room theatre performance'	No	No	Yes	Yes, some	No	No

Table 2. Characteristics of the participating experimental wards

Implementation of VCM in daily care

With VCM the caregivers learn to use the key elements, theatrical, poetic and musical communication, in daily care to stimulate a focused interaction and reciprocity in the contact with the person with dementia. In contrast with the Veder method as 'living-room theatre performance', VCM is set up to apply during daily caring tasks. VCM is not a group activity that costs a lot of time to prepare and execute, besides caregivers do not need to have a 'talent for acting'. The relation between the procedural steps, the key elements and the communication strategies of VCM are described in Table 3.

Procedural steps of VCM	Key elements of VCM	Examples of the VCM communication strategies
Greeting by one-on-one contact	Theatrical communication	presentation/acte de présence, timing and intonation/tone
Appealing to long-term memory	Poetic communication	rhythm, associating, intonation/sound
Communication about the present time	Musical communication	recognizable songs from the past, humming, deliberate use of music
Saying goodbye		

Table 3. The Veder Contact Method in daily care: relation between the procedural steps, key elements and communication strategies

The theatrical stimuli are applied to the (often apathetic) people with dementia, sometimes literally to wake them up, and tempt them into interaction. The consecutive procedural steps of VCM are (1) greeting by one-on-one contact, (2) appealing to long-term memory, (3) communication about the present time (connection to short-term memory), and (4) saying goodbye (Boersma et al., 2017). Foundation Theatre Veder contributed to the implementation of VCM in daily nursing home care by means of a nine-month training and coaching program (Fig. 1). Implementation barriers known from previous research (Boersma et al., 2015; Lawrence et al., 2012; Meiland et al., 2005; Van Haeften-Van Dijk et al., 2015) were anticipated. For example, VCM was adapted for application in daily care and tried out in one nursing home before the start of the implementation study; the involvement of the nursing home manager was explicitly discussed before the start of the implementation; and the transfer of VCM to the caregivers was carried out by means of an intensive and multifaceted training and coaching program. The team of caregivers of the six nursing home wards, including their managers, participated in this training and coaching program (Boersma et al., 2017). The training started with a team meeting to inform the caregivers about the method. After that, experienced observers conducted an observation according to the Dementia care mapping method (DCM), which highlights what is going well in the interaction with residents and at what points the caregivers can improve contact and better meet the wishes and needs of the residents (Brooker, 2005; Van de Ven

et al., 2012). Subsequently, in the 'feedback meeting' the observations were 'mirrored' to and discussed by the team. Next, trainers of Foundation Theatre Veder offered the team three training sessions and two follow-up sessions. During these sessions the caregivers learned to initiate communication with the residents by means of theatrical, poetic and musical communication. Three 'coaching on the job' sessions took place on the wards during daily caring tasks, as the trainers observed and coached the caregivers. The training program ended with an evaluation of the training and coaching program. Finally, consultation took place with the manager of the ward to discuss how they could maintain the implementation of VCM. The implementation of VCM was closely monitored by Foundation Theatre Veder, allowing adjustments during the implementation. The implementation of VCM took place between January 2013 - October 2014. The standard training and coaching program took nine months per ward. However, because of holidays and planning problems on three wards, the planning of the first and second follow-up session had to be adjusted. This caused a variation in the training and coaching period from nine to twelve months.

Figure 1. Training and coaching program over nine months

Methods and procedure

Baseline information was gathered by a questionnaire before the start of the focus groups on caregivers' age, gender, nationality, education, current position, current job experience and number of hours employed.

Reach

To assess the reach of the intervention, Foundation Theatre Veder registered participation of the caregivers in the training and coaching program. The reach was determined by calculating the percentage of caregivers participating in the five training and coaching sessions related to the total number of caregivers working on the ward (excluding temporary caregivers and newly appointed caregivers during implementation). A caregiver could be a nurse, a nursing assistant, an activity therapist, a nursing home host, a volunteer, or could perform a combination of functions, with or without the execution of coordinating activities.

Furthermore, data collection took place via focus groups with caregivers of all six wards who followed the training and attended follow-up meetings of VCM and semi-structured interviews with stakeholders who were involved in the implementation of the intervention on the nursing home wards, and with the trainers and director of VCM. The focus groups were conducted first as important outcomes for successful implementation could be included in the in-depth discussion with the stakeholders.

Focus groups

Small focus groups were composed with three to eight participants per group to allow for increased contribution of each participant (Kitzinger, 1995; Reid & Reid, 2005). The team managers of the wards asked the caregivers to participate in the focus groups, based on purposive sampling. Selection criteria were (1) participation in the training program, and (2) a variety of professions and expertise. The focus groups were held with the trained caregivers to investigate the applicability and implementation of VCM in their daily caring tasks on the nursing home wards. The first author and researcher (PB, BSc, nurse and lecturer, 4 year research experience, female) acted as moderator during the focus group interviews, four female research assistants, all without ties to Foundation Theatre Veder, acted as observers (SeY, MD, LW, LB). A predetermined 'topic list' based on the five constructs of the RE-AIM framework and supplemented with specific topics from the theoretical framework of Meiland et al. (2004) was developed. This theoretical framework distinguishes three phases in the implementation process: the preparation phase, the execution phase and the continuation phase, at the micro, meso and macro level and was used in another process analysis (Van Haeften-Van Dijk et al., 2015). Based on the topic list an interview schedule was composed with questions for the focus group and individual interviews. Questions for the focus groups included, for example: 'Can you give an impression of your experiences with VCM?', 'Can you give an impression how VCM is implemented?', 'Were you facilitated sufficiently to implement VCM?' or 'Can you indicate what factors stimulated or hindered you to use VCM in daily care? Probing questions such as 'Can you tell me more about that?' or 'What influence did your theatrical, poetic or musical communication have on the resident?'

These questions ensured clear responses from the participants and elicited detailed information during the focus groups.

Interviews

All managers who were involved in the implementation strategy were invited to participate in the study. We approached stakeholders by e-mail or phone describing the goal of the research and general topics that would be addressed during the interview. The interviews with stakeholders were conducted by the first author (PB). All interviews were conducted face-to-face and anonymity was guaranteed. The predetermined topic list used for the focus groups, was also used for the interviews. Questions for the stakeholders were for example: 'How did you facilitate the implementation of VCM?', 'In what way was the introduction of VCM executed on your ward?', or 'What facilitated or hindered the implementation of VCM?'. Questions for the stakeholders from Foundation Theatre Veder were, for example: 'What was the situation at the wards at the start of the implementation?', 'How did the managers of the nursing homes facilitate the implementation of VCM on their wards?' or 'Was VCM executed as intended?' All interviews and focus groups were audiotaped and subsequently transcribed verbatim.

Analysis

Descriptive statistics were obtained on the characteristics of the participating caregivers in the focus groups. The registered participation in the training and coaching program was monitored and percentages of attendance were computed. The verbatim transcripts of the focus groups and interviews were analysed by using both deductive and inductive methods of data analysis. First, the data were coded based on a predetermined analysis scheme derived from the five constructs of the RE-AIM framework (Table 1). Next, following an inductive method, three new codes were created based on data that could not be coded appropriately with the analysis scheme created beforehand (1. involving residents/informal carers in taking the decision of implementation of VCM on the ward; 2. participation of caregivers in the training; 3. including VCM in mission/vision of the organisation). To ensure reliability of the results, and to transform the predetermined analysis scheme into an objective coding system, two researchers (PB and JvW) independently coded the first two focus groups and the first two interviews. After this was done, the objective coding system was developed and coding of the rest of the focus groups and interviews was carried out by one researcher. All codes and text fragments were entered in the qualitative software program NVivo (qualitative data analysis software; QSR International Pty Ltd. Version 10, 2012). To provide a detailed description of each case (i.e. ward), firstly a within-case analysis was carried out: text fragments from each case were organised per theme using the predetermined analysis scheme (Braun & Clarke, 2006). After analysing all cases separately, a cross-case analysis was conducted with inclusion of all cases, by analysing all text fragments related to the predetermined themes derived from the five constructs of the RE-AIM framework (Creswell, 2013). The results were summarised in matrices, categorising themes concerning the implementation process of VCM, as well as the facilitating and

impeding factors with respect to this implementation process on the micro (primary care process) and meso (organisational) level. The results were discussed in the research group (PB, JvW, RMD, BvM) thus achieving consensus on the main outcomes of the analyses. In the 'Results' section, quotations that reflect the responses given by interviewees are presented to illustrate the findings. The quotations are coded based on the respondents' number (Resp) and function.

Results

Eight focus groups were held, with 42 trained caregivers from six nursing home wards. Table 4 describes the characteristics of the participants per focus group. Of the 42 participants, 90.5% (*n* = 38) attended the starting team meeting; 78.6% (*n* = 33) attended the feedback session of the DCM observations and joined at least one of the coaching-on-the-job sessions. A majority

Characteristic	FG1	FG2	FG3
Number of participants	4	3	4
Age, mean (SD)	43 (9.22)	47 (10.40)	46 (7.86)
Female, *n* (%)	4 (100)	2 (66.7)	4 (100)
Function, *n* (%)			
Nurse	2	1	
Nursing assistant	1		2
Nurse and coordinator		1	2
Therapist			
Therapist and nurse			
Nursing home hostess	1	1	
Volunteer			
Ethnicity			
The Netherlands,*n* (%)	1	2	1
Surinam/Antilles, *n* (%)	2	0	2
Other Western, *n* (%)		1	
Other non-Western, *n* (%)	1		1
Education			
No nursing education, *n* (%)	1	1	0
Low nursing education, *n* (%)	1	0	2
Middle-high nursing/	2	2	2
Occupational education, *n* (%)			
Work in psychogeriatric care			
Short (<1 year), *n* (%)			
Middle (1–5 year), *n* (%)	3		
Long (>5 year), *n* (%)	1	3	4

Table 4. Characteristics of the participants of the eight focus groups (*n* = 42)
FG1 = Focus group1, FG2 = Focus group2 etc.

of the 42 participants, 73.8% (*n* = 31) attended four or five training- and follow-up sessions and 23.8% (*n* = 10) attended three training and follow-up sessions. The focus groups took place in the nursing homes and lasted 52 - 96 minutes (mean duration 73 minutes).
Eleven semi-structured interviews with stakeholders of the nursing homes were held: team managers of the participating wards (*n* = 6), location managers (*n* = 3), portfolio holder (*n* = 1) and advisor of the Board of Directors (*n* = 1), in this paper all referred to as 'manager'. They had insight into facilitating and impeding factors of the implementation of VCM during the different implementation stages: the preparation phase, the execution phase and/or the phase of continuation. The other interviewed stakeholders were the art director of Foundation Theatre Veder (*n* = 1, female) and trainers of VCM (*n* = 3, two females), who were interviewed together. None of the stakeholders refused. The interviews took place at the nursing homes and lasted 37-98 minutes (mean duration 60 minutes).

FG4	FG5	FG6	FG7	FG8	Total value
5	4	7	7	8	42
50 (6.06)	47 (7.46)	48 (13.29)	52 (9.61)	44 (12.65)	47 (10.02)
5 (100)	4 (100)	7 (100)	6 (85.7)	8 (100)	40 (94.2)
1	2	1	3	5	15 (35.7)
2		1	2	1	9 (21.4)
	1		1	1	6 (14.3)
		3	1	1	5 (11.9)
		1			1 (2.4)
2	1				5 (11.9)
		1			1 (2.4)
0	2	7	7	7	27 (64.3)
4	1				9 (21.4)
	1			1	3 (7.1)
1					3 (7.1)
1	1	2	0	0	6 (14.3)
3	0	2	1	0	9 (21.4)
1	3	3	6	8	27 (64.3)
		2			2 (4.8)
2	2	2	1	3	13 (31.0)
3	2	3	6	5	27 (64.3)

RE-AIM framework

For each construct of the RE-AIM framework the themes related to the implementation of VCM are described. An overview of the related (sub)themes to the five constructs of the RE-AIM is given in Table 1. Subsequently, the notable barriers and facilitators per theme are described (refer to Table 5 for an overview of the barriers and facilitators).

RE-AIM construct	Facilitators	Barriers
Reach	• Mandatory participation in training and follow-up meetings • A stricter procedure to implement training and coaching program • Doing the training together as a team • Offering training at two moments to ensure everyone can participate	• Irregular working hours • Doing the training outside regular working hours • Inadequate management supervision
Implementation-effectiveness	• Small-scale care setting and rural environment • Positive and cheerful reactions of the residents (reciprocity in contact) • Collaborating with enthusiastic (Veder) colleagues • Easy applicability of the VCM in daily care	• Lack of background information on the residents • Caregivers not allowed to wear their own clothes (negative effect on homelike atmosphere) • Apathetic or silent residents (people with moderate to severe dementia) • Limited communication skills of caregivers • Inability to focus on VCM program because of other ward issues
Adoption	• DCM, DVD and positive approach of the training and coaching program • Cheerfulness and contact with colleagues in training and follow- up meetings • VCM application creates connectedness and reciprocity with colleagues and residents • Giving more specific assignments during the training • Practical approach of the training and coaching program • Offering the training and follow-up in a way that you show more of yourself as a colleague, but also as a person • Doing the training together as a team • Involvement of and stimulation by the management • VCM is a method that caregivers can also use in collaboration with other disciplines	• Resistance against the use of key elements of VCM • Too much attention during training for organisational problems on the ward with family/insufficient support from management/ absenteeism • Different cultures in a team made collaboration difficult • Insufficient learning culture on the ward • Change of trainers • Some parts of the training were perceived as childish • Apathetic behaviour of caregivers during training influenced behaviour of trainers, who had to stay alert not to exhibit apathetic behaviour themselves • Some aspects of VCM do not suit a caregiver's personality (e.g. theatricality)

RE-AIM construct	Facilitators	Barriers
Implementation	• VCM is an invitation to equality and recognition (being present). VCM finds openings in people with dementia, making happy encounters possible • VCM takes no extra time and is easy to integrate into daily care duties. • VCM is easily applicable, not complicated, no special investments are needed; it's all about personality and enthusiasm • VCM is an important addition to the Veder method as 'living-room performance' • Not having office space forces caregivers to increase their presence in the living room with residents • VCM fits well with the development of self-managing teams and integration of tasks of various staff members of a team (e.g. activity therapists, nurses, hostesses) • Facilitation by the organisation • Support within the team • Long duration of the training and coaching program • Inexpensive training and coaching	• Unclear who is responsible for the registration of residents' background information • Life-story books are poorly made by relatives • In case caregivers have an office: a tendency to retire in their own office to do administrative tasks instead of being in the living room with the residents • Tendency to focus on to-do task lists • Hastiness of the caregivers due to high workload • Integration of tasks of activity therapists and nurses results in less time to do activities with residents • Development towards self-managing teams (which resulted in a higher workload) while implementing VCM • Low education level of caregivers • Poor mastery of the Dutch language • High absenteeism of caregivers
Maintenance	• VCM and Veder method as a 'living-room performance' is likely for an organisation to distinct themselves • Senior management sees the necessity of sustainable implementation and takes steps for continuation • Applicability of VCM as a shared method when conducting discussions/ (multidisciplinary) consultations/performance appraisal / team-development discussions • Transfer of VCM on a resident level to new caregivers is easy • Availability of a regular education and training budget	• Lack of vision and decisiveness on long-term implementation of senior management • Lack of a long-term implementation plan • Focus on implementation is diverted by inspection visits, budget cuts, management and staffing changes • Insufficient directive guidance to identify an informal leader and/or project leader • Lack of a training budget

Table 5. Facilitators and barriers during the implementation of VCM

RE-AIM construct I: Reach

The reach in this study is the proportion of caregivers in nursing homes that participated in the training and follow-up meetings during the study. Table 6 shows that on five wards the reach was moderate to good (67%–86%). On these wards the caregivers reported that the training contributed to team building, which facilitated the reach. The team of W2a & b did not experience this. The main barrier was the change of management, which resulted in the caregivers receiving less encouragement to participate in the training.

Ward	Nursing home	Number of caregivers* working on the ward at T0 *(n)*	Reach at T1 (%)	Number of caregivers** who attended one training or follow-up meeting *(n)*	Number of caregivers** who attended all (five) training and follow-up meetings *(n)*
W1a & b	1	42	67	3	9
W2a & b	1	41	43	9	1
W3	2	20	74	2	10
W4	3	22	79	1	10
W5a & b	4	21	69	2	6
W6a & 6	4	19	86	0	10

Table 6. Reach of the training of VCM

* Caregivers are: nurses, nursing assistants, activity therapists, combined function of activity therapist and nursing assistant, combined function of nurse and coordinator of the ward, nursing home hostesses, volunteers. Excluded are temporary caregivers and caregivers starting new on the ward during implementation.

** Number of caregivers from total caregivers at T0.

RE-AIM construct II: Implementation-effectiveness

Implementation-effectiveness is the perceived impact of VCM on the wellbeing and quality of life of people with dementia as experienced by caregivers when applying VCM. Two themes were identified in relation to the *implementation-effectiveness.*

1. Residents having fun during application of VCM

During the execution phase, on most participating wards (W1a & b – partly -, W3, W4, W5b, W6a & b) caregivers managed to apply theatrical, musical and/or poetic elements in their communication with residents during daily care moments, and reported that they experienced fun when applying VCM, but also that the care was easier to give, e.g. it evoked less resistance from the residents. VCM could be applied as a small activity together with

the residents (e.g. quote Resp29, nurse), but it could also be a change of music in the living room. For example, the residents appreciated different styles of music being played resulting in positive responses; on another ward a nurse (Resp31) recited old poems in the residents' own dialect, producing smiles on residents' faces:

"Since the training I use the internet to play music they know, not just the radio. And Elvis Presley, they love it and you hear them say: 'Oh, this is Elvis Presley' and then they start to dance." (Resp19, hostess)

On five wards (W1a & b, W3, W4, W5a & b, W6a & b) the caregivers indicated that residents experienced pleasure when caregivers applied VCM:

"When I work with M, we call G. G then comes to play the piano and we take the residents into the hall. I put on a boa, a robe and I walk past all residents, sing with them and give them a friendly pat on the head. We really have 20 minutes of fun with the residents." (Resp29, nurse)

Caregivers on W2a & b and a few caregivers on W1a & b and W5a indicated that they found it difficult to apply VCM. They felt that theatrical, musical and/or poetic communication did not fit their personality. However, trainers of Foundation Theatre Veder believe that every caregiver feels comfortable with a form of theatrical, musical or poetic communication. Although the trainers tried to anticipate this by using 'experiential learning' techniques, such as demonstrating theatrical characters (e.g. the trainer showed up as a postman, a form of 'acte de presénce', while the caregivers assumed the role of residents), it was not enough for some caregivers to overcome their resistance and gain more self-confidence in applying VCM (Trainers Foundation Theatre Veder).

2. Person-centredness: recognition of the person behind the resident with dementia.
On four wards (W3, W4, W5b, W6a & b) the caregivers experienced that the implementation of VCM led to a greater recognition of the person behind the resident with dementia and to more reciprocity in the contact with the people with dementia:

"We placed a suitcase with goodies of yesteryear on the table. A resident who used to be a bicycle repairman took some bike stuff from the suitcase. That was a fun and special experience because without any prompting he began to tell stories about his life as a bicycle repairman." (Resp29, nurse)

On W2a & b the caregivers reported they found it difficult to empathise with the world of the residents. One barrier was having little information about the background and personal interests of the residents. This problem also existed on W1a & b and W5a, but caregivers on these wards discovered that by applying VCM they gained valuable insights on the interests of the person with dementia.

Summarising the *implementation-effectiveness*, in the perception of caregivers and managers applying VCM has a positive influence on the wellbeing of the people with dementia, although using the theatrical elements of VCM does not suit all caregivers.

RE-AIM construct III: Adoption

Adoption can be defined as the willingness of caregivers and trainers to initiate VCM and deliver the program. Willingness of caregivers to change their behaviour, e.g. having more attention for the quality of life of people with dementia, strengthened their competences. Three themes related to adoption emerged from the focus groups and interviews.

1. Caregiver competence: development of awareness.

The training started with a film about the Veder method as 'living-room theatre performance', which demonstrated how to make contact in a touching way. Trainers reported that this was often the moment when resistance against VCM decreased. On four wards (W1a & b, W3, W4, W6a & b), observation of the residents using the DCM-method and the feedback about these observations to the team, led to insight into how they acted and communicated with the residents during the care process. Some caregivers were really shocked by the observations as they realised how they neglected some residents. The positive focus of the training facilitated caregivers to gain more self-confidence and it stimulated their motivation to learn. For the caregivers from W2a & b and some from W5a the training did not result in increased awareness. During the training, these caregivers focused too much on problems like the absence of management and colleagues, and issues with family of the residents.

2. Caregiver competence development in contact with the residents.

Caregivers of all six wards (W3, W4, W5b, W6a & b and some caregivers of W1a & b, W2a & b and W5a) reported that because of their willingness to engage in self-reflection and by using VCM they experienced more connectedness/reciprocity in contact with the residents. This resulted in having a more genuine attention for individual residents:

Resp20, nurse: "Previously, you were seen as a nurse. There was a certain distance. But now, if you talk to a resident one-on-one, our contact is more equal."
Int: "So you are looked upon differently by the residents."
Resp20, nurse: "Yes."
Int: "And do you also feel that you look differently at the residents?"
Resp20, nurse: "Yes, I feel closer. They share small secrets with you. And in return I'll tell a small secret (e.g. the date of my birthday) and say: Don't tell anyone?"

A number of caregivers of W1a & b, W2a & b and W5a indicated they found it difficult to communicate with apathetic residents and/or residents who display repetitive behaviour. It was an eye-opener for them that it is possible to validate the experiences and emotions of these patients with severe dementia.

3. Caregiver competence development in contact with colleagues.
On all six wards the participating caregivers in the focus groups reported that the training was built up gradually in terms of showing oneself as a colleague but also as a person who dares to be vulnerable in the presence of colleagues. On wards W1a & b (partly), W3, W4, W5a & b and W6a & b this resulted in more mutual trust, which stimulated the collaboration between the various disciplines in the team: caregivers, therapists, hostesses and volunteers. A manager (Resp48) reported that the nursing assistants in particular, those who are not well educated on dementia, experienced the VCM training and coaching program as very helpful for providing better person-centred care in their new role as nursing assistant. Also, it was easier for the caregivers, therapists, hostesses and volunteers to appeal to each other: 'Is this how we learned to do it during VCM trainings?' (Resp20, nurse). Caregivers on W2a & b and some on W1a & b, however, did not experience this improvement in cooperation, since working together with different cultures and difficulties with the Dutch language remained dominant barriers for effective collaboration within the team. VCM provided the caregivers on all other wards with a method that facilitated discussing the behaviour of residents with other staff members, and as result being accepted as a full partner in multidisciplinary meetings:

"In the multidisciplinary consultation (with physician, dietician, psychologist and/or music therapist) the caregivers now feel more confident to propose alternative ways of dealing with difficult behaviour. If these new ways work, the general recommendation regarding dealing with difficult behaviour is adapted." (Resp17, nurse and coordinator)

Summarising the *adoption*, both caregivers and managers reported that VCM created awareness and helped caregivers to develop their professional competences, in terms of both caring tasks and cooperating with colleagues.

RE-AIM construct IV: Implementation
Within the context of the present study *implementation* is defined as fidelity to the VCM protocol, adaptations made to the intervention during the study, costs of the intervention, and consistency of implementation across staff, time, setting and subgroups. Trainers reported that all teams received the same amount of training and follow-up sessions, team meetings and coaching-on-the-job. No adaptations were made to the intervention. Four themes related to *implementation* have been identified.

1. Application of VCM in daily care.
Caregivers and managers from five wards (W3, W4, W5a & b, W6a & b, some of W1a & b) stated that VCM is easy to apply in daily practice:

"The method is easy to apply, all caregivers have talents to apply the method, and nothing extra is needed." (Resp48, manager)

However, both caregivers and managers of W2a & b indicated that caregivers did not apply VCM often. Caregivers of W1a & b and W2a & b believed that VCM was used best during caring tasks in the bedroom and the bathroom. Commotion in the living rooms made it difficult for them to apply VCM adequately to individual residents. On wards W2a & b and W5a caregivers reported that the implementation of VCM was hindered by organisational problems, such as absence of caregivers and managers, high workload and collaboration problems with colleagues. It is striking that while a change of management and high absenteeism occurred on both wards W5a and W5b, these were not mentioned by W5b as an impeding factor to successful implementation. According to the manager, team W5a and W5b had different team cultures: "They differ notably in self-management and collaboration."

2. Time to apply VCM.
'Time' is a major issue in nursing home care. The influence of VCM on the factor 'time' is described in three sub-themes.

a) Enough time to apply VCM during daily care.
Most caregivers of five wards (W1a & b, W3, W4, W5b, W6a & b) reported that the execution of VCM took no extra time. The method was easily integrated in their daily professional activities:

"Once you cross the ward's doorstep you start applying VCM." (Resp51, manager)

Some caregivers from these same wards, as well as caregivers from W5a and W2a & b, indicated that performing caring tasks is often done in a rush, meaning that applying VCM properly was difficult. A manager attributed this to differences in handling stress:

"Caregivers differ in how well they tolerate high work pressure; this probably depends on their personalities." (Resp50, manager)

b) Setting priorities.
Caregivers on five wards (W1a & b, W3, W4, W5B, W6a & b) indicated that the training forced them to face the facts: performing care calmly, making one-on-one contact and having patience meant that both the caregivers and the residents are more at ease and comfortable. And this saved time during the rest of the day! Still, some caregivers of wards W2a & b, W4 and W5a & b indicated that they found it really hard to let go of the 'traditional' time schedule (e.g. all residents must be washed, dressed and finish breakfast before 10:30 a.m.):

"Caregivers still make an issue of time while time is not an issue, the nursing home is a 24-hour business." (Resp43, manager)

c) Saving time by doing other work in the presence of residents (e.g. in the living room).
Caregivers of W3, W5a & b and W6a & b conducted the administrative work in the presence

of residents. For them, paying attention to the residents while doing other chores resulted in extra time for the social and emotional wellbeing of the residents. On these wards caregivers had no office space, for them it was 'normal' to do administrative work in the presence of the residents. Although caregivers of W4 are also used to do administrative work in the small-scale living room, they did not experience they had extra time for the residents due to the integration of the tasks of nurses and activity therapists. Nurses were obliged to do activities with residents, and activity therapists had to perform simple caring tasks. Most caregivers of W1a & b and W2a & b found it hard to carry out administrative work in the presence of residents, they preferred to write their reports in the office. Due to this mindset and a high workload, caregivers of these two wards were unable to, for example, take time to clean up together with the residents and to combine this with having a personal talk with the residents.

3. Public Relations (PR).
The caregivers of W4 and the managers of W5a & b and W6a & b realised that by using VCM the nursing home could distinguish itself from other nursing homes in the region. This opportunity of positive PR stimulated the higher management of these wards to invest in long-term implementation of VCM. On W4, however, the manager retired during the implementation period, and at the same time the team of W4 had to become self-managing. These changes resulted in the senior management being less involved with the implementation and consequently W4 did not benefit from this opportunity of positive PR of VCM.

4. Costs.
The participating wards received grants for participation in this VCM-project. As a result all managers considered the implementation trajectory inexpensive, which made it attractive to implement VCM.

Summarising the *implementation*, on W2a & b both caregivers and managers reported that the implementation of VCM had not been successful. On wards where both reported it was successful, caregivers and managers found VCM easy to apply during daily caring tasks, as it took no extra time. Caregivers and managers reported VCM is useful for PR, but only two of the six wards managed to actually use it for this purpose.

RE-AIM construct V: Maintenance
Maintenance describes the extent to which VCM was institutionalised and became part of the organisations routine practice and policy. From the focus groups and interviews four themes related to long-term sustainability.

1. Vision and strategy.
VCM fitted the person-centred care vision of all participating nursing homes. However, after implementation the management of W1a & b, W2a & b, W3 and W4 did not promote the

method on other wards/locations of their nursing homes. Barriers were a lack of vision and decisiveness regarding the long-term implementation and decreasing attention for the implementation of VCM because of other activities demanding their attention, such as inspection visits, budget cuts, and management and staffing changes.

2. Strategies for continuation.
Only the board of directors of W5a & b and W6a & b acknowledged the importance of continuing the implementation of VCM and undertook long-term implementation actions:

- Anchoring VCM hierarchically within the organisation, moving beyond the pilot status.
- Involving senior management in sustainable implementation.
- Broadening the support base among all staff of the organisation.
- Including VCM in regular business processes.

3. Ensuring long-term implementation.
After the nine-month training and coaching program the senior management from W5a & b and W6a & b wrote a long-term implementation plan, focused on securing, extending and broadening the support base (spreading the 'Veder virus'):

"The start of the implementation was 'spur of the moment', some were excited and they just went ahead, without a sound and long-term implementation plan. In hindsight the implementation should have taken place on a larger scale."
(Resp53, manager)

The board of W5a & b and W6a & b took the initiative to appoint enthusiastic personnel as portfolio holders; these employees presented themselves spontaneously. Senior management of the other nursing homes identified no project leader or portfolio holder. Caregivers of W1a & b, W3, W4, W5a & b and W6a & b reported that they wanted to remain inspired and expressed the need for 'Veder ambassadors' within the organisation and that they could meet internally and externally:

"To remain inspired, I would like to have a Veder method 'living-room theatre performance' on our ward a few times a year." (Resp7, nursing assistant)

Foundation Theatre Veder expressed the wish to develop a certification mark.

4. Long-term support of current employees and transfer to new employees.
Caregivers of all wards indicated that VCM is easily transferred to new employees during daily care activities. In the nursing home of W5a & b and W6a & b a follow-up training of the method was added to the regular course offerings, funded from the regular education budget of the organisation. In the nursing homes of W1a & b, W2a & b, W3 and W4 no budget was available for this purpose.

Summarising the *maintenance*, caregivers need more support and investment from the management to continue applying VCM in the long run. Managers of four wards failed to develop a long-term implementation plan, due to a lack of vision, budget cuts, inspection visits and management and staffing changes.

Discussion

By means of a multiple case study design, we described the implementation process of VCM on six nursing home wards for people with dementia. The RE-AIM framework enabled us to evaluate the degree to which the implementation has been successful and provided insight into the facilitators and barriers during the implementation process. Below we discuss the implementation of VCM and the main facilitators and barriers we found for each RE-AIM construct. The reach was moderate to good on five wards (67% – 86%) and poor on one ward. Foundation Theatre Veder, stressing the importance of the role of the manager in the preparation phase of the implementation process, could not prevent the latter. Several studies identified the importance of a supportive and facilitating manager during the implementation (Boersma et al., 2015; Chenoweth, 2015; Lawrence et al., 2012; Van Haeften-Van Dijk et al., 2015; Van Weert et al., 2004). The current research shows that the manager also has a major impact on the caregivers participating in the training, which is a first crucial step for a successful implementation. It is of great importance that management consistently conveys the message to staff members that the application of VCM is important basic care, and that caregivers learn to stick to using the method even in less than optimal circumstances. Remarkably, some teams simply had more difficulties dealing with organisational problems on the ward, like the absence of the manager and/or colleagues, than other teams. A hypothesis is that not the organisational problems on the ward as such are barriers to successful implementation, but how a team deals with them is of greater importance. Team culture, the system and the interconnected and interacting individuals determine whether a team is ready to adopt a new care method (Snoeren et al., 2014). Caregivers who succeeded in applying elements of VCM became better at tailoring their communication to the individual needs of the residents and the person behind the dementia, which resulted in residents enjoying themselves more, and less resistance to daily caring tasks *(implementation-effectiveness*). This means that VCM supported the caregivers greatly with the operationalisation of person-centred care (Brooker & Latham, 2015; Kitwood, 1997). More specifically, VCM helped caregivers to be more 'present' with the residents, by 'connecting' with the residents, 'attuning' to the residents and 'being of significant meaning' for the residents, which corresponds with the presence theory (Baart & Vosman, 2011). Lawrence et al. (2012) report that the use of a psychosocial intervention leads to 'more meaningful relations' between the resident and the caregiver. To effectively provide person-centred care, caregivers need information about the background and personal interests of the residents. As found in Broderick & Coffey (2013), this information was not always available, which was a barrier to successful implementation on two wards. However, in addition to developing more effective ways to retrieve this information, the application of the multi-faceted VCM training and coaching program, including careful observation of the reactions of the residents,

provides valuable insight into their personal interests and preferences. When caregivers use *theatrical*, *poetic* or *musical* communication in their contact with residents and are willing to reflect on themselves, they develop competences in making contact with the residents and with colleagues (*adoption*). In this way, the VCM training and coaching program helps caregivers to professionalise their work, which has been reported previously as a potential asset of psychosocial interventions in dementia care (Chenoweth, 2015; Eggenberger et al., 2013). Although the trainers of Foundation Theatre Veder state that every person has skills for theatrical, poetic or musical communication, not all caregivers were able to overcome their resistance to using VCM in their daily caring tasks. Some caregivers reported, in line with the studies of De Lange (2004) on integrated emotion-oriented care and Götell et al. (2009) on caregiver singing and music, that VCM does not fit their personality and they feel uncomfortable with it. In retrospect, more 'experiential learning' (Snoeren, 2015) in the training might be useful to increase the caregivers' familiarity with the communication tools of VCM. On wards where compliance with VCM was higher, the training helped caregivers to reflect, correct and encourage each other. Providing feedback appears to be as important as the intervention itself, because it stimulates 'ongoing learning' (Eggenberger et al., 2013; Snoeren, 2015). As reported before, the long duration of the training, the follow-up sessions and coaching-on-the-job are also important 'boosters' to successful implementation of VCM (Boersma et al., 2015; Lawrence et al., 2012). An important barrier mentioned in previous studies on implementing psychosocial methods was 'the time it takes' (Boersma et al., 2015; Eggenberger et al., 2013). VCM was set up to be implemented *during* daily caring tasks like washing, eating or going to bed. Both caregivers and managers of five of the six wards confirm that VCM required 'no extra time'. From a practical point of view, caregivers and managers therefore concluded that VCM is easy to implement in daily care, which corresponds with Lawrence et al. (2012), who state that integrating a person-centred method in daily caring tasks facilitates successful implementation (*implementation*). It must be noted however that, although a minority, some caregivers found it difficult to apply VCM when the workload is high. The high workload made it difficult to take the time and to be creative using theatrical, poetic or musical communication in the contact with the residents. In addition to 'time', two related themes emerged in this study. 'Setting priorities' is still an issue in nursing homes. Van Weert et al. (2004) also found that caregivers tend to do their work based on 'the clock'. It is difficult for them to change the daily planning and to approach nursing home care as a 24-hour business. The third theme, 'doing work in the presence of the residents' appeared to save time and more importantly, working this way increased the caregivers' attention for the social and emotional wellbeing of the residents. Gnaedinger (2003) and McAllister & Silvermann (1999) found that playing multiple and integrated roles, for example combining caring tasks with housekeeping tasks and formal activities, encouraged caregivers to respond to the social, emotional, physical and medical needs of residents. Caregivers had integrated roles on wards where the care was organised in small-scale living-rooms (see Table 2). On a micro level maintaining the implementation of VCM seems easy for caregivers, because the method is considered easy to transfer to (new) colleagues (maintenance). Although VCM fits the vision of all participating nursing homes,

so far only one of the four nursing homes has achieved sustainable implementation (continuation phase) on a meso level. Important facilitating factors like structural financing of the implementation, securing the method in regular business processes and benefitting from the positive PR that comes along with VCM have been reported earlier (Meiland et al., 2005; Van Haeften-Van Dijk et al., 2015). Contrary with the facilitating factors described by Meiland et al. (2005), this specific nursing home started implementation without a long-term (implementation) plan. This organisation 'just started' the implementing of VCM. Later on in the process, they performed a number of actions to maintain the implementation of VCM, such as developing and financing a long-term implementation plan and including VCM in the regular business processes. This process is consistent with Snoeren et al. (2014), who concluded that improvement of care and cultural change in nursing homes are dynamic, interactive and non-linear processes that take place at the same time. These are complex processes, making prediction and control difficult, and they require managers with a supportive and flexible attitude. 'Just start' and adjust during the implementation process might also be a right path to follow after all.

Strengths and limitations of the study

Several methodological issues in this process analysis need to be taken into consideration. Strengths of the study are:

- All involved stakeholders of the implementation of VCM (caregivers, managers on different levels of the organisation and trainers from the Foundation Theatre Veder) were interviewed by the same researcher, using the same protocol.
- Data analysis was structured on a predetermined analysis scheme based upon the RE-AIM framework.
- To promote the reliability of the process analysis the data of the first two focus groups and interviews were analysed by two independent researchers, with little disagreement between the two researchers.
- There was no dependency between Foundation Theatre Veder who developed and implemented VCM and the researchers.

Despite these strengths, some limitations must be mentioned.

- In this multiple case study we used a standard protocol both for the focus groups and for individual interviews, which was prepared beforehand. This resulted in some themes being only 'briefly discussed'. During the analysis it became clear that further exploration of some issues could have resulted in better insight into the implementation process, for example why a team on one ward experienced the absence of management as an impeding factor, whereas the implementation in another team was not hindered by the absence of management.
- In this process analysis we investigated the perspectives of caregivers and managers of six nursing home wards. Although relevant, we did not ask the people with dementia or their informal caregivers about their experiences with VCM.
- There was variation in the settings involved in this study: the six wards differed in the

type of care organisation, the number of residents living on the ward and the region of the Netherlands where they were located. Because of these differences we have to be cautious to make generalisations about facilitators and barriers to implementation of VCM, as they may have been related to specific contextual factors of the different wards.

- As described earlier there was also variation in the period Foundation Veder needed to implement VCM; on three wards this took nine months, on the three other wards it took twelve months, due to planning problems. This may have influenced the implementation process and the facilitating and hindering implementation factors we found.
- The last limitation of this study is related to the qualitative methods used in this study. We have interviewed caregivers and managers of the experimental wards, who shared with us the factors they perceived as facilitating or hindering the implementation. However, observing the behaviour of the caregivers may complement the information derived from the focus groups and interviews. It is recommended that further research also use other ways of data collection, such as observations how caregivers communicate with residents in daily practice, additional to what they retrospectively say about the implementation.

Conclusions

Using the five constructs of the RE-AIM framework we gained insight into the way the implementation of VCM is executed and which facilitators and barriers were encountered on the micro and the meso level. Although Foundation Theatre Veder offered all meetings of the training and coaching program on two different days, the *reach* varied between the wards. Managers still have an important role in stimulating caregivers. On a micro level, caregivers on four of the six wards *adopted* the method and succeeded in applying VCM during their daily caring tasks like washing, eating and going to bed. In the short-term VCM was *implemented* fairly successfully, caregivers learned a lot and were positive about the application of VCM in their daily caring tasks. Caregivers and managers reported that VCM had a positive influence on the quality of life of the people with dementia, e.g. increased reciprocity in interaction between caregivers and residents. *Maintaining* the implementation of VCM in the long run, is still an issue. On a meso level, senior management from only one nursing home initiated actions to maintain VCM; they integrated VCM and the Veder method as 'living-room theatre performance' in their regular business and care processes. The most important facilitator of the implementation was that the method is easily applied and takes no extra time. Most important barriers to the implementation of VCM were resistance against theatrical communication, dealing with organisational and staffing problems on the ward, and no continuation with a long-term implementation plan or finances for extra training or VCM inspirational meetings.

Relevance to clinical practice

Just as Lawrence et al. (2012) describe for the United Kingdom, the care for people with dementia is also changing in the Netherlands. Less staff will have to take care of more residents and residents move to the nursing home later in the course of their disease (Van Haeften-van Dijk et al., 2015). In this 'changing landscape' of lower staff-to-resident ratios and more complex care needs among residents, the caregivers and managers implemented

VCM. Another radical change in the Dutch dementia care is the emergence of self-managing teams, where the function of the team managers has disappeared and the team has more responsibilities, e.g. making up their own duty roster, choosing and planning their training. The implementation of VCM has helped most teams to start a dialogue about how care is provided and what is important for people with dementia. With the development of self-managing teams, nurses become more autonomous (Kieft et al., 2014). On the other hand, not all self-managing teams are able to implement a new person-centred care method without the daily presence of a stimulating and facilitating manager. We found that the majority of the participating caregivers experienced more satisfaction and enjoyment in their contact with residents during the implementation of VCM, and that the method required no extra time investment from caregivers, which positively contributed to the integration of VCM in the daily caring tasks. Despite these encouraging findings, some barriers were experienced by caregivers when implementing VCM:

- insufficient management supervision and support;
- lack of vision and decisiveness on long-term implementation by the management of the nursing homes;
- little information available about the personal interests and background of the residents;
- high work pressure.

Moreover, some caregivers felt uncomfortable using theatrical, musical or poetic communication, some caregivers and some wards had staff with different cultural backgrounds, which made it more difficult for them work well together. Successful implementation of VCM requires that these hurdles are taken into account. However, in the follow-up of this study we will also investigate the implementation-effectiveness by means of observing the behaviour of caregivers and residents to find out whether the increased knowledge has actually led to more person-centred care. This part of the study will be published in the near future. Although there is increasing awareness of the importance of implementation studies (Gaglio et al., 2014; Leontjevas et al., 2012; Vernooij-Dassen & Moniz-Cook, 2014) and the value of a process analysis, these are still not common practice. For example, this process analysis resulted in the realisation that both innovators (e.g. Foundation Theatre Veder) and managers of nursing homes have to take more responsibility for the implementation of VCM. The RE-AIM framework helps to gain insight into the course of the implementation process. This study shows the value of conducting a systematic process analysis using this framework. It appears to be an effective approach to operationalise the different facilitating and impeding factors of implementation of VCM. Insight into these implementation factors will help caregivers and managers of international nursing homes who want to implement VCM or other person-centred methods in daily dementia care to anticipate the hurdles along the way.

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Chapter 5

Testing the implementation of the Veder Contact Method, a theatre-based communication method in dementia care

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Abstract

Background and objectives

There is a lack of research on implementation of person-centred care in nursing home care. The purpose of this study was to assess the implementation of the Veder Contact Method (VCM), a new person-centred method using theatrical, poetic and musical communication for application in 24-hour care.

Design and Methods

Caregivers (*n* = 136) and residents (*n* = 141) participated in a one-year quasi-experimental study. Foundation Theatre Veder implemented VCM on six experimental wards and rated implementation quality. Six control wards delivered care-as-usual. Before and after implementation, caregiver behaviour was assessed during observations using the Veder-observation-list and Quality of Caregivers' Behaviour-list. Caregiver attitude was rated with the Approaches to Dementia Questionnaire. Quality of life, behaviour, and mood of the residents were measured with QUALIDEM, INTERACT and FACE. Residents' care plans were examined for person-centred background information.

Results

Significant improvements in caregivers' communicative behaviour (i.e. the ability to apply VCM and establish positive interactions) and some aspects of residents' behaviour and quality of life (positive affect, social relations) were found on the experimental wards with a high implementation score, as compared to the experimental wards with a low implementation score, and the control wards. No significant differences were found between the groups in caregivers' attitudes, residents' care plans, or mood.

Implications

The positive changes in caregivers' behaviour and residents' well-being on the high implementation score wards confirm the partly successful VCM implementation. Distinguishing between wards with a high and low implementation score provided insight into factors which are crucial for successful implementation.

Background

Some 47.5 million people worldwide are diagnosed with dementia and this number is expected to increase to 75.6 million by 2030 (http://www.who.int/features/factfiles/dementia/en). As the illness progresses, behavioural and mood problems such as depression, agitation, anxiety, apathy, and aggression often increase (Zuidema et al., 2007). This has a negative impact on the quality of life of people with dementia.

Person-centred care

Caregivers can positively influence the mood, behaviour and well-being of people with dementia by taking into account their personal preferences, needs and lifestyle (Brooker et al., 2013). This person-centred care approach, developed by Kitwood (1997), is characterized by valuing each person with dementia and creating a positive psychosocial environment in which they experience relative well-being (Brooker & Latham, 2015). In the last decade's different person-centred care methods, such as validation (Feil, 1992), reminiscence (Woods et al., 2005), movement activation (Dröes, 1991) and multi-sensory stimulation (Van Weert et al., 2006) have been developed, implemented, and their effects on the behaviour and quality of life of the people with dementia studied. Although many studies reported some positive effects on the behaviour, mood and quality of life of people with dementia, effect sizes are usually small and long-term implementation requires more attention (Livingston et al., 2014; Olazarán et al., 2010). These results encouraged us to perform additional implementation research.

Theoretical foundation of the Veder Contact Method

The Veder Contact Method (VCM), developed by Foundation Theatre Veder, is a new person-centred method for residential 24-hour care based on emotion-oriented care models (Finnema et al., 2000; Van der Kooij, 2003). These models build upon the dialectical framework of Kitwood (1997), and also on the Adaptation-Coping model (Dröes, 1991; Dröes et al., 2010). Kitwood (1997) explains behaviour changes in people with dementia and their sense of well-being as the result not only of brain degeneration, but of a combination of personality, life history, health, and interaction with the social environment. The Adaptation-Coping model emphasizes the importance of factors like personality, life history, health aspects, and social and material conditions for understanding the person with dementia and how they deal with the disease. One of the crucial adaptive tasks for people with dementia is to develop and maintain social relationships in order to maintain an emotional balance (Van der Roest et al., 2007). The emotion-oriented care models (Finnema et al., 2000; Van der Kooij, 2003) have in common that they focus on the person living with dementia instead of the patient with a disease (medical perspective). VCM aims to stimulate contact between the person with dementia and the caregiver, and therefore their sense of well-being, by using *theatrical, poetic* and *musical* communication in combination with elements of existing care methods, i.e. reminiscence, validation and neuro-linguistic programming (Bandler & Grinder, 1975; Feil, 1992; Woods et al., 2005). This combination is expected to achieve broader effects than the single methods separately (Van Dijk et al., 2012).

Theatrical and poetic communication

The use of theatrical communication in VCM is based on Keith Johnstone's ideas of improvisation theatre (1987). The basic principle of improvisation theatre, 'saying yes', is important for people with dementia and is in line with validation (Feil, 1992), emotion-oriented care (Finnema et al., 2000; Van der Kooij, 2003) and neuro-linguistic programming (Bandler & Grinder, 1975). People with dementia feel accepted and appreciated by caregivers when they use theatrical communication (Kontos et al., 2010). Poetic communication is used as poetry can have a therapeutic effect (Leedy, 1969; Lerner, 1980; Zeilig, 2014). With poetry-therapy people understand their feelings better and are better able to communicate about their emotional needs (Leedy, 1969).

Development of the Veder Contact Method

VCM is a modification of the Veder method, in which 'living-room theatre performances' are given in day rooms of psychogeriatric nursing home wards, i.e. wards where people with dementia live together and receive 24-hour care generally in groups of six to 23 people. VCM and the Veder method for living-room performances intend to improve contact between the caregiver and the resident (http://www.theaterveder.nl/nl/english). As advised by caregivers and managers during focus groups and interviews in the study of Van Haeften-Van Dijk et al. (2015), VCM was specifically developed for integration in 24-hour nursing home care. In contrast with the Veder Method, caregivers do not need to set-up a complete theatre performance, they can apply VCM during daily caring tasks (e.g. during meals, personal care) (Boersma et al., 2017b).

Implementation and evaluation of the Veder Contact Method

We expected that adaptation of the Veder method into VCM would promote effective implementation of the method in daily care for people with dementia. From earlier research we know that psychosocial methods adapted for use in daily care (e.g. individualized music) tend to be more effectively implemented than psychosocial methods (e.g. integrated oriented care, family biography workshop, multi-sensory stimulation) which require additional time and resources (Boersma et al., 2015; Lawrence et al., 2012). The present study focuses on whether VCM was implemented successfully in daily nursing home care and is part of a larger study (Boersma et al., 2017b) entitled 'The implementation of the Veder Contact Method (VCM) in daily nursing home care for people with dementia: an evaluation based on the RE-AIM framework' (Glasgow et al.,1999). Within the framework of the current implementation study, we also conducted a process analysis to gain insight in the implementation process in the nursing homes, if VCM was implementable in daily 24-hour care and what factors facilitated and hindered the implementation of VCM (Boersma et al., 2017a). The aim of the current study was to assess the quality of the implementation of VCM on:

a) The communicative behaviour and attitude of professional caregivers.
b) The content of the care plan.
c) The behaviour, mood and quality of life for people with dementia.

In the present study we use the theoretical RE-AIM framework of Glasgow et al. (1999) to evaluate the implementation success of VCM. VCM was developed taking into account the five constructs of the RE-AIM framework that are considered important for effective and sustainable implementation (i.e. Reach, Effectiveness, Adoption, Implementation, and Maintenance). It has proved suitable for evaluating implementation of person-centred and psychosocial interventions in nursing home care (Boersma et al., 2015), and its use is comprehensively described in Boersma et al. (2017b). The research questions in the present study concern the constructs of Effectiveness, Adoption, and Implementation from the RE-AIM framework. 'Effectiveness' concerns the effect of VCM on the behaviour, mood and quality of life of the people with dementia; 'adoption' concerns caregivers' communicative behaviour and attitude; and 'implementation' concerns the way caregivers use VCM in daily care (i.e. treatment fidelity) and the content of the care plan (e.g. personal information of the resident).
We hypothesized that successful implementation (Van der Kooij et al., 2013) of VCM can result in (a) better communicative behaviour and more person-centred attitudes of caregivers towards dementia; (b) increased caregiver awareness regarding the life experiences of the people with dementia, resulting in more personal information about the residents' lifestyle, life history and preferences being included in the care plan; (c) less behavioural problems, improved mood and better quality of life of the people with dementia.

Methods

Design and settings

We conducted a quasi-experimental study with matched groups. Six wards from four nursing homes implemented VCM, six control wards from the same nursing homes provided care-as-usual (CAU). The control wards continued their care practices without implementing any new psychosocial intervention during the study period. Foundation Theatre Veder recruited wards for the VCM training program in nursing home organizations who had prior experience with the Veder method as a 'living-room theatre performance'. However, only wards within these nursing homes who had no experience with the Veder method as a 'living-room theatre performance' were asked to participate in the current study. Of the twelve participating wards some caregivers on one experimental ward and one control ward (in the same nursing home) had previous experience with the Veder method as a 'living-room theatre performance'. When an experimental ward agreed to implement VCM, a comparable ward from the same nursing home was recruited by the management of the nursing home. Matching of experimental and control wards took place on different characteristics (i.e. open or closed ward, number of residents, small-scale living or conventional ward living and familiarity with the basic principles of the Veder method). In one nursing home, no control group could be recruited; this was compensated by another nursing home with comparable characteristics (Table 2). The recruited nursing homes were located in different parts of the Netherlands. Implementation of VCM on the experimental wards lasted nine months and took place between January 2013 and October 2014. Measurements were carried out at T0 (baseline, before implementation) and T1 (nine months after the start of the implementation). Table 1 summarizes the training program and study design.

Month	Experimental group (M=6)	Control group (M=6)
1	Informed consent procedure	Informed consent procedure
2	*Pretest* Data collection: • Observation residents and their caregivers • Residents characteristics and care plan • Caregivers characteristics • Self-report questionnaire caregivers	*Pretest* Data collection: • Observation residents and their caregivers • Residents characteristics and care plan • Caregivers characteristics • Self-report questionnaire caregivers
3 – 9	*Implementation VCM in daily care by Foundation Theatre Veder:*	
3	• Team meeting • Observation of caregivers with Dementia Care Mapping method (DCM) • Feedback meeting outcomes observation DCM with caregivers and staff of the ward	
3 – 5	Three monthly training sessions of three hours: 1. Functioning of long-term memory in people with dementia, reminiscing and one-on-one contact. 2. Theatrical communication (intonation & acte de présence); importance of the 'saying goodbye' ritual. 3. Theatrical communication (poetic and musical communication); relation with the life history of residents.	
6 – 9	Two three-hour follow-up training sessions: 1. Repeating the information from the first three monthly sessions and discussing the experiences of caregivers and the reactions of residents when applying VCM 2. Connection is made with the 'authentic self' of the caregivers & exercise in how to start up a communication according VCM and related to the life history of residents as described in their care plan.	
4 – 8	Coaching on the job (three hours) before the second, third and fourth training session	
10	Evaluation of the implementation with caregivers and staff	
11 –12	*Posttest* Data collection: • Observation of residents and their caregivers • Analysing residents care plan • Self-report questionnaire caregivers • Implementation score VCM	*Posttest* Measurements: • Observation residents and their caregivers • Analysing residents care plan • Self-report questionnaire caregivers

Table1. Summary of the study design

Participants

The sample consisted of residents with dementia and their professional caregivers. Residents were eligible if they had cognitive problems due to a type of dementia and if they were able to stay in the living-room. Based on expected moderate changes in the indicators of successful implementation (i.e. the outcomes on mood and quality of life of the residents) a power analysis demonstrated that eight wards were required, resulting in 64 residents in the experimental group and 64 residents in the control group ($1\text{-}\beta = 0.80$, $\alpha = 0.05$, $d = 0.6$). The sample size calculation was corrected for clustering of residents within wards, assuming an average number of eight participating residents per ward and an intra-class correlation coefficient of 0.05. Given an expected loss of residents during this period of 25% (Koopmans, Ekkerink, & Van Weel, 2003), 86 people with dementia were required in both study groups. All residents from the twelve wards who met the inclusion criteria and for whom informed consent was obtained were included.

During team meetings the managers of the experimental wards informed the caregivers about the implementation of VCM. The principal investigator (PB) provided oral and written information about the study to all twelve wards teams. All caregivers of the participating wards, i.e. nurses, activity therapists, nursing assistants, nursing home hostesses and permanent volunteers, were included. The caregivers were asked to sign an informed consent form, ensuring the confidentiality of the data (Dutch Trial Register, number NTR4248).

Ethical statement

Written informed consent was obtained from all legal representatives of participating residents. In a few cases the legal representative recommended asking the resident him/herself to also sign the informed consent form, which was done on the same form. One person with dementia refused to sign and was not included in the study. Moreover, before the start of each observation, observers introduced themselves to the residents sitting in the living-room, and asked them oral permission to be observed. Only residents whose legal guardians signed the consent forms were observed. The study was approved by the Medical Ethical Committee and the Scientific Committee of the EMGO Institute for Health and Care Research of the VU University Medical Centre in Amsterdam (2009/142).

Intervention

VCM seeks to foster a focused interaction and reciprocity and stimulation of joy and lightness in the contact between caregivers and residents (http://www.theaterveder.nl/nl/english downloaded at 16-08-2016). During daily caring tasks, theatrical stimuli are provided to the (sometimes depressed, agitated, anxious and/or apathetic) people with dementia inviting them to engage in social interaction. VCM follows fixed procedures in the daily contact moments between caregiver and resident: (a) greeting by one-on-one contact; (b) communication about the past (connection to long-term memory); (c) communication about the present time (connection to short-term memory), and (d) saying goodbye (Boersma et al., 2017b). By means of a multifaceted training program, caregivers were trained in applying VCM. Trainers

of Foundation Theatre Veder conducted the training and coaching program, and all caregivers of the ward participated. The training started with a team meeting, in which all caregivers of the ward (nurses, nursing assistants, therapists, hostesses and sometimes also a volunteer) and the team manager participated. Next, the communicative behaviour of the caregivers was observed using the Dementia Care Mapping method (Beavis et al., 2002). Based on these observations feedback was given to the caregivers. Subsequently, three training and two follow-up meetings of three hours each were offered. The training and follow-up program focused on knowledge improvement and skills training in practice, and reflection on the person-centred attitude. Three coaching-on-the-job sessions took place in the morning before training sessions two and three, and the first follow-up session. During these coaching-on-the-job sessions caregivers received feedback on how they applied VCM in practice. The intervention and implementation strategies are comprehensively described by Boersma et al. (2017b).

Characteristics	**Nursing home 1 Experimental**		**Nursing home 1 Control**		**Nursing home 2 Experimental**
	Ward 1a&b	Ward 2a&b	Ward 7	Ward 8	Ward 3
Number of residents	23+23	23+23	20	23	16
Staff-resident ratio during the day	1:4	1:4	1:4	1:4	1:5
Staff-resident ratio in the evening	1:6	1:6	1:6	1:6	1:8
Type of care-organization	Large closed wards				Large open wards
Caregivers familiar with VM as 'living-room theatre performance'	No	No	No	No	Yes

Table 2. Characteristics of the participating experimental and control wards
*This control ward was matched with the experimental ward (4) of nursing home.

An example of applying VCM in the living-room is:

"Every evening nurse M. applies lotion to Mr. H.'s legs because they are so dry.
She greets him and asks if he allows her to rub his legs.
She knows in his younger years he was a good ice skater.
When she starts applying the lotion to his legs, she asks him: Mr. H. how come you have such beautiful athletic legs, did you skate a lot?

Mr. H. confirms this and starts talking about skating, and then about how nice it was to skate across the ice with his wife.
When the nurse is ready applying the lotion, she asks him 'shall we skate together here?'
And there they go: he in the front, she behind him, through the living-room.
Together they imagine skating over the ice. When they are ready, she thanks him for the beautiful ride and says goodbye."
(M. Lem, personal communication, May 23, 2017)

Nursing home 2 Control		**Nursing home 3 Experimental**	**Nursing home 4 Experimental**		**Nursing home 4 Control**	
Ward 9	Ward* 10	Ward 4	Ward 5a&b	Ward 6a&b	Ward 11a&b	Ward 12a&b
16	16	6+6+6	6+6	6+6	6+6	6+6
1:5	1:5	1:4	1:4	1:4	1:4	1:4
1:8	1:8	1:6	1:6	1:6	1:6	1:6
		Small-scale open living-rooms	Small-scale closed living-rooms			
Yes	Yes	Yes, some	No	No	No	No

Measures and procedures

Descriptive information was obtained for caregivers (i.e. age, gender, nationality, education, function, working experience, working hours). For residents, descriptive information included age, gender, education, years living in nursing home, years of illness, type of dementia, cognitive function, use of psychopharmacological medication.

At T0 and T1, caregivers completed two questionnaires: Approaches to Dementia Questionnaire (ADQ) and subscale 'Working with a care plan' of the Emotion-oriented Skills in the Interaction with elderly people with Dementia (ESID) list (Van der Kooij et al., 2013).

Measures	Description	Validity and reliability
Hypothesis (a)		
Quality of Caregivers' Behaviour in dementia care (Kitwood, 1997; Van Weert et al., 2006)	A 25-item observation instrument based on the Dialectical Framework of Kitwood (1997). QCB describes positive and negative interactions (communicative behaviour of caregivers) influencing the well-being of residents. Positive interactions are summarized as 'Positive Person Work' (PPW), negative interactions as 'Malignant Social Psychology' (MSP). Score ranges from 'not at all' to 'maximally'.	Cronbach's alpha of PPW was 0.93 and for MSP it was 0.87. The ICC for the subscale PPW was 0.85 and 0.71 for MSP, indicating high reliability.
Approaches to Dementia Questionnaire (Lintern et al., 2000)	Measures the caregivers' attitude towards dementia, and consists of 19 items to be scored by caregivers on a five-point Likert scale, ranging from 'totally agree' to 'totally disagree'. ADQ includes two attitude dimensions. The hope dimension measures the optimistic/pessimistic beliefs of the caregiver with respect to the (future) possibilities of a person with dementia. The person-centred dimension reflects the caregiver's recognition of the person with dementia as a unique, conscious and valuable human being.	Cronbach's alpha of both the hope and person-centeredness dimension was 0.65.
Implementation score	Foundation Theatre Veder assessed the successfulness of the implementation of VCM of the experimental wards. The higher the score, the better VCM is implemented.	-
Observation list 'Veder Contact Method' (Tol et al., 2011)	This list determines whether caregivers apply elements and techniques of VCM. The list was adapted for present study by assessing the extent to which elements of VCM were applied in daily dementia care, and consists of 16 items with four answer possibilities ranging from 'not at all' to 'maximally'.	Cronbach's alpha was 0.90. The ICC was 0.73 (range 0.55 - 0.84), indicating high reliability.
Hypothesis (b):		
Care plan screening	The first author and the research assistants examined the content of the care plans of the participating residents, using a checklist to determine whether the personal preferences of the residents and information about their life history were described.	-

Working with a care plan (Van der Kooij et al., 2013)	A 12-item subscale of the 'Emotion-oriented Skills in the Interaction with Elderly People with Dementia-list' (ESID; Van der Kooij et al., 2013). Uses a five-point Likert scale, ranging from 'not applicable' to 'almost always applicable'. Concerns the topics: writing observations of residents in the care plan, converting these observations into objectives and using the care plan in collaboration with colleagues.	Cronbach's alpha was 0.85.
Hypothesis (c):		
QUALIDEM (Ettema et al., 2007)	Measures quality of life of people with mild to severe dementia. It is a 37-item observational instrument with four answer categories (never, rarely, sometimes, always), and consists of nine subscales: caring relationship, positive affect, negative affect, restless/ nervous behaviour, positive self, social relationships, social isolation, feeling at home and having something to do.	Cronbach's alpha of the subscales was between 0.39 and 0.93. Mean ICC for the subscales was 0.65. The inter-observer reliability of the subscales, 'care relation' (0.41) and 'feeling at home' (0.15), was insufficient; the reliability of the other seven ranges from 0.67 - 0.86.
INTERACT (Baker et al., 2001)	Measures behaviour and interactions of residents, a 34-item observational instrument on positive and negative behaviours that measures mood, speech, interaction with others, relating to environment, need for prompting and alertness/inactivity. The behaviours are assessed on a five-point Likert scale, ranging from 'not at all' to 'almost all the time'.	Mean inter-rater reliability (κ) for the items was 0.40 (range 0.23 - 0.85). Four items were excluded from the analysis because of low inter-rater reliability (κ<0.21).
Face (Whaley & Wong, 1987)	Observational instrument of the mood of residents, a three-point Likert scale (☺, 😐, ☹).	Mean inter-rater reliability was 0.58 (95% CI, 0.32 to 0.85 post hoc).

Table 3. Description and psychometric properties of caregiver and resident measures in present study

Reliability and validity of earlier studies are comprehensively described in Boersma et al. (2017b).

At the same time, the behaviour of caregivers was observed using the Quality of Caregivers' Behaviour in dementia care (QCB) (Van Weert et al., 2006) and the 'Veder Contact Method-list' (Tol et al., 2011). The behaviour of the residents was observed using the QUALIDEM (Ettema et al., 2007 a, b) and the INTERACT (Baker et al., 2001). Seven of the nine utilized measures have established evidence of reliability and validity (see Boersma et al., 2017b). Reliability and validity in the present study is described in Table 3. Nine independent observers who had followed a three-and-a-half-hour observer training carried out the observations. Although initially blind to the intervention, i.e. not informed about which ward was an experimental or a

control ward, five observers worked this out during observations on experimental wards that applied VCM well. Observations were conducted in the living-room, seven days a week, from 10:00 am until 1:00 pm (around coffee and lunch breaks) and from 3:00 pm until 6:00 pm (around tea and dinner time). Two observations were obtained per day (total six hours) for each of the participating residents, and one observation per day (total three hours) for each caregiver. Observation days were randomly selected, and for T0 and T1 the same procedure was used: observations were carried out on all days of the week and during the same periods; residents were observed several days when different caregivers were taking care of them.

a) Caregivers' communicative behaviour and attitude (Adoption & implementation success)
Quality of Caregivers' Behaviour in dementia care (Adoption)
Communication and behaviour of the caregivers were assessed with the Quality of Caregivers' Behaviour in dementia care (QCB), a 25-item observation instrument based on the Dialectical Framework developed by Kitwood (1997) and adapted by Van Weert et al. (2006). This adapted version of Van Weert et al. (2006) consists of two subscales and describes a variety of interactions (communicative behaviour of caregivers) that influence the well-being of residents either positively (Positive Person Work, PPW) or negatively (Malignant Social Psychology, MSP).

Approaches to Dementia Questionnaire (Adoption)
Caregivers rated their attitude towards dementia with the Approaches to Dementia Questionnaire (ADQ) (Lintern et al., 2000), indicating on a 5-point Likert scale the extent to which they agree with 19 statements regarding the two dimensions 'hope' and 'person-centeredness'.

Overall implementation score (Implementation success)
For each experimental ward, Foundation Theatre Veder rated the overall quality of implementation of VCM at T1 with one score between zero and ten. This score was based on Theatre Veder's overall assessment of several criteria, which were not scored separately: attitude of the caregivers during the training, the ability of the caregivers to integrate VCM into daily caring activities, and changed behavior of caregivers.

Veder Contact Method list (Implementation success)
Application of elements and techniques of VCM by caregivers was assessed during three hours of caregiver observation at T0 and three hours at T1 with the 'Veder Contact Method' observation list. This list was originally developed by Tol et al. (2011) for the Veder method as 'a living room performance' and adapted for VCM in 24-hour care. Examples of items on the list are: 'Does the caregiver present herself to the individual resident?', 'Does the caregiver make an effort to retrieve long-term memories from the resident?', 'Does the caregiver attune her communication (tone, tempo, rhythm) to the resident?', 'Does the caregiver use music or songs that the residents like?' and 'does the caregiver use poetry in the communication?"

b) Content of the care plan (Implementation)
The content of the resident care plans was assessed by means of a checklist determining whether the personal preferences of the residents and information about their life history were described with respect to music, social contacts, activities, personal habits.

Caregivers rated themselves on the 'Working with a care plan' subscale of the 'Emotion-oriented Skills in the Interaction with Elderly People with Dementia-list' (ESID; Van der Kooij et al., 2013).

c) People with dementia's behaviour, mood and quality of life (Effectiveness)
The quality of life of residents was assessed using the QUALIDEM (Ettema et al., 2007 a, b), a 37-item observational instrument including nine subscales which are described in Table 3. The QUALIDEM was validated comprehensively (Aspden et al., 2014; Bouman et al., 2011; Dichter et al., 2013; Ettema et al., 2007a and b) for use with people with dementia, and has been successfully used in nursing home research (Gräske et al., 2014; Ortiz et al., 2014; Van Dijk et al., 2012). Behaviour and interactions of residents were assessed using INTERACT, a 34-item observational instrument on behaviours measuring mood, speech, interaction with others, relating to environment, need for prompting and alertness/inactivity (Baker et al., 2001; Baker & Dowling, 1995). Because VCM is a new method we could not exactly predict the items on which an effect was expected, and we therefore chose to use all items. 'Overall mood' of residents was assessed with FACE, a three-point Likert scale (☺, 😐, ☹) (Whaley & Wong, 1987).

Analysis
Data was analysed with SPSS for Windows version 20. Baseline characteristics of the caregivers and residents were calculated using percentages, means and standard deviations or median and interquartile ranges, depending on the type and distribution of the data. Differences in baseline characteristics of the experimental and control groups were tested using the chi-squared test or Fisher's exact test for dichotomous or nominal variables and the independent samples t-test or Mann-Whitney U-test for interval or ordinal variables. The same statistical tests were used to perform a non-response analysis between caregivers from the experimental group and the control group who dropped out before posttest, and between the residents who agreed to participate and those who refused or did not respond at all. Finally, the caregivers and residents who dropped out during the study were compared with caregivers and residents who completed the study.
Inter-rater reliability (IRR) of the behaviour observation instruments used for the caregivers and residents were determined by having two observers conduct observations simultaneously: 44 caregivers (19%) and 56 residents (22%) were observed simultaneously. Mean intra-class coefficients (ICC) were calculated for the nine subscales of the QUALIDEM and the two subscales PPW and MSP of the QCB. An ICC < 0.40 was viewed as poor, between 0.40 and 0.59 as fair, between 0.60 and 0.74 as good, and higher than 0.75 as excellent (Cicchetti, 1994). Kappa's (κ) were calculated for the items (INTERACT, FACE and the observation list 'Veder

Contact Method'); values between 0.21 and 0.40 were considered fair, between 0.41 and 0.60 moderate, and values > 0.61 good (Altman, 1990). Inter-rater reliability is described in Table 3.

To examine whether changes in means on continuous outcome measures between T0 and T1 differed between the experimental and the control group, a multilevel analysis was carried out taking into account clustering of residents and caregivers within wards. First, only group (experimental or control) was included as a fixed effect in the model. Subsequently the degree of implementation as measured by Foundation Theatre Veder in the experimental group was added as a fixed effect. The cut-off point for a high or low implementation score was set at six points. A random effect for ward and for subjects nested within wards was included in the model. Analyses were corrected for significant differences at baseline between caregivers and residents in the experimental and the control group. Linear mixed models were used for continuous outcomes, and general estimating equations (GEEs) with logit link function for dichotomous and ordinal outcomes. In the linear mixed models, a variance component correlation structure was used and in the GEEs an exchangeable correlation structure was used to take into account the clustering within wards. Post hoc analyses were conducted to compare the changes in the two experimental groups (high and low implementation score) and the control group. The Bonferroni correction was used for multiple testing. Analyses were only performed when the variance of the change between T0 and T1 did not equal zero. A T-test was used to calculate the differences between both experimental groups regarding the application of VCM (as measured by the observation list 'Veder Contact Method') by caregivers at T1. Additionally, a Pearson's correlation between the difference scores (*d*) of the subscales of QCB and the Veder list was performed. All statistical tests were conducted two-sided with an alpha level of 0.05. A *p*-value <0.1 is reported as a tendency to significance. Cohen's *d* effect sizes were calculated for the continuous outcome measures.

Results

Response

Of the 212 eligible residents (122 in the experimental and 90 in the control group), 106 received the intervention (experimental group) and 86 received CAU (control group). At T1, 78 (63.9%) care plans and 76 (62.3%) behaviour and quality of life measurements of the residents in the experimental group were analysed, versus 61 (67.7%) care plans and 58 (64.4%) behaviour and quality of life measurements of the residents in the control group. For nineteen residents (ten from the experimental group and nine from the control group) one of four observations was missing, and for one resident in the experimental group two of four observations (one T0, one T1) were missing. Because these residents did not drop out during the study, we included them in the analyses. We determined 224 caregivers were eligible for inclusion (145 in the experimental and 79 in the control group). At T1 behaviour observations of 79 (54.4%) caregivers from the experimental group and 57 (72.2%) of the control group were analysed. Data of 75 (51.7%) caregivers in the experimental group and 36 (45.6%) in the control group were included in the analysis of attitude. A consort diagram for resident and caregiver recruitment is presented in Figure 1.

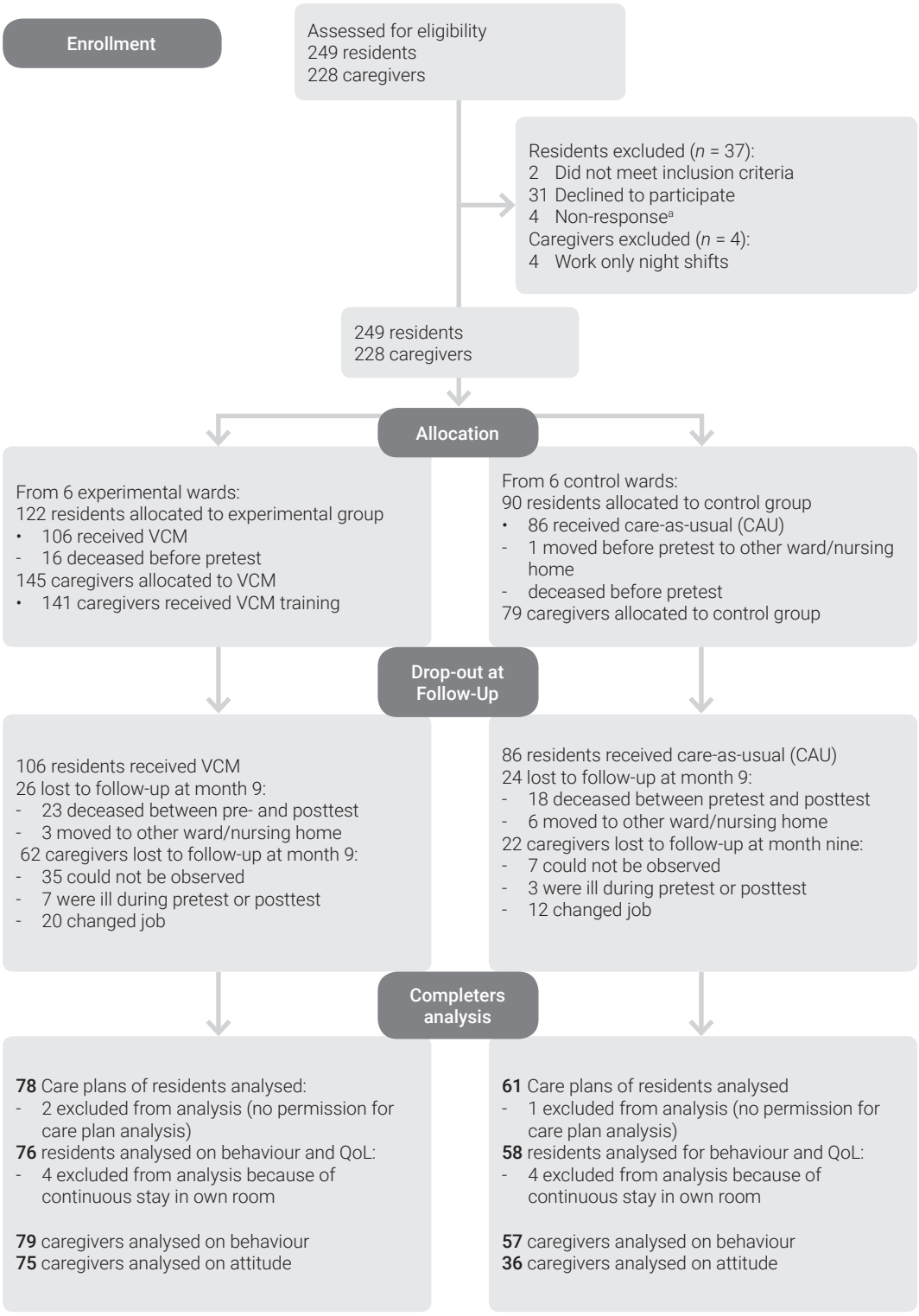

Figure 1. Consort diagram detailing numbers of residents & professional caregivers
[a] received no contact with legal guardian / [b] during observations busy in bedrooms of residents or busy in office with other colleagues, or were not present during observation period.

Caregiver characteristic	VCM (*n* = 79)		CAU (*n* = 57)			
	n total	value	*n* total	value	X^2 (*df*), *t* or *U*	*p* value
Female, *n* (%)	79	77 (97.5)	57	54 (94.7)	0.698 (1)	0.41
Age in years, mean (SD)	79	45.5 (12.7)	57	43.2(10.6)	-1.101 (134)	0.27
Nationality, *n* (%)	78		57		2.659 (3)	0.45
• Dutch		66 (84.6)		52 (91.2)		
• Surinamese/Antillean		6 (7.7)		4 (7.0)		
• Other Western		2 (2.6)		0 (0.0)		
• Other non-Western		4 (5.1)		1 (1.8)		
Nursing education level, *n* (%)	79		57		13.924 (2)	**0.001***
• No nursing education		15 (19.0)		1 (1.8)		
• Low nursing education		25 (31.6)		12 (21.1)		
• Middle/high nursing education		39 (49.4)		44 (77.2)		
Function, *n* (%)	79		56		9.298 (5)	0.098
• Nurse		32 (40.5)		32 (57.1)		
• Nursing assistant		20 (25.3)		11 (19.6)		
• Nurse & coordinator		5 (6.3)		7 (12.5)		
• Therapist		8 (10.1)		1 (1.8)		
• Nursing home hostess		13 (16.5)		5 (8.9)		
• Volunteer		1 (1.3)		0 (0.0)		
Working experience as caregiver, *n* (%)	79		55		4.940 (2)	0.085
• Short (< 1 year)		3 (3.8)		1 (1.8)		
• Medium (1 – 5 year)		27 (34.2)		10 (18.2)		
• Long (> 5 year)		49 (62.0)		44 (80.0)		
Working experience with people with dementia, *n* (%)	79		55		9.821 (2)	**0.007***
• Short (< 1 year)		5 (6.3)		0 (0.0)		
• Medium (1 – 5 year)		30 (38.0)		11 (20.0)		
• Long (> 5 year)		44 (55.7)		44 (80.0)		
Years working on the ward, *n* (%)	79		57		6.152 (2)	**0.046***
• Short (< 1 year)		8 (10.1)		0 (0.0)		
• Medium (1 – 5 year)		39 (49.4)		32 (56.1)		
• Long (> 5 year)		32 (40.5		25 (43.9)		
Head nurse, n (%)	78	2 (2.6)	57	0 (0.0)	1.484 (1)	0.22
Working hours a week, n (%)	79		57		7.132 (5)	0.21
• < 8 hours		2 (2.5)		0 (0.0)		
• 8 – 15 hours		9 (11.4)		3 (5.3)		
• 15 – 22 hours		12 (15.2)		17 (29.8)		
• 22 – 29 hours		27 (34.2)		20 (35.1)		
• 29 – 36 hours		26 (32.9)		14 (24.6)		
•> 36 hours		3 (3.8)		3 (5.3)		

Table 4a. Background characteristics of the participating caregivers of the experimental and control wards (*n* = 136) who completed pre- and posttest
*Significant on a *p* = 0.05 level

Caregiver characteristic	VCM (*n* = 79)		CAU (*n* = 62)			
	n total	value	*n* total	value	X^2 (*df*), *t* or *U*	*p* value
Female, *n* (%)	79	70 (87.3)	62	51 (82.3)	0.708 (1)	0.40
Age in years, mean (SD)	79	85.3 (7.5)	62	85.9 (7.8)	0.477 (139)	0.63
Education, *n* (%)	20		22		0.891 (3)	0.83
• Primary school		7 (35.0)		9 (40.9)		
• Low		3 (15.0)		4 (18.2)		
• Middle		5 (25.0)		6 (27.3)		
• High		5 (25.0		3 (13.6)		
Years in nursing home, median (range)	79	1.98 (.23-14.9)	62	1.72 (.24-13.8)	2606.5	0.52
Years of illness, median (range)	69	3.5 (0.0-13.7)	53	2.83 (0.67-17.7)	1911.5	0.67
Type of dementia, *n* (%)	77		61		2.385 (3)	0.50
• Alzheimer		38 (49.4)		1 (1.8)	26 (42.6)	
• Vascular dementia		14 (18.2)		10 (18.2)	15 (24.6)	
• Dementia not specified		23 (29.9)		44 (80.0)	16 (26.2)	
• Other		2 (2.6		44 (80.0)	4 (6.6)	
MMSE-score, mean (SD)	39	13.9 (8.9)	31	14.6 (7.3)	0.356 (68)	0.72
BCRS-score, median (range)	35	48 (24-56)	28	47 (25-56)	57	0.24
GDS-score, mean (SD)	73	5.6 (1.2)	59	5.6 (1.2)	-.011 (130)	0.99
Use of psychopharmaca, n (%)	79	25 (31.2)	61	25 (41.0)	1.307 (1)	0.25

Table 4b. Background characteristics of the participating residents of the experimental and control wards (*n* = 141) who completed pre- and posttest

Background characteristics of caregivers and residents

At baseline we found the following statistically significant differences: on the experimental wards caregivers were educated on a lower level (p = 0.001), had less experience working with people with dementia (p = 0.007), and had been working fewer years on the ward (p = 0.046). These variables were included as potential confounders in the analyses, the adjusted analyses are reported. No significant differences were found in resident characteristics between the groups (Table 4a & b).

Implementation of VCM

Implementation scores

Foundation Theatre Veder rated ward 2a & b with an implementation score of 4.5. Wards 1a & b and ward 3 received a score of 7.0, wards 4, 5a & b and 6a & b a score of 7.5. Following these implementation scores, the experimental group was divided in two subgroups: E1 with an implementation score of 4.5 (*n* = 20 residents) and E2 with an implementation score of 7.0 or 7.5 (*n* = 56 residents).

Application of VCM in daily practice

An overall significant difference in change between T0 and T1 was found between the three groups regarding the extent to which caregivers applied elements and techniques of VCM (p = 0.006). Post hoc analysis (appendix C) showed an improvement in E2 (high implementation score) compared to E1 (low implementation score) (p = 0.005; d = 0.37), but not compared to the control group (p = 0.14). The difference in change between T0 and T1 on application of VCM by caregivers between both experimental groups was also significant (p = 0.002).

Caregivers' communicative behaviours and attitude to dementia (Adoption)

Multilevel analyses showed a significant overall change between T0 and T1 on positive communicative behaviours (PPW: p = 0.003). A tendency to an overall significant change between T0 and T1 was found on negative communicative behaviours (MSP: p = 0.078) (see Figure 2). In the post hoc analyses and as shown in Figure 2, caregivers in E2 (high implementation score) showed a significantly greater positive change than E1 (low implementation score) on PPW at T1 (p = 0.004, d = 0.39). Between T0 and T1, mean PPW increased in E2 and decreased in E1. E2 showed a tendency to a significant positive change compared to the control group (p = 0.099, d = 0.20). Appendix C shows the post hoc analyses of PPW and MSP.

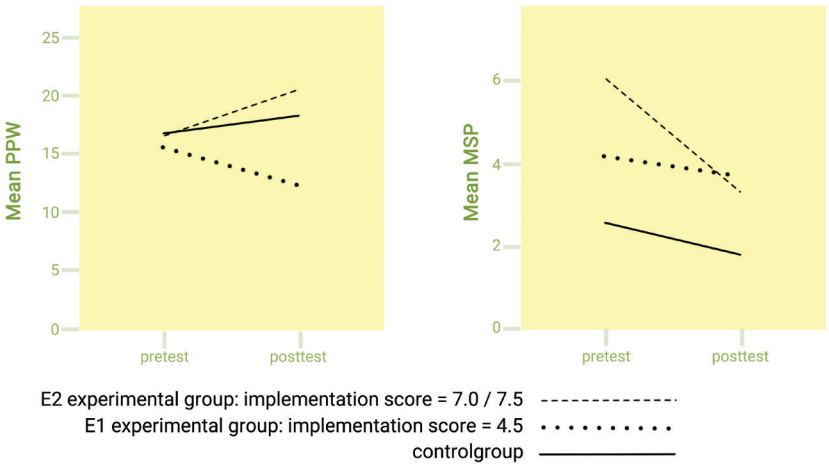

Figure 2. Subscales Positive Person Work (PPW) and Malignant Social Psychology (MSP) from Kitwood's dialectical framework (QCB)

There was no significant overall change of the attitude of the caregivers towards dementia (ADQ) between baseline and follow up (before and after implementation of VCM). No change was found on the total scale (p = 0.97), neither on the subscales 'hope' (p = 0.24) nor 'person-centeredness' (p = 0.65). The baseline scores of the total scale ADQ and both subscales (hope and person centeredness) were already rather high at T0 in all groups and have not changed much at T1 (see Table 5).

Experimental group	N	T0 Mean (SD)	T1 Mean (SD)
ADQ total (19-95)	75	*76.32* (5.63)	*77.70* (7.15)
ADQ subscale Hope (8-40)	75	*24.17 (4.05)*	*25.86 (4.12)*
ADQ subscale Person Cantered (11-55)	75	*43.61 (3.85)*	*43.41 (4.07)*
Control group			
ADQ total (19-95)	36	*78.22 (6.65)*	*78.97 (8.09)*
ADQ subscale Hope (8-40)	36	*25.97 (4.35)*	*26.42 (4.99)*
ADQ subscale Person Cantered (11-55)	36	*43.67 (3.41)*	*44.08 (4.18)*

Table 5. Mean scores and standard deviations of total and subscales of ADQ

Correlation between caregivers' communicative behaviour and application of VCM
A significant positive correlation (r = 0.722) was found between the subscales positive communicative behaviour (PPW) and the Veder list (p = 0.000); a negative correlation (r =-0.318) was found between the subscales negative communicative behaviour (MSP) and the Veder list (p = 0.005). This suggests that the changed behaviour of the caregivers could be a result of a different way of working.

Implementation of VCM in the care plan
No significant difference in change from T0 to T1 was found in the care plans on information about the life history of the residents between E2 (high implementation score) and the control group (p = 0.95). E1 (low implementation score) could not be included in the multilevel analysis of the care plan, because the variance of the change was zero between T0 and T1. Also, no significant difference in overall change between T0 and T1 was found in the care plan with respect to information about the personal preferences of residents (p = 0.24). Overall significant changes between T0 and T1 were found on three of the thirteen items of the subscale 'Working with a care plan' (ESID). Post hoc analysis (Appendix C) showed that the caregivers of E2 rated themselves significantly higher compared to the control group on the items 'Finding it easy to report positive topics for the care plan' (p = 0.010) and 'Discussing and presenting the care plan in the multidisciplinary consultation' (p = 0.034), but not compared to E1. The caregivers of E2 rated themselves significantly lower in comparison with E1 on item 'Reporting psychosocial problems' (p < 0.0001) and caregivers of E1 rated themselves significantly higher on this item in comparison with the control group (p = 0.032).

People with dementia's quality of life, behaviour and mood (Effectiveness)
Multilevel analyses showed significant overall changes between T0 and T1 on the QUALIDEM subscales 'positive affect' (p = 0.001) and 'social relations' (p = 0.003) (Figure 3). Post hoc analysis (Appendix D) of both subscales showed that the overall positive change of quality of life was caused by the significantly higher scores of E2 (high implementation wards)

compared to the control group ($p < 0.001$, $d = 0.37$ for 'positive affect' and $p = 0.002$, $d = 0.32$ for 'social relations').

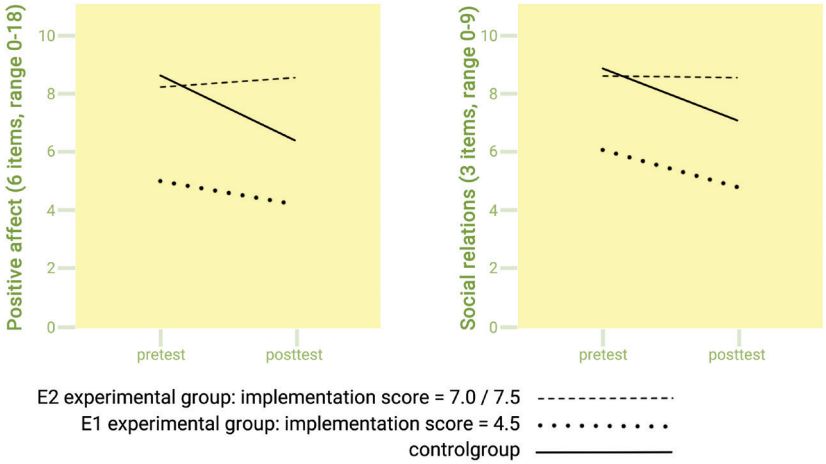

Figure 3. Qualidem subscales 'positive affect' and 'social relations'

An overall significant positive change between T1 and T0 was found between the three groups on eleven items of the INTERACT; spoke clearly ($p = 0.020$), spoke sensibly ($p = 0.034$), talked in normal length sentences ($p = 0.039$), appropriate eye contact ($p = 0.030$), related well ($p = 0.006$), responded to speaking ($p = 0.044$), tracked stimuli ($p = 0.028$), attentive to activity ($p = 0.009$), comments or questions about activities ($p = 0.027$), did things on own initiative ($p = 0.026$), negativism/complaining ($p = 0.015$). Post hoc analyses (Appendix D) showed that, with the exception of 'negativism/complaining', the significant overall changes of these items could be explained by the fact that at T1, the scores of E2 (high implementation wards) were significantly higher than the scores of E1 (low implementation ward). On three of the ten items E2 also scored higher than the control group. On the item 'negativism/complaining', E1 showed a significantly greater change (leading to less negativism/complaining behaviour) compared to the control group. The post hoc analyses on this item also showed a tendency to a significant change in E2 compared to the control group. The FACE (Appendix D) demonstrated no significant difference in change between T0 and T1 in mood of the residents between the three groups ($p = 0.86$).

Discussion

We investigated the Effectiveness, Adoption and Implementation of VCM, using data from caregivers and residents. Five of the six experimental wards received a sufficient score for the implementation of VCM from the trainers from Foundation Theatre Veder. On these five wards caregivers were better able to integrate VCM in their daily caring tasks and showed more positive communicative behaviours (e.g. recognition, play, distraction, making contact) in their interaction with residents, compared to the lower rated wards. The present study did not provide evidence that caregivers developed a more person-centred or hopeful attitude

towards people with dementia when applying VCM, nor did implementation of VCM result in more information about life history and personal preferences in the care plans of the residents. Successful implementation of VCM was reflected in the improvement of certain aspects of quality of life (i.e. positive affect, social relations) and social behaviour (e.g. speech, relation with the environment) of the residents. Implementation of VCM did not improve their mood.

Below we discuss our findings in relation to the three hypotheses of our study. First, the influence of implementing VCM on communicative behaviour and attitudes of the caregivers (i.e. adoption of the method by the caregivers). Caregivers from the five experimental wards with the higher implementation score showed more 'VCM fidelity', i.e. they applied the method more consistently during their daily caring tasks. This was associated with more positive communicative behaviours. Also, after implementation of VCM an overall tendency was observed that these caregivers showed less negative communicative behaviours. Future research with larger samples should determine whether this tendency could be empirically confirmed as an effect of VCM. The caregivers from the ward with a low implementation score showed a decline in positive communicative behaviour in contact with the residents. These findings confirm the findings of the process analysis that was conducted during the implementation study (Boersma et al., 2017a). Ward 2a & b had to deal with many organizational problems, which impeded VCM implementation and apparently negatively influenced the communicative behaviour of caregivers. Although not significant, the communicative behaviour of caregivers from the control wards improved regarding making more individual contact with the residents. This may have been caused by contamination effects and 'the Hawthorne effect' in one nursing home, i.e. caregivers may have modified their behaviour stimulated by the fact that they participated in the research and possibly heard about experiences with VCM from caregivers of the experimental ward within the same nursing home. Caregivers' attitude towards people with dementia did not change in any of the three groups. This seems in contradiction with the findings of the process analysis (Boersma et al., 2017a) in which the interviewed caregivers reported they learned a lot in the VCM training and coaching program. As found by Smythe et al. (2014) a possible ceiling effect (caregivers already scored high at pretest) might explain the absence of further improvements in knowledge and attitude.

Secondly, the influence of implementing VCM on the content of the care plan (implementation). The assumption was that adequate application of VCM requires caregivers to know the personal life history and preferences of the residents. In the process analysis (Boersma et al., 2017a) caregivers reported that applying VCM gave them valuable insights into the personal interests and preferences of the residents. In the present study, implementation of VCM did not result in any change in the amount of personal information about the residents' life history or preferences in their care plans. It is likely that caregivers do not report the obtained valuable insights in the care plan. This corresponds to the findings of Broderick & Coffey (2013), who reported that nurses in general poorly document personal information of the residents in the care plan. Kolanowski et al. (2015) found that caregivers prefer oral exchange of information about residents, which could be an explanation for not finding changes in the reported

information in the care plans. They described that caregivers consider oral communication more reliable and easier. Nevertheless, after VCM implementation, caregivers from the wards with a higher implementation score reported that they found it 'easier to report positive topics about the residents in the care plan'. VCM is a cheerful method which focuses on having fun with the residents and on opportunities of making contact (Boersma et al., 2017a). This possibly stimulates caregivers to report more positive topics of the residents, in contrast with the regular problem-oriented reports. Also, via the ESID-questionnaire caregivers reported that after VCM implementation they found it easier to 'discuss and present the care plan in the multidisciplinary consultation'. Van der Kooij et al. (2013) also reported considerable changes in how caregivers function during multidisciplinary consultation after the implementation of Emotion-Oriented Care. Surprising results from our process analysis (Boersma et al., 2017a) indicated that VCM helped caregivers to improve collaboration with other professionals. Caregivers experienced VCM as a method that enables discussion on the behaviour of residents in interaction with other professionals. After the training in VCM, they felt more actively involved in the multidisciplinary meetings and made suggestions on how, for example, difficult behaviour of the residents could be handled using VCM. We speculate that successfully trained caregivers changed their focus from the traditional problem-orientated care to a more positive view on how residents can be optimally supported based on the possibilities residents still have. This may explain why the caregivers of the high implementation group scored lower on 'reporting psychosocial problems', as compared to the other groups.

The third hypothesis to discuss is the influence of VCM on quality of life, behaviour and mood of the residents (effectiveness). It is impressive that the caregivers succeeded in improving several aspects of the residents' well-being (measured with QUALIDEM) and social functioning (measured with INTERACT) during the intervention period. These findings correspond with the review of Anderson et al. (2016), who showed that the way caregivers communicate with and care for residents influenced aspects of their quality of life. Similar to the study of Van Dijk et al. (2012) on the Veder method as 'living-room theatre performance', VCM did not influence the mood of the residents as measured with FACE. Originally, FACE was intended as a self-report scale for the residents. In both studies, the residents were not able to do this due to the GDS mean score of between 5.1 and 5.6, indicating a moderate to severe cognitive decline. Therefore, the observers interpreted the mood by the facial expression of the residents. In FACE, a choice has to be made for one out of three smileys (☺, 😐, ☹). Apart from the fact that we had to rely on observers, the 3-point FACE scale might not be sensitive enough to capture a change in mood. In the previously conducted process analysis, caregivers and their managers reported that applying VCM produced more fun among residents (Boersma et al., 2017a). This qualitative finding gave the impression that VCM positively influences the mood of the residents. We did not find this with FACE. In the present study the median score of FACE in the three groups was the neutral face expression (😐) at both measuring moments. Nevertheless, the positive outcomes on several other aspects of the residents' quality of life and social behaviour show that VCM is a valuable alternative to the Veder Method as 'living-room theatre performance' (Van Dijk et al., 2012).

Based on these findings, can we conclude that implementation of VCM was successful?
First, Foundation Theatre Veder rated the success of VCM implementation on five wards with a sufficient score (7.0 or 7.5) and one ward with an insufficient score (4.5). These scores are related to the percentage of caregivers that participated in the training and coaching program (the 'reach') as reported in Boersma et al. (2017a). Next, seven indicators were used to assess the successfulness of VCM implementation. Four of these (communicative behaviour of the caregivers, application of VCM by caregivers, quality of life and social behaviour of people with dementia) showed improvements after VCM implementation. Three indicators showed no changes (caregivers' attitude towards people with dementia, personal information in the residents' care plans, residents' mood). Based on these outcomes we may conclude that implementation of VCM has been partly successful but there is room for improvement.

Some strengths of the study are worth noting.
The present study demonstrates that the overall implementation score by Foundation Theatre Veder, a score between one and ten, is a simple and adequate method to rate implementation success. The distinction between the experimental groups with high and low implementation scores enabled us to show differences in outcomes between both groups. An interesting question for future studies is whether it is advisable to let the 'experts of the innovation' (i.e. those who systematically developed and/or professionally implemented the method) give an overall implementation score based on explicit criteria - such as used in our study: the attitude of the caregivers during the training, the ability of the caregivers to integrate the method into daily caring activities, and changed behaviour of caregivers - that can be taken into account in the analyses of the outcomes.
Given the nine months' duration of the study, a relatively high number of caregivers and residents completed the study, despite the 8.5% higher loss of residents than expected (Koopmans et al., 2003). The study was completed by 61% caregivers. Nursing home care is faced with a high caregiver turnover (Zimmerman et al., 2014). Due to the relatively high loss of residents and caregivers, and because the experimental group was split into two subgroups (high and low implementation score), the post hoc analysis of our study was somewhat underpowered. In contrast to the study protocol, six instead of eight experimental wards were enrolled, because the number of residents per ward in three nursing homes was higher than estimated in advance. Hence, this did not influence the power of the study. Different items of the INTERACT and few subscales of the QUALIDEM showed a trend towards significance in the post hoc analyses. With a larger sample size some of these items/subscales may have shown significant changes.
Finally, the observations were carried out by trained, independent observers; inter-observer reliability appeared to be satisfactory.

Some limitations of this study should be mentioned.
The wards were matched (not randomized) on relevant characteristics, e.g. number of residents living on the ward and residential form. No differences were found on baseline characteristics, so we can be fairly sure the groups were comparable.

From the perspective of successful implementation, the duration of the study (nine months between baseline and final measurement) was too short (Van der Kooij et al., 2013). From the perspective of effectiveness of VCM, the duration of the study was probably a little long. Some short-term effects may have been missed because of the high loss of caregivers and residents.

Following the implementation model, i.e. the RE-AIM framework (Gaglio et al., 2014), a third measurement should have been carried out six months after the last implementation contact. In that case, the study duration would have been 15 months. Because of high turnover of residents and caregivers in the nursing home care and the limited funding for the study, a third measurement was not feasible.

Behaviour of caregivers and people with dementia was observed in the living rooms only. In future research, it would be worthwhile to also observe the behaviour of caregivers and people with dementia during other daily care moments, for example in the bedroom or bathroom.

Conclusions

Our results show that VCM, a theatre-based communication method specifically adapted for 24-hour care, is well implementable. VCM implementation led to behavioural changes in the caregivers on five of the six wards, which indicated a positive impact on the behaviour and quality of life of the residents. The present study shows that it is possible to investigate the implementation success of a new person-centred care method in nursing homes. Differences in implementation successfulness were demonstrated by using various types of data collected from caregivers and residents, i.e. questionnaires, observations and analysis of care plans. It is important to examine the implementation of an intervention from various perspectives in order to be able to say something about the effectiveness of the implementation.

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Chapter 6

Does working with the Veder Contact Method influence the job satisfaction of caregivers? A nonrandomized controlled trial in nursing homes for people with dementia

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Abstract

Background

Person-centred care interventions can improve the quality of life and decrease behavioural problems of people with dementia. Although not convincingly proven, person-centred care interventions may benefit the caregivers as well. This study aims to gain insight into how working with the Veder Contact Method (VCM) - a new person-centred care method - influences the job satisfaction of caregivers.

Methods

Within a quasi-experimental study, the job satisfaction of caregivers of six experimental wards (n = 75) was compared with caregivers of six control wards (n = 36) that applied Care-As-Usual. The Leiden Quality of Work Questionnaire was filled in by caregivers in both conditions. Additionally, on the experimental wards, qualitative research, i.e. focus groups with 42 caregivers and interviews with eleven managers, was conducted to obtain a deeper understanding of the influence of applying VCM on caregivers' job satisfaction. The transcripts were analysed using deductive analysis.

Results

No quantitatively significant differences were found on the subscales of the LQWQ: work and time pressure, job satisfaction, autonomous decision making, social support from colleagues and social support from supervisors. From the qualitative research, some caregivers and managers reported that implementing VCM contributed to their job satisfaction and that applying VCM supported handling difficult behaviour and depressed mood of residents and contributed to team building.

Conclusions

No significant effects on job satisfaction were demonstrated. Qualitative findings indicate that VCM positively influences the daily work performances of nursing home caregivers. The relation between the experience of offering quality care and job satisfaction of caregivers needs further investigation.

Introduction

Dementia is a severe disease that affects cognition, performance of daily activities, mood and behaviour. About 80% of the people with dementia living in a nursing home show one or more neuropsychiatric symptoms, such as depression, agitation, anxiety, apathy and aggression (Zuidema et al., 2007). Nowadays, there is a trend towards deinstitutionalisation, the consequence of which is that people with dementia stay at home longer and usually make the transition to a nursing home in a later stage of the disease (Kolanowski et al., 2010). One effect of this development is that the care for people with dementia in nursing homes has become more demanding for professional caregivers in recent years (Lawrence et al., 2012). Research shows that the complex needs of residents places high demands on caregivers and may lead to significant burden (De Rooij et al., 2012).

Person-centred care, as developed by Tom Kitwood (1997), supports caregivers to cater to the individual needs, lifestyle and preferences of people with dementia. Research has shown that delivering person-centred care in nursing homes can positively influence the behaviour, mood and quality of life of people with dementia (Boersma et al., 2017 (in press); Finnema et al., 2000; Olazarán et al., 2010; Rokstad et al., 2013). Some studies indicate that person-centred care can also positively influence the job satisfaction of the caregivers (Barbosa et al., 2014; Van den Pol-Grevelink et al., 2012). Other research did not find significant influences on the job satisfaction of caregivers after implementation of new person-centred care methods (Finnema et al., 2005; Fritsch et al., 2009; Lauriks et al., 2008). Job satisfaction is defined by Spector (1997) as an attitude concerning the extent to which people like (satisfied) or dislike (unsatisfied) their job. Bakker et al. (2014) thoroughly investigated the concept of job satisfaction. They state that job-related outcomes are related to both burnout and work engagement. Burnout is presumably caused, among other things, by high job demands, whereas work engagement is presumably caused by the availability of job resources. Job demands in nursing home care are, for example: high caseload, complexity of tasks, and emotional demands, all leading to the experience of work pressure. Examples of job resources in nursing home care are social support by colleagues, supervision and coaching, and control over time. Individual characteristics (e.g. personality, personal resources) influence both burnout and work engagement (Bakker et al., 2014). This brief description of the concept of job satisfaction shows that it represents a variety of dimensions, perspectives and experiences.

In the Netherlands, a new person-centred care method, the Veder Contact Method (VCM), has recently been developed and implemented in daily dementia care by Foundation Theatre Veder (www.theaterveder.nl/nl/english). VCM was developed as a variant of the Veder method as 'a living-room theatre performance'. Both methods provide tools for caregivers to improve the communication with people with dementia, in order to achieve reciprocity in contact and promote feelings of wellbeing, identity and self-esteem, but VCM is integrated in 24-hour daily care. VCM is applied within the time available during daily care moments such as washing, eating, having tea/coffee, or going to bed (Boersma et al., 2017b), whereas the original Veder method is an interactive theatre performance, applied in the living room of

nursing homes. Van Dijk et al. (2012) showed that even two hours after a living-room theatre performance, the people with dementia were more alert, less confused and were having more fun. They also felt more at home and were more socially involved. In the 'Methods' section the intervention VCM is comprehensively described.

In previous qualitative research on the original Veder method as a 'living-room theatre performance', caregivers reported more job satisfaction (Van Dijk et al., 2011). Following this finding, we assumed that VCM might also positively influence the job satisfaction of caregivers working with people with dementia in nursing homes. As described above, job satisfaction includes several interrelated concepts. We therefore designed a study on job satisfaction using both quantitative and qualitative methods. Our aim was to determine whether caregivers' job satisfaction improved after implementing VCM, and which specific aspects of job satisfaction improved. The target question of the present study was: Does implementation of VCM on nursing home wards have a positive impact on the job satisfaction of professional caregivers who were trained in applying the method in daily care?

Methods

The present study is part of a larger study, i.e. 'The implementation of the Veder Contact Method (VCM) in daily nursing home care for people with dementia: an evaluation based on the RE-AIM framework' (Boersma et al., 2017b). The acronym RE-AIM represents Reach, Effectiveness, Adoption, Implementation and Maintenance.

Characteristics	**Nursing home 1 Experimental**		**Nursing home 1 Control**		**Nursing home 2 Experimental**
	Ward 1a&b	Ward 2a&b	Ward 7	Ward 8	Ward 3
Number of residents	23+23	23+23	20	23	16
Staff-resident ratio during the day	1:4	1:4	1:4	1:4	1:5
Staff-resident ratio in the evening	1:6	1:6	1:6	1:6	1:8
Type of care-organization	Large closed wards				Large open wards
Caregivers familiar with VM as 'living-room theatre performance'	No	No	No	No	Yes

Table 1. Characteristics of the participating experimental and control wards

*This control ward was matched with the experimental ward (4) of nursing home.

Design

This mixed-methods study combined quantitative and qualitative research methods (Johnson et al., 2007). Using a quasi-experimental design (a pretest-posttest control group design), we obtained insight into whether the implementation of VCM influenced job satisfaction of the caregivers. Additionally, qualitative research was conducted on the experimental wards to gain a more profound understanding of how working with VCM influences job satisfaction. After the implementation of VCM, focus groups were executed with caregivers, as well as individual interviews with managers from the experimental wards.

Settings and participants

Caregivers from six wards from four nursing homes spread across different regions of the Netherlands where VCM was implemented (experimental groups) were compared with caregivers from six control wards from the same four nursing homes providing Care as Usual (CAU). Matching took place on type of ward (open or closed), number of residents on the ward and applied care method (e.g. small-scale living or conventional residential living) (see Table 1). All caregivers from the participating wards who were involved in the 24-hour care for people with dementia and who worked on the ward with a permanent contract were included in the study. Two volunteers who took care of the people with dementia at least once a week also participated in the study. Temporary staff, students, and caregivers who only worked during night shifts and were unable to follow the training program, were excluded. Participating caregivers and volunteers were asked to sign an informed consent form, ensuring the confidentiality of the data (Dutch Trial Register, number NTR4248).

Nursing home 2 Control		**Nursing home 3 Experimental**	**Nursing home 4 Experimental**		**Nursing home 4 Control**	
Ward 9	Ward* 10	Ward 4	Ward 5a&b	Ward 6a&b	Ward 11a&b	Ward 12a&b
16	16	6+6+6	6+6	6+6	6+6	6+6
1:5	1:5	1:4	1:4	1:4	1:4	1:4
1:8	1:8	1:6	1:6	1:6	1:6	1:6
		Small-scale open living-rooms	Small-scale closed living-rooms			
Yes	Yes	Yes, some	No	No	No	No

Based on our expected moderate changes in the job satisfaction of the caregivers a power analysis showed 45 caregivers in the experimental and 45 caregivers in the control group were needed via an independent samples t-test ($1-\beta = 0.80$, $\alpha = 0.05$, $d = 0.6$) (Cohen, 1977). The sample size calculation was thereafter corrected for clustering of caregivers within wards using the following formula $N = 45*(1+(m-1)*ICC)$, where we intended to include eight wards per group and we assumed an average number of eight participating caregivers per ward (i.e. $m = 8$ in the formula above) and an intra-class correlation coefficient of 0.05 (Adams et al., 2004), yielding a total of 64 caregivers per group. Foundation Theatre Veder informed the caregivers of the experimental wards about the implementation of VCM. All participating caregivers were assured that the collected data would be treated confidentially.

The Veder Contact Method (VCM)

Both VCM and the Veder method as 'living-room theatre performance' combine core elements of treatments from existing and internationally used methods, such as reminiscence (Woods et al., 2005), validation (Feil, 1992), integrated emotion-oriented care (Finnema et al., 2005) and neuro-linguistic programming (Bandler & Grinder, 1975). This is combined with *theatrical, musical* and *poetic* communication. VCM seeks to improve the contact between the caregiver and resident by stimulating focused interaction and reciprocity. The theatrical stimuli are applied to the (often apathetic) people with dementia, sometimes literally to wake them up, and entice them to engage in interaction. VCM follows a fixed procedure: (a) greeting by one-on-one contact, (b) appealing to long-term memory, (c) communication about the present time (connection to short-term memory), and (d) saying goodbye. The VCM tools, procedural steps and key elements of VCM, as well as the communication strategies, are described in Table 2.

Procedural steps of VCM	Key elements of VCM	Examples of the VCM communication strategies
Greeting by one-on-one contact	Theatrical communication	presentation/acte de présence, timing and intonation/tone
Appealing to long-term memory	Poetic communication	rhythm, associating, intonation/sound
Communication about the present time	Musical communication	recognizable songs from the past, humming, deliberate use of music
Saying goodbye		

Table 2. The Veder Contact Method in daily care: relation between the procedural steps, key elements and communication strategies

More information about VCM can be found on (http://www.theaterveder.nl/nl/english. Retrieved at May 13, 2017). With a multifaceted nine-month training programme, Foundation Theatre Veder taught the caregivers in groups of up to 20 people to apply these different steps of VCM during daily care moments. The initial training programme consisted of five team meetings of three hours each focussing on knowledge transfer and skills training. In addition, three on-the-job coaching sessions of three hours each were organised, including behavioural observation and direct feedback. The training- and coaching program took place in the four participating nursing homes. The implementation of VCM took place between January 2013 and October 2014. In Boersma et al. (2017b) the intervention and its implementation are described in more detail.

Measuring instruments and procedures

Quantitative measurements in the experimental group and the control group were carried out at T0 (baseline, before the implementation of VCM) and T1 (nine months after the start of the implementation when the implementation phase was completed). At T0 and T1 the first author and researcher (PB) distributed the surveys to the caregivers in a closed envelope, personally or via their manager if the caregiver was not present. Caregivers were asked to return the survey as soon as possible. A pre-stamped envelope was provided to send the completed surveys back to the researcher. The surveys were numbered, but only the first researcher knew which number was connected to which caregiver to send out reminders if necessary. The qualitative methods, focus groups and interviews were carried out on the experimental wards at T1. Participating caregivers in the focus groups received a gift certificate.

Caregiver characteristics

At baseline (T0), information was gathered on caregivers' age, gender, nationality, education, current position, current job experience, and number of hours employed.

Quantitative data

Job satisfaction (Leiden Quality of Work Questionnaire)

As a quantitative measure, we used the validated self-report questionnaire Leiden Quality of Work Questionnaire (LQWQ) (Van der Doef & Maes, 1999). The LQWQ consists of 23 items, divided over five subscales. The scale has been applied in earlier research among caregivers in dementia care (Te Boekhorst et al., 2008). The subscale 'work and time pressure' (five items) measures demands, the subscale 'job satisfaction' (six items) measures job satisfaction in general, the subscale 'autonomous decision making' (four items) measures control regarding the work, the subscales 'social support from colleagues' (four items) and 'social support from supervisors' (four items) measure social support. For all subscales a higher score indicates better quality of work (i.e. the caregiver experiences less demands, more satisfaction, more control and more social support). The items are scored on a four-point Likert scale, ranging from 'totally disagree' to 'totally agree'. The reliability of the subscales in the study of Te Boekhorst et al. (2008) ranged from 0.72 to 0.90. The reliability

of the subscales in the present study were similar: work and time pressure which measures job demands (Cronbach's alpha 0.67), job satisfaction (Cronbach's alpha 0.86), autonomous decision making (Cronbach's alpha 0.70), social support from colleagues (Cronbach's alpha 0.87) and social support from supervisor (Cronbach's alpha 0.90).

Qualitative data

Additional qualitative data about the job satisfaction of the caregivers were collected via focus groups with caregivers and semi-structured interviews with managers of all six experimental wards. These qualitative data were collected and analysed as part of the process analysis of the implementation of VCM, and were described in Boersma et al. (2017a).

Focus groups

The focus groups were conducted in the nursing homes with trained caregivers to investigate how working with VCM influences their job satisfaction. Every focus group consisted of caregivers from the same team. Focus groups were made up of at least three and at most eight participants per ward (Kitzinger, 1995). The team managers of the wards asked the caregivers to participate in the focus groups, based on purposive sampling. Selection criteria were (1) participation in the training programme, (2) a variety of professions and expertise, and (3) being available (e.g. not having a day off or holiday). The first author and researcher (PB) acted as moderator during the focus group interviews; a total of four female research assistants (two bachelor students, two master students) acted as observers in the different focus groups (SeY, MD, LW, LB). Within the context of the earlier executed process analysis (Boersma et al., 2017a), a predetermined topic list was developed based on the five constructs of the RE-AIM framework. Job satisfaction was an aspect from this topic list. From this topic list, which included the aspect of job satisfaction, we derived an interview schedule. The central question in this schedule regarding job satisfaction was: 'How did implementation of VCM influence your job satisfaction?' Probing questions such as 'If VCM does influence your job satisfaction, can you tell me more about that?'; 'If VCM does not influence your job satisfaction, can you explain'?; or 'What do you mean exactly?' were asked in order to stimulate the participants to tell more about their experiences. The focus groups lasted 52-96 minutes (mean duration 73 minutes). All focus groups were audiotaped and subsequently transcribed verbatim.

Interviews

Eleven managers who were involved in the implementation of VCM were approached by e-mail or phone to participate in the study. The interviews with the managers were conducted face-to-face by the first author and researcher (PB). The predetermined topic list used for the focus groups, was also used for the interviews. The central question for the managers was: 'How did implementation of VCM influence the job satisfaction of the caregivers of your ward and in what way?' The interviews took place in the nursing home of the interviewee and lasted 37-98 minutes (mean duration 60 minutes). All interviews were audiotaped and subsequently transcribed verbatim.

Analysis

Data management

If possible, caregivers who handed in an incomplete LQWQ questionnaire were immediately asked to complete the questionnaire. To determine whether the data was missing at random or not, we compared baseline characteristics of completers and non-completers. Significant differences on baseline characteristics between cases with a complete LQWQ and cases with one or more missing values on the LQWQ were only found for function (the group of caregivers with missing values had fewer nurses, more volunteers and team managers). We therefore concluded that there were no structural missing data, and assumed that our missing data were missing at random (MAR) (Rubin, 1976). In the experimental group missing values on each of the 23 items ranged from 0 (0.0%) to 3 (4.0%) at T0, and from 0 (0.0%) to 7 (9.3%) at T1; in the control group from 0 (0.0%) to 3 (8.3%) at T0, and from 0 (0.0%) to 3 (8.3%) at T1. Working with only complete-case analysis (CCA), which is actually the best method for dealing with data missing at random, would reduce the power (Eekhout et al., 2012). Following Eekhout et al. (2014) we therefore decided to use multiple imputation. Missing item values were imputed using multiple imputation by creating five imputation datasets (Eekhout et al., 2014), which is advised as the minimum by Van Buuren (2012). The variables age, gender, nursing education level, working experience as caregiver, working experience with people with dementia, experimental or control group, moment of measurement, working hours according to contract, and type of contract served as independent variables. These variables were chosen because they could be predictable for the item scores.

Quantitative data analysis

Data were analysed with SPSS for Windows version 22 (IBM Corp., Armonk, NY, USA). Baseline characteristics of the caregivers were calculated using percentages, means and standard deviations or median and interquartile ranges, depending on the distribution of the data. Differences in baseline characteristics of the experimental and control groups were tested using chi-squared tests or Fisher's exact tests for dichotomous or nominal variables, and independent samples t-tests or Mann-Whitney U-tests for interval or ordinal variables. The same statistical tests were used to perform a non-response analysis of caregivers from the experimental group and the control group who dropped out before the posttests, and finally, the caregivers who dropped out during the study were compared with caregivers who completed the study. To examine differences in changes in job satisfaction between caregivers of the experimental group and the control group, a non-parametric Mann-Whitney U-test was performed on the difference-score (*d*-score) between T1 and T0 in the imputation dataset. The mean p-value of the five imputation sets is reported. Baseline characteristics that differed between the groups were tested for potential confounding influence via a one-way ANOVA on the d-score. Subscales of the LQWQ that were related to potential confounders were retested via linear regression analysis on the d-scores. All statistical tests were conducted two-sided with an alpha level of 0.05.

Qualitative data analysis

The verbatim transcripts of the focus groups and interviews were analysed using a deductive method of data analysis. The data was gathered within the context of the process analysis (Boersma et al., 2017a) and was coded based on a predetermined analysis scheme derived from the five constructs of the RE-AIM framework (Reach, Effectiveness, Adoption, Implementation and Maintenance) (Glasgow et al., 1999). 'Job satisfaction' was a category within the construct 'adoption', which is defined as the willingness of caregivers to change their behaviour as a result of the implemented intervention. The totality of codes and text fragments were entered in the qualitative software program NVivo (qualitative data analysis software; QSR International Pty Ltd. Version 10, 2012). To answer the research question from the present study, all data under 'job satisfaction' in the 'adoption' construct were selected and subsequently coded by two independent researchers (PB and JvW) to ensure reliability of coding. The outcomes showed few differences between the two researchers. A within-cases analysis was carried out: text fragments from each ward were organised per theme using the predetermined analysis scheme (Braun & Clarke, 2006). The results were discussed in the research group (PB, JvW, RMD, BvM) to achieve consensus on the main outcomes of the analyses. In the 'Results' section, quotations that reflect the responses given by the interviewees are presented to illustrate the findings. The quotations are coded based on the respondents' number (Resp) and function (Caregiver versus Manager).

Ethical issues

This study was approved by the Medical Ethical Committee and the Scientific Committee of the EMGO Institute for Health and Care Research of the VU University medical center in Amsterdam (number 2009/142). Prior to participation, the caregivers and managers from the twelve wards, including the caregivers participating in the focus groups, gave written informed consent after being informed about the study orally and in print. In addition, prior to the focus groups and interviews, all caregivers and managers gave oral informed consent for this part of the study.

Results

Response

A consort diagram for the recruitment of the caregivers is shown in Figure 1. Two hundred and twenty-eight caregivers were eligible and included in the study. Of the 148 included caregivers in the experimental group, 118 filled (80%) in the survey at pretest. Seventy-five of them completed the posttest (51%). In the control group 80 caregivers were included; 56 (70%) caregivers filled in the survey at pretest, and 36 of them completed the study (45%).

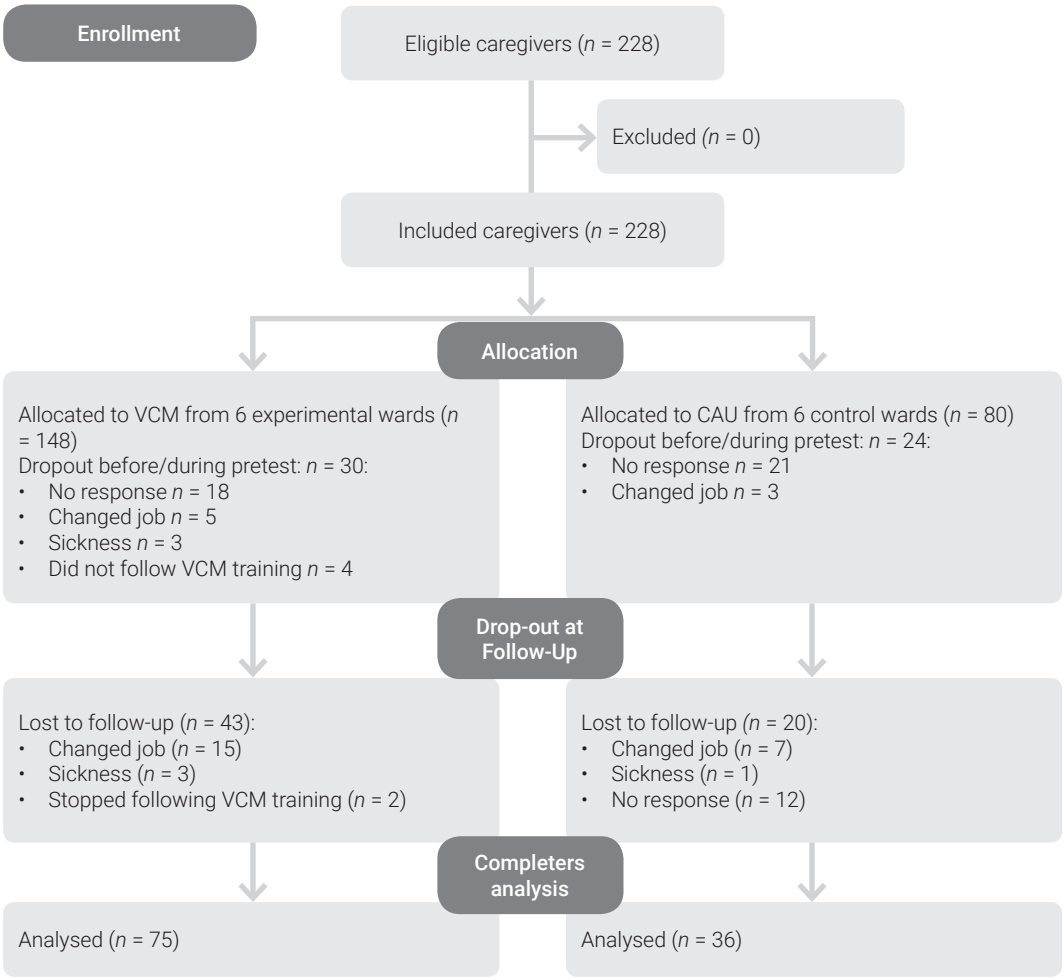

Figure 1. Flow chart caregivers

Background characteristics

Significant differences were found between caregivers from the experimental group and the control group who completed the study on nursing educational level ($p = 0.008$) and function ($p = 0.030$). Caregivers on the control wards were more highly educated and differed in function: more qualified nurses and fewer nursing assistants, more coordinators, fewer therapists and fewer hostesses (see Table 3). A relation was found at the pretest between the educational level and scores on the subscales 'autonomous decision making' ($p = 0.004$) and 'social support from colleagues' ($p = 0.031$), making educational level a potential confounder in the effect study. It was therefore included as a covariate in the analyses. Further analyses showed significant differences in function ($p = 0.019$) between caregivers who completed the study and caregivers who dropped out. The latter group contained significantly more nursing assistants, fewer nurses who combined their function with a function as coordinator and fewer head nurses. Finally, caregivers from the control group who dropped out had significantly more working experience with people with dementia ($p = 0.011$) and worked on the ward longer ($p = 0.021$) in comparison with caregivers from the experimental wards who dropped out.

Caregiver characteristic	VCM (*n* = 79)		CAU (*n* = 57)			
	n total	value	*n* total	value	X^2 (*df*), *t* or *U*	*p* value
Female, *n* (%)	75	72 (96.0)	36	33 (91.7)	0.89 (1)	0.35
Age in years, mean (SD)	75	46.2 (11.6)	36	41.7 (11.8)	-1.94 (109)	0.055
Nationality, *n* (%)	74		36			
• Dutch		65 (87.8)		31 (86.1)	2.55 (3)	0.47
• Surinamese/Antillean		4 (5.4)		4 (11.1)		
• Other Western		2 (2.7)		1 (2.8)		
• Other non-Western		3 (4.1)		0 (0.0)		
Nursing education level, *n* (%)	75		35		9.72 (2)	**0.008***
• No nursing education		15 (20.0)		0 (0.0)		
• Low nursing education		17 (22.7)		6 (17.1)		
• Middle/high nursing education		43 (57.3)		29 (82.9)		
Function, *n* (%)	74		36		13.95 (6)	**0.030***
• Nurse		31 (41.9)		24 (66.7)		
• Nursing assistant		17 (23.0)		4 (11.1)		
• Nurse & coordinator		4 (5.4)		5 (13.9)		
• Therapist		8 (10.8)		0 (0.0)		
• Nursing home hostess		10 (13.5)		1 (2.8)		
• Volunteer		3 (4.1)		1 (2.8)		
• Headnurse		1 (1.4)		1 (2.8)		
Working experience as caregiver, *n* (%)	75		36		1.62 (2)	0.45
• Short (< 1 year)		2 (2.7)		2 (5.6)		
• Medium (1 – 5 year)		17 (22.7)		5 (13.9)		
• Long (> 5 year)		56 (74.7)		29 (80.6)		
Working experience with people with dementia, *n* (%)	75		36		2.81 (2)	0.25
• Short (< 1 year)		5 (6.7)		0 (0.0)		
• Medium (1 – 5 year)		23 (30.7)		10 (27.8)		
• Long (> 5 year)		46 (62.7		26 (72.2)		
Years working on the ward, *n* (%)	75		36		2.59 (2)	0.27
• Short (< 1 year)		8 (10.7)		1 (2.8)		
• Medium (1 – 5 year)		39 (52.0)		23 (63.9)		
• Long (> 5 year)		28 (37.3)		12 (33.3)		
Head nurse, n (%)	75	6 (8.0)	36	3 (8.3)	0.004 (1)	0.95
Working hours a week, n (%)	75		36		2.39 (5)	0.79
• < 8 hours		2 (2.7)		0 (0.0)		
• 8 – 15 hours		10 (13.3)		3 (8.3)		
• 15 – 22 hours		17 (22.7)		9 (25.0)		
• 22 – 29 hours		25 (33.3)		12 (33.3)		
• 29 – 36 hours		18 (24.0)		9 (25.0)		
•> 36 hours		3 (4.0)		3 (8.3)		

Table 3. Baseline characteristics of caregivers who completed the study
*Significant on a $p = 0.05$ level

Quantitative outcomes

As Table 4 shows, median scores on the subscales were approximately the same in the experimental group and in the control group at both times. Also, the interquartile range was not very large, indicating a low variability.

Experimental group	**T0**			**T1**		
	N		Median	N		Median
Subscale LQWQ	Valid	Missing	(IQR)	Valid	Missing	(IQR)
Work and time pressure (range 4-20)	75	0	13 (11-25)	75	0	13 (12-15)
Job satisfaction (range 4-24)	74	1	19 (18-22)	75	0	19 (18-21)
Autonomous decision making (range 4-16)	75	0	12 (11-12)	75	0	12 (11-12)
Social support colleagues (range 4-16)	75	0	12 (12-15)	75	0	12 (12-13)
Social support supervisor (range 4-16)	75	0	12 (12-14)	73	2	12 (12-13)
Control group	**T0**			**T1**		
	N		Median	N		Median
Subscale LQWQ	Valid	Missing	(IQR)	Valid	Missing	(IQR)
Work and time pressure (range 4-20)	35	1	13 (11-14)	36	0	13 (11-14)
Job satisfaction (range 4-24)	36	0	18 (15-19)	36	0	18 (15-18)
Autonomous decision making (range 4-16)	36	0	12 (11-12)	35	1	12 (11-13)
Social support colleagues (range 4-16)	36	0	13 (12-13)	36	0	12 (12-12)
Social support supervisor (range 4-16)	36	0	12 (11-12)	35	1	12 (11-12)

Table 4. Median and interquartile range (IQR; 25th-75th percentile) of subscales LQWQ (original dataset)

Results of the non-parametric Mann-Whitney U-tests are summarized in Table 5. No significant changes between T0 and T1 were found on the five subscales of the LQWQ between the experimental and the control group. After correcting for the baseline difference in 'educational level of the caregivers', the changes for the subscales 'autonomous decision making' and 'social support from colleagues' remained insignificant (p = 0.88 and p = 0.99, respectively).

Subscale LQWQ		N	Median d-score (IQR)*	*p*-value**
Work and time	control	35	0.0 (-1.0 - 1.0)	
pressure	experimental	75	0.0 (-1.0 - 1.0)	0.81
Job satisfaction	control	36	0.0 (-2.0 - 1.0)	
	experimental	75	0.0 (-2.25 – 1.0)	0.73
Autonomous	control	35	0.0 (-1.0 – 1.0)	
decision making	experimental	75	0.0 (-1.0 – 1.0)	0.83
Social support	control	36	0.0 (-1.0 – 0.75)	
colleagues	experimental	75	0.0 (-2.0 – 0.0)	0.49
Social support	control	36	0.0 (-1.0 – 1.0)	
supervisor	experimental	75	0.0 (-1.0 – 1.0)	0.93

Table 5. Median d-score and p-values subscales LQWQ (d between T1 and T0)
* median *d*-score of the original dataset
** mean *p*-value of the five imputation sets without correction for educational level (the *p*-values remained not significant after correction)

Characteristic	FG1	FG2	FG3
Number of participants	4	3	4
Age, mean (SD)	43 (9.22)	47 (10.40)	46 (7.86)
Female, *n* (%)	4 (100)	2 (66.7)	4 (100)
Function, *n* (%)			
Nurse	2	1	
Nursing assistant	1		2
Nurse and coordinator		1	2
Therapist			
Therapist and nurse			
Nursing home hostess	1	1	
Volunteer			
Ethnicity			
The Netherlands,*n* (%)	1	2	1
Surinam/Antilles, *n* (%)	2	0	2
Other Western, *n* (%)		1	
Other non-Western, *n* (%)	1		1

Qualitative outcomes

Forty-two caregivers participated in the focus groups. Their average age was 47 years, 40 of them were female and 64% worked in psychogeriatric nursing home care more than five years. Table 6 describes all the characteristics of the caregivers from the focus groups.

At first sight, the qualitative data of the focus groups seemed to support the outcomes of the quantitative data of the LQWQ. A proportion of the caregivers reported that implementation of VCM did not influence their job satisfaction. When talking more about the influence of implementing VCM on their daily caring tasks, some of the caregivers reported several aspects that could be interpreted as indicators of a more positive job satisfaction. In contrast to the caregivers, most interviewed managers immediately mentioned that VCM had a positive influence on the job satisfaction of the caregivers. They reported that with VCM, caregivers could handle difficult behaviour of the residents more easily and they also noticed more fun in the interaction between caregivers and residents. Managers concluded that these changes had influenced the job satisfaction of the caregivers. The different aspects reported by caregivers and managers are summarized and clarified in the following three themes.

FG4	FG5	FG6	FG7	FG8	Total value
5	4	7	7	8	42
50 (6.06)	47 (7.46)	48 (13.29)	52 (9.61)	44 (12.65)	47 (10.02)
5 (100)	4 (100)	7 (100)	6 (85.7)	8 (100)	40 (94.2)
1	2	1	3	5	15 (35.7)
2		1	2	1	9 (21.4)
	1		1	1	6 (14.3)
		3	1	1	5 (11.9)
		1			1 (2.4)
2	1				5 (11.9)
		1			1 (2.4)
0	2	7	7	7	27 (64.3)
4	1				9 (21.4)
	1			1	3 (7.1)
1					3 (7.1)

Characteristic	FG1	FG2	FG3
Education			
No nursing education, *n* (%)	1	1	0
Low nursing education, *n* (%)	1	0	2
Middle-high nursing/	2	2	2
Occupational education, *n* (%)			
Work in psychogeriatric care			
Short (<1 year), *n* (%)			
Middle (1–5 year), *n* (%)	3		
Long (>5 year), *n* (%)	1	3	4

Table 6. Characteristics of the participants of the eight focus groups (*n* = 42)

FG1 = Focus group1, FG2 = Focus group2 etc.

1. Facilitation of the care

Some caregivers reported a positive influence on their care skills when applying VCM. They felt VCM supported them in handling difficult behaviour of residents. A nurse and coordinator (Resp 48) explained that taking time for one-to-one contact helped her to handle complex behaviour of residents:

Resp: "For me … uh … I think … you recognise the compliments residents give without using words. You are accomplishing something. You see the results of your work … and you think: 'Okay, I have a plan in my mind and I will write it down later, but of course there is more to it'. And then suddenly, you get these wonderful surprises you didn't expect, like…"

Int: "No."

Resp: "Hey, this is working really well."

Int: "Yes. Or see emotion or gratitude."

Resp: "Yes, or… or that there is physical improvement. Or somebody … who cannot improve physically is still content in his situation."

Int: "Yes. Nice."

Resp: "And… yes. Then I think: Yes … of course that's what we all want."

Int: "Yes."

Resp: "And that to me ... that makes me grow."

Int: "Yes."

Resp: "Which make it easier to provide care, you know… it seems to me, when I look around me… Like this morning, a colleague and I talked about this. I said: 'Gosh, that lady…' One of our residents is really deteriorating physically…. Which makes our work a lot more... "

Int: "Yes. "

Resp: "… Indeed, and that … this lady has a lot of pain and you have to deal with this as best

FG4	FG5	FG6	FG7	FG8	Total value
1	1	2	0	0	6 (14.3)
3	0	2	1	0	9 (21.4)
1	3	3	6	8	27 (64.3)
		2			2 (4.8)
2	2	2	1	3	13 (31.0)
3	2	3	6	5	27 (64.3)

you can. So it really becomes a matter of, you know, slow down… Spend all your time on her, and not think about 'but I still have five more residents to go'. You know, you have to let that go. And it feels so good if you can do that. Because that is what makes the work enjoyable. I said to my colleague: 'I really like it so much, taking care of that resident."

Int: "Yes."

Resp: "Yes, you have… you have the time…"

Int: "Yes."

Resp: "… So, you should also take the time… And if you need help, you can ring a colleague."

Int: "Yes."

Resp: "That's just great. This can make me so happy. But you do have to let go of the rest."

On the other hand, caregivers reported that VCM did not influence their job satisfaction, particularly when it did not help them to deal with difficult behaviour of residents, i.e. when residents did not respond positively.

2. Cheering up residents

Caregivers and managers reported that VCM helps to cheer up residents, and that working with happy residents is nicer and it is easier to sustain. Two caregivers explained:

"With VCM I can get a resident in a different mood, which is rewarding."
(Resp 32, nursing assistant)

"I think VCM does influence my work, if the residents are happier, then the work is just more fun and better, and I can keep going longer." (Resp 21, nurse)

3. Team building

Caregivers and managers reported the influence of attending the training together as a team. They noticed that this supported team building, which also may contribute to caregivers' job satisfaction. Two caregivers articulated this as follows:

"We now work together as a team much better, and yes, I think if colleagues get along with each other, collaborate well, this has a positive effect on the residents, and then you enjoy your work more." (Resp 14, nursing assistant)

"As a team we came together more. And that certainly affects the job satisfaction." (Resp 46, nurse and coordinator)

A manager explained this in another way:

"VCM implementation is actually no education, no training, it is the team ... the team together ... the caregivers have experienced the implementation of VCM as added value." (Resp 47)

In summary, some caregivers experienced positive influences of using VCM on different aspects of their job, more specifically when they gained new care skills by applying VCM and when they noticed that residents benefitted from VCM, e.g. when it helped them to cheer up the residents. Managers mentioned comparable positive influences. Caregivers as well as managers reported that attending the training together as a team had contributed to the team building.

Discussion

This study assessed the influence of using VCM in the communication with people with dementia on the job satisfaction of nursing home caregivers. The quantitative self-report survey showed no significant difference in caregiver's job satisfaction after implementation of VCM. The qualitative results from the focus groups and interviews suggested that implementation of VCM influences some aspects of the daily work of caregivers. Caregivers who experienced benefits from applying VCM mentioned that it helped them to deal with residents who show difficult behaviour or depressed mood. Both caregivers and managers reported that the implementation trajectory of VCM had contributed to the team building, which for some had increased the pleasure they find in their work. Below we will discuss the findings in relation to the Veder method as 'living-room theatre performance', in relation to our previously executed process analysis (Boersma et al., 2017a) and in relation to other studies.

The qualitative findings of the present study are in line with the qualitative findings of Van Dijk et al. (2011). In their study the interviewed caregivers reported that execution of the Veder method as 'living-room theatre performance' contributed to their job satisfaction. Playing

a living-room theatre performance delighted the caregivers as it brought about positive reactions in the residents, which led to a closer contact with the residents. Comparable with the experiences of caregivers who implemented VCM, the caregivers who executed a 'living-room theatre performance' experienced improved (inter)personal relations with colleagues. Although not statistically proven on a group level, the qualitative findings suggest that both the Veder method as a 'living-room theatre performance' and VCM contain elements that can positively influence the job satisfaction of nursing home caregivers.

The themes 'facilitating the care' and 'cheering up residents' extracted from the qualitative data are related to the subscale 'work and time pressure'. In the process analysis of Boersma et al. (2017a) caregivers and managers reported that applying VCM was easy and required no extra time. Caregivers managed to integrate the method in their communication with the residents during the execution of daily caring tasks. Thus VCM may have alleviated the job demands of some of the interviewed nursing home caregivers, resulting in a more positive work experience.

The third theme extracted from the present study, i.e. 'team building', is related mainly to the subscale 'social support from colleagues' and was also mentioned in the process analysis (Boersma et al., 2017a). During the training, caregivers shared work-related and personal experiences with each other, which resulted in mutual trust and subsequently to better collaboration. In the same process analysis caregivers reported that VCM provided a method which supported them to discuss difficult behaviour of residents with colleagues. In this respect one could assume that VCM increased caregivers' skills, and consequently also autonomy in the collaboration with colleagues of other disciplines. The influence of VCM in relation to social support from supervisors was not mentioned either in the process analysis (Boersma et al., 2017a) or in the present study.

Although some caregivers and managers reported that VCM influenced the job satisfaction positively, we did not find this on the subscale job satisfaction. Looking at the data in more detail, we see that caregivers already scored high on this subscale at T0 (i.e. the median score in the experimental group at T0 was 19 – range 4 to 24; in the control group this was 18), which leaves little room for improvement. Possibly the caregivers in the nursing homes were already highly motivated and satisfied about their job. Brodaty et al. (2003) described in their study, in which 253 nursing home caregivers were included, that 91% were content with their job. They also found that troublesome residential behaviour was not the most important factor on nursing staff burden. Other factors, such as the ability to accept residents' behaviour, leaderships styles, age of the caregiver, working experience, opportunities to discuss the psychological stress about their work were more important in experiencing strain.

Although in the focus groups and the interviews both caregivers and managers reported influences of VCM related to aspects of job satisfaction as measured with the LQWQ, i.e. job

satisfaction in general, work and time pressure, social support from colleagues and indirectly also autonomous decision making, no statistically significant changes on the LQWQ could be demonstrated on a group level. Although it is possible VCM does not affect job satisfaction, another possibility is that the LQWQ is simply not sufficiently sensitive to assess the type of changes in job satisfaction associated with applying person-centred care. In the literature, we found two reviews focusing on the relation between person-centred care and job satisfaction in nursing homes (Barbosa et al., 2014; Van den Pol-Grevelink et al., 2012). Three studies in the review of Van den Pol-Grevelink et al. (2012) used subscales of the LQWQ (Berkhout et al., 2004; Boumans et al., 2008; Te Boekhorst et al., 2008). Other studies, in both reviews, used other self-report instruments for measuring job satisfaction: The Maastricht Work Satisfaction Scale for Healthcare and indicators adapted from Montgomery (1993). In the review of Barbosa et al. (2014), stress (as an outcome of demands) was measured with the General Health Questionnaire and the Hassles subscale of the Nurses Hassles and Uplifts scale. Based on these reviews two aspects are worth mentioning. First, the used scales cover different concepts as indicators of job satisfaction. Secondly, both reviews reported mixed results on (sub) scales of these instruments, suggesting that person-centred care methods do not influence all aspects of the job satisfaction of caregivers working with people with dementia in nursing homes. None of the included studies in psychogeriatric care found significant differences on the subscales autonomous decision making and social support from the supervisor with the LQWQ. However, Te Boekhorst et al. (2008) and Berkhout et al. (2004) found significant differences for the subscales work and time pressure (job demands) and social support from colleagues. Te Boekhorst et al. (2008) also found significant differences for the subscales autonomous decision making and job satisfaction. Boumans et al. (2008) found no significant difference for any of the subscales of the LQWQ used in psychogeriatric care. Although the interventions in the three mentioned studies were all classified as person-centred care, one might question whether they are comparable. The intervention involved in Te Boekhorst et al. (2008) concerned care in small-scale living arrangements, in Berkhout et al. (2004) resident-oriented care and in Boumans et al. (2008) demand-oriented care. We believe the intervention VCM in the present study is most comparable with resident-oriented and demand-oriented care. The studies using the LQWQ and the studies in both reviews using other instruments for measuring job satisfaction and stress also reported mixed results. Summarizing, with these instruments it appears difficult to find convincing evidence of person centred care influencing the job satisfaction of caregivers.

Recently two other studies in dementia care used the LQWQ to measure job satisfaction. Willemse et al. (2014) investigated the staff's person-centeredness in relation to job characteristics and job-related wellbeing, and found a significant difference on the subscale social support from colleagues. They concluded that social support from colleagues was an important factor for job satisfaction especially for caregivers who have a less person-centred attitude. In another study, Willemse et al. (2016) investigated the relation between an unhealthy work environment and the prescription of psychotropic drugs and physical

restraints. In this study 993 nursing home caregivers filled in the LQWQ and minimal significant differences on the LQWQ were found (p = 0.049 for the subscale social support from colleagues). In our study (Boersma et al., 2017 in press) caregivers already scored high on person-centeredness at the start of the implementation of VCM, which may explain why we found no improvement on the subscale social support from colleagues.

In conclusion, the LQWQ seems sensitive enough to measure some changes after implementation of person-centred care methods, but the results are minimal and mixed and therefore make proper interpretation difficult. It is not unique that we found no significant results in our study with the LQWQ. These findings are in line with the review of Bakker et al. (2014) who concluded that our knowledge of the concepts underlying job satisfaction is still limited. The relation between job demands (i.e. work and time pressure) and job resources (i.e. social support and being in control), work engagement, motivation and burnout and how these concepts are associated with or influence the job satisfaction of nursing home caregivers, is unclear. Also, Bakker et al. (2014) described that personal resources (i.e. positive self-evaluations referring to a persons' sense of ability to successfully control and impact his or her environment) influence job resources. And to make it even more complicated, they state that daily fluctuations in burnout and work engagement cause daily fluctuations in job satisfaction. Because of this complexity of the concept of job satisfaction, and because the wards were not randomized, the results should be interpreted with caution. Although the sample in the present study consisted of caregivers working in nursing homes spread across different regions in the Netherlands, and caregivers who vary in age, education, working experience and ethnicity, the results cannot be generalised. As described before, the present study is part of a larger implementation study (Boersma et al., 2017b). In the context of this implementation study a process analysis was executed (Boersma et al., 2017a), which showed a variety of facilitators and barriers that need to be acknowledged before a nursing home can think about implementing VCM in daily care. We subsequently investigated the impact of the implementation on the behaviour of the caregivers and the behaviour, mood and quality of life of the people with dementia was investigated through observations (Boersma et al., in press). This study showed that implementation of VCM positively affected the behaviour of nursing home caregivers (i.e. they were able to apply VCM during their daily caring tasks and they showed more positive communicative behaviour). The implementation of VCM also affected social behaviour (e.g. speech and relation with environment) and quality of life (i.e. positive affect and social relations) of the people with dementia. Altogether, the influences of VCM on job satisfaction are minimal, but considering the whole study we think the results are worthwhile.

Limitations

Some limitations need to be mentioned. First, the use of a self-report questionnaire. Although the LQWQ-questionnaire has been successfully used before in nursing home care (Berkhout et al., 2004; Te Boekhorst et al., 2008; Willemse et al., 2014, 2016), the use of a self-report questionnaire in this study also involved some risks. With a self-report questionnaire we rely on the honesty of the caregivers. As job satisfaction is influenced by individual

characteristics and even by the variance in daily measurements, a self-report questionnaire measured at two moments (T0 and T1) may not be the preferred instrument. Bakker et al. (2014) therefore suggested using diaries in research or the experience sampling method (ESM; Dimotakis et al., 2013). In ESM participants answer multiple questions during several days, which provides insight into job demands and work engagement during the different daily tasks of caregivers. Furthermore, there is always the risk of response bias, caregivers who tend to answer questions in a certain way, regardless of the actual meaning of the question, e.g. caregivers who respond with socially desirable answers. Response bias is a potential danger to the validity of the study. Although some questions are 'reversed' in the LQWQ-questionnaire to prevent this bias, it is still an issue in self-report questionnaires. The descriptive analysis of the data showed that the median score of all items (after recoding) of the LQWQ was three, which means caregivers agree with the statements. This is in line with the findings of Brodaty et al. (2003) who reported that nursing home caregivers are quite satisfied with their job. We assume caregivers do not easily give an extremely positive answer, as there are always aspects of the work they are less satisfied with. We also used qualitative methods to get more profound information in addition to the results from the quantitative study. Although the combination of both methods provided us with more insight into how applying VCM may relate to job satisfaction, many questions also remain unanswered. We agree with Bakker et al. (2014) that future studies should also look for possibilities to observe 'behaviour' specifically related to job satisfaction. However, although these relation between behaviour and job satisfaction is not yet clearly understood, there are indications from other research that burnout may result in more aggressive behaviour (Rafii et al., 2004) and that work engagement could increase proactive behaviour (Sonnentag, 2003).

A second limitation is the sample size. In contrast to the study design, six instead of eight experimental wards were enrolled due to the higher numbers of eligible residents expected on these wards (Boersma et al, in press). As a consequence fewer caregivers could be recruited, and some also dropped out during the study. This resulted in the sample size of the present study being relatively small. Based on the power calculation, we needed 64 caregivers in both groups, which was not achieved for the control group. Therefore, the study was somewhat underpowered. Apart from leave, sickness or quitting the training, the most important reason for dropping out of the study was that caregivers neglected to fill in the questionnaires. Despite the many reminders in person by the researcher or via the manager, these caregivers could not be persuaded. In the experimental group 49% dropped out, and in the control group 55% dropped out of the study. A significant difference for function was found between caregivers who completed the study and those who dropped out. More nursing assistants were found in the dropout group, while nurses who combined their function with a function as a coordinator and head nurses more often completed the study. The duration of the study might probably explain this difference. Some of the caregivers who changed jobs (n = 22) were nursing assistants and busy with their vocational education. Part of this education is that they regularly change wards. Obviously, this had little to do with not being satisfied with their job. The fact is that more experienced caregivers completed the study, which may have biased the outcomes, although the median scores in Table 4 do not

give the impression that a more equally spread educational level and working experience would have led to significant effects.
The third limitation concerns missing data. In our data set there was a relatively high percentage of missing data. In the experimental group at most 9.3% data was missing at posttest, and for the control group at pretest and posttest at most 8.3% data was missing. The underlying reason for this could not be traced, but since the complete cases analysis differ only on function from the caregivers with missing items, we assumed they were missing at random (MAR). We therefore used multiple imputation to deal with the missing data (Eekhout et al., 2014).
The quasi-experimental study design is the fourth limitation to mention. The nonrandomized wards are a threat to the external validity. The fact that Foundation Theatre Veder selected the experimental wards and the nursing home management selected the control wards may have led to systematic differences between the experimental and control groups at the beginning of the study, although the characteristics of the wards were comparable (Table 1).
A fifth limitation consists of the roles of the first researcher and the team managers. The first author and researcher (PB) collected all qualitative data and at the same time executed the quantitative part of the study. We think we limited the risk of confirmation bias by having the qualitative data independently coded by two researchers (PB and JvW). The statistical analyses were also executed by two researchers (PB and BW). JvW and BW both did not participate in the data collection.
The team managers selected the participating caregivers for the focus groups based on purposive sampling with clear criteria (see Methods, qualitative data/focus groups). As described in Table 6 the participating caregivers in the focus groups differed in age, function, ethnicity, education and experience working in psychogeriatric care. So team managers have apparently not selected only, for example, highly educated caregivers or caregivers with more working experience.
The last limitation we want to describe is the possibility of contamination between the experimental and control wards and the 'Hawthorne effect'. In one of the four nursing homes there was incidental exchange of staff between the experimental and control ward. Although contamination cannot be completely ruled out, we assume that this concerned only a small number of the total group of caregivers. Also, the influence of 'the 'Hawthorne effect', i.e. that caregivers of the control wards changed their opinion about job satisfaction merely due to the fact that they were involved in the research and received attention for their professional activities (Polit, 2003), is assumed to be small, as the median score of the subscales of the experimental group and the control group at T0 and T1 were more or less the same.

Conclusions and recommendations

The quantitative outcomes of our study indicate that working with the person-centred method VCM does not positively influence the job satisfaction of the caregivers. However, results from the qualitative data suggest that working with VCM does have some positive influences on the daily working tasks of nursing home caregivers. These possible positive influences do not seem to automatically influence the job satisfaction of caregivers as measured in this

study. Further qualitative and quantitative research is recommended to gain insight into the relationship between the experience of providing person-centred care and different aspects of job satisfaction of caregivers of people with dementia.

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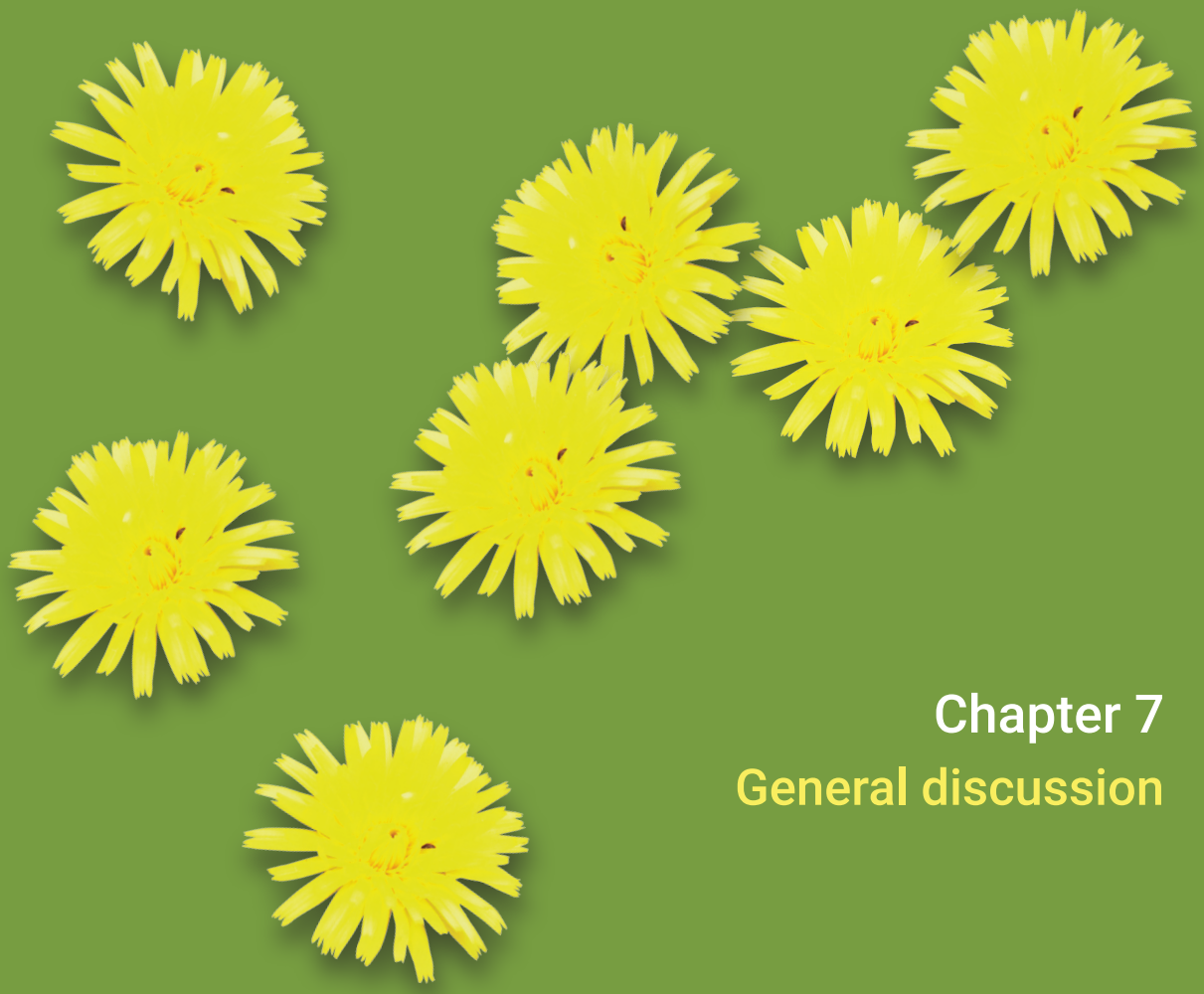

Chapter 7
General discussion

Introduction

This thesis focused on the implementation of person-centred care methods in daily nursing home care. More specifically, we investigated the implementation of the Veder Contact Method (VCM) in daily nursing home care for people with dementia. First, by executing a systematic review, we aimed to get a state of the art overview of effective implementation strategies of psychosocial interventions in daily nursing home care. By using the RE-AIM framework and its five indicators of implementation, we gained insight into the successfulness of various implementation strategies and their outcomes. Secondly, we studied the implementation process of VCM by a qualitative process analysis. Thirdly, we performed a quantitative study of implementation of VCM on six nursing home wards, compared to six control wards where care as usual was offered. Finally, we investigated the influence of the implementation of VCM on job satisfaction of the caregivers.

In this final chapter, we shall review the main findings of our studies in relation to the five constructs of the RE-AIM framework and the literature, and discuss some methodological issues regarding the conducted studies. Finally, we will share our views on the scientific, clinical and societal relevance of our research and provide recommendations for future research, clinical practice and policy.

Summary of findings

Research questions (per chapter):

What are, according to the literature, the strategies for successful implementation of psychosocial interventions as offered by professional caregivers in daily residential dementia care? (Chapter 2)

A systematic review was carried out on empirical studies reporting on the implementation of psychosocial interventions in daily 24-hour nursing home care and evaluating strategies executed by caregivers to implement the intervention. We searched in the databases PubMed, PsychInfo and Cinahl for empirical studies published between 1980 and 2012. Fifty-four studies met the inclusion criteria and were mapped according to the five constructs of the modified RE-AIM framework (Reach, Effectiveness, Adoption, Implementation, and Maintenance).

While the target population of the study (*Reach*) was described in most selected studies, the proportion of caregivers who were reached remained unclear in the large majority of studies (n = 42). Also, in 24% of the studies the characteristics of the participating caregivers and in 72% of the studies the methods used for their recruitment were not described. The outcomes of the implementation in terms of increased caregiver knowledge (*Effectiveness*) were more positive if multiple implementation strategies were used, such as training, coaching, follow-up meetings and appointing a project leader. *Adoption*, referred to as the proportion of caregivers that change their behaviour due to the adopted intervention, was seldom reported. Only a minority of studies (n = 10) described the percentage of caregivers who had gone through the entire implementation process (i.e. participation in the offered trainings / execution of the intervention) and another ten merely gave a global description of

the adoption of the intervention. Seventeen studies clearly described the '*Implementation*', i.e. the actual execution of the intervention or performed an intervention check and seven studies indicated the costs. Twenty studies reported on factors that facilitated or impeded the implementation process (staff, time available, setting and target group). Examples were, having a dedicated project leader, management support, an enthusiastic and/or experienced team, clear benefits from the intervention for the quality of care, (im) material conditions, time available, training opportunities, the innovative culture in the nursing home, multiple innovations/projects running at the same time, and willingness of both residents and family members to participate in the intervention. Sustainable implementation (*Maintenance*) received little attention: eleven studies described outcomes on at least six months follow-up after completing the implementation strategy, in seven of these studies the outcomes were maintained at follow-up. Five studies reported on sustainable implementation activities, e.g. a long-term implementation plan or long-term support for motivating the caregivers. Long-term adaptation of the intervention program to achieve successful implementation was described in only two studies.
Based on this review we recommended the use of multiple implementation strategies for psychosocial interventions. In order to reach sustainable implementation, innovators and researchers will have to specifically pay attention to the dimensions 'Adoption', 'Implementation' and 'Maintenance' of the RE-AIM framework, as these are underexposed aspects of implementation.

Designing a study into the implementation and evaluation of the Veder Contact Method (VCM) in daily nursing home care: the study protocol (Chapter 3)
This chapter describes the Veder Contact Method (VCM), as well as the design and methods of our implementation study on VCM. VCM was developed by Foundation Theatre Veder in 2012 as a contact method in 24 hour nursing home care based on the Veder method as 'living-room theatre performance'. In contrast to the original Veder method, VCM in 24-hour nursing home care seeks to improve the individual contact between the caregiver and the person with dementia within the time available during daily care events such as washing, eating, having tea/coffee or going to bed. Both the original Veder living-room theatre method and VCM combine core components from existing psychosocial and person-centred methods in dementia care, such as reminiscence, validation, integrated emotion-oriented care and neuro-linguistic programming. Both variants provide tools to improve communication and to achieve reciprocity in contact between the person with dementia and caregiver. With VCM, the caregivers learn to apply the key elements (i.e. theatrical, poetic and musical communication) during daily care moments and seek to promote feelings of well-being, identity and self-esteem of people with dementia.
In the study protocol, we described the implementation procedures Foundation Theatre Veder followed when implementing VCM in daily nursing home care (a nine-month multifaceted training and coaching program) and how we planned to study this implementation by means of a qualitative process evaluation to gain insight into the facilitators and barriers of the implementation. We also designed a quantitative study into the implementation-effectiveness

(the outcomes of the implementation), by means of observing the communicative behaviour of caregivers, as well as the behaviour, quality of life and mood of the residents. We also planned to investigate caregivers' attitudes towards dementia. Finally, at the end of the implementation the trainers of Foundation Theatre Veder would give an overall implementation score to provide insight into how successful VCM was implemented on the six experimental wards. The implementation score would enable us to distinguish between wards that successfully implemented VCM, and wards that had been less successful in implementing VCM. Finally, we planned to investigate the influence of VCM-implementation on the caregivers' job satisfaction by means of a self-report questionnaire and individual and focus group interviews.

How is VCM integrated in daily nursing home care, and what are the conditions for successful implementation? (Chapter 4)

By means of a process evaluation, using a multiple case study design, we gained insight into how VCM was implemented on six nursing home wards and what factors facilitated or impeded the implementation. We thematically analyzed the data from eight focus group interviews with 42 caregivers, and twelve individual interviews with stakeholders (managers and trainers of Foundation Theatre Veder). For this purpose, we used the five constructs of the RE-AIM framework.

This study revealed that the 'reach' (proportion of caregivers who participated in the training and follow-up meetings) was moderate to good. Absence of management and colleagues hindered the reach.

'Effectiveness' was defined as the caregivers' perceived impact of VCM on the residents' well-being and quality of life. The caregivers reported that by applying VCM, the residents experienced fun and the caregivers became more person-centred in their communication with the residents (i.e. having more attention for the person behind the resident with dementia and achieving more reciprocity in the contact with the resident). Some caregivers reported that having little background information about the life history and personal interests of the residents hindered them to use VCM.

With regard to 'adoption', caregivers mentioned they became aware of their communicative behaviour in relation to the resident and developed competences in making contact with them, but also with their colleagues. Following the training together as a team, and the positive focus in the training stimulated their motivation to learn. Some caregivers also mentioned resistance against the theatrical aspects of VCM as it did not fit their personality.

Regarding 'implementation', four themes were reported: the first concerned the easy applicability of VCM, while the second was about saving time. These two themes were found to be related: the VCM training showed the caregivers that if they gave priority to one-on-one contact with de resident and have patience, this would result in residents to be more at ease, and thus saved time during the rest of the day. Not all caregivers were able to apply VCM during daily care, the high workload hindered them. The third implementation theme concerned PR-issues: two nursing homes realised that with VCM they could positively distinguish themselves from other nursing homes in the region. The last implementation

theme was about costs: as the nursing homes received financial compensation for their participation in this study, implementing VCM was rather inexpensive for these nursing homes, and proved to be a clear facilitating factor.
Regarding 'maintenance', caregivers and managers of all wards reported that VCM is easily transferrable to new employees. However, only one nursing home developed a strategy for long term implementation, consisting of anchoring VCM hierarchically in the organisation (thus moving the project beyond the pilot-status), involving senior management in sustainable implementation and organizing follow-up VCM-training. Barriers were a lack of vision, indecisiveness for long term implementation and decreased attention for VCM because of concurrent demanding activities (e.g. budget cuts, inspection visits, staffing changes).
Based on all findings of the process evaluation we concluded that for most caregivers VCM is easy applicable in daily 24-hour dementia care and can save time. Caregivers of four of the six participating wards in the experimental condition adopted VCM, meaning that they succeeded in applying VCM during daily caring tasks. They experienced that by applying VCM the contact with the people with dementia improved. Little effort was put into 'maintenance'; only one nursing home developed a long term implementation strategy.

How is the implementation of VCM reflected in the communicative behaviour and attitudes of caregivers, the content of the care plan and the behaviour, mood and quality of life of people with dementia? (Chapter 5)
Caregivers (*n* = 136) and residents (*n* = 141) participated in a one-year quasi-experimental study (pre- and posttest control group design). Trainers from Foundation Theatre Veder implemented VCM on six experimental wards and rated afterwards the quality of the implementation by means of an implementation score. On six control wards, Care-as-Usual was delivered. Before and after implementation, independent observers assessed the applicability of VCM, caregivers' communicative behaviour and residents' behaviour, quality of life and mood. In addition, caregivers' attitude towards the people with dementia was evaluated with a self-report questionnaire, and residents' care plans were assessed on personal background information. Five wards were rated by Foundation Theatre Veder with a high implementation score (7.0 – 7.5), one ward was rated with a low implementation score (4.5). Significant improvements in caregivers' communicative behaviour (i.e. the ability to apply VCM effectively and establishing positive interactions) and specific aspects of their behaviour (i.e. speech, eye contact, responding to person/activity, taking initiative) and residents' quality of life (positive affect and social relations) were found in favour of the five wards with a high implementation score, as compared to caregivers from the low implementation ward and the control wards. A significant positive correlation was found between the subscale 'positive communicative behaviour' (PPW) and the Veder list (measuring VCM application), indicating that the more elements of VCM caregivers applied the more positive communicative behaviour they showed. No significant change was found in the residents' mood or caregivers' attitudes towards the people with dementia (i.e. being optimistic/pessimistic about the future possibilities of the people with dementia or having a person-centred attitude). After implementation, no more personal information about the life

history or preferences of the residents was found in their care plans.
We concluded that caregivers were able to apply VCM during daily caring tasks and that this influenced some aspects of the behaviour and quality of life of the people with dementia. Implementation of VCM did not influence the knowledge and attitude of the caregivers, the amount of personal information about the residents in their care plans and their mood.

How does implementation of VCM affect the job satisfaction of caregivers? (Chapter 6)
The job satisfaction of caregivers was assessed with the Leiden Quality of Work Questionnaire (LQWQ) using a pretest-posttest control group design. Additionally, qualitative data from the previously executed focus groups with 42 caregivers and interviews with eleven managers of the six experimental wards was used. The quantitative results showed no significant differences in job satisfaction between caregivers (LQWQ) working on the experimental or control wards. However, the results from the focus groups and interviews with some caregivers and managers indicated that implementation of VCM had contributed to job satisfaction: applying VCM supported the caregivers to handle cumbersome behaviour of the residents, and VCM supported them to cheer up some residents with a depressed mood. Caregivers as well as managers reported that the implementation of VCM had contributed to teambuilding. We concluded that VCM did not have a significant effect on job satisfaction, although qualitative findings indicated that VCM positively influenced the daily work performances of nursing home caregivers. The relation between the experience of offering quality care and job satisfaction needs further investigation.

Discussion of the findings

From the review, we learned that a multiple implementation strategy promotes successful implementation of psychosocial and person-centred interventions. We also learned that for reaching sustainable implementation more attention should be given to the RE-AIM framework dimensions 'Adoption', 'Implementation' and 'Maintenance'. Offering trainings on different times/days, which enables caregivers to participate supports adoption of the intervention, and management commitment is crucial. Measuring treatment fidelity gains insight into the implementation of the intervention. For 'maintenance', it is important to report how sustainable implementation of the intervention is realised. Foundation Theatre Veder implemented VCM by conducting a nine-month multifaceted implementation trajectory, including observation according to Dementia Care Mapping, feedback meeting, trainings, follow-up meetings and coaching-on-the-job. Caregivers of the six experimental wards learned to use this person-centred care method during the daily work. Our study showed that although dementia is a very severe syndrome, which seriously affects the abilities of communication of people and affects their quality of life, it is still possible for people with dementia to experience moments of true happiness.
At the same time a next question arises: are we able to formulate how well VCM was implemented according to the five RE-AIM dimensions? We will discuss this below.

Degree of implementation of VCM

Glasgow et al. (2006) described that an overall implementation index or assessment could be useful for making policy decisions, but they also warn for the fact that an overall index might hide important findings. Therefore, in addition to the single overall assessment score provided by Foundation Theatre Veder, we composed a figure in which we included all five RE-AIM dimensions using a 0 to 100 scale (see Figure 1) and made a distinction between the wards with a high and the ward with a low implementation score. In this way, we obtained an overview of the degree of implementation in all its facets. These are discussed below.

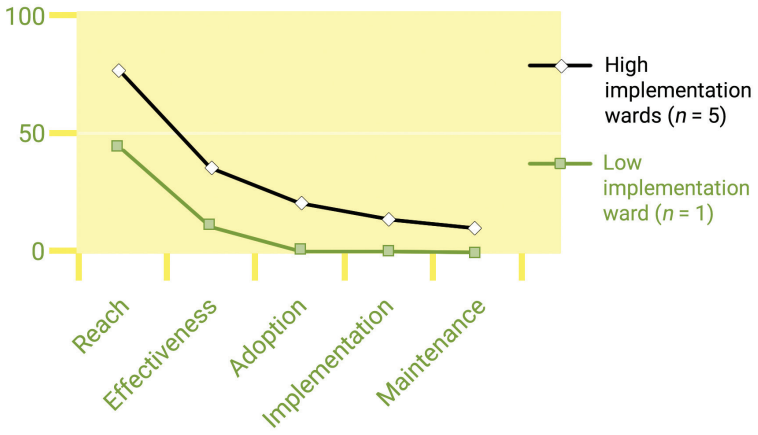

Figure 1. Implementation of VCM on wards with high and low implementation score (Calculation of the five dimensions following Glasgow et al., 2006).

Reach

In our study, we defined 'reach' as the proportion of caregivers in the nursing homes that participated in the training during the study. This definition deviates from the original definition of the 'reach' in the RE-AIM framework as that we did not include the whole target population of nursing home caregivers (Glasgow et al., 1999). The 'reach' in Figure 1 is calculated by the number of caregivers who participated in training- and follow-up meetings divided by the total number of caregivers working on the wards at T0. As discussed in chapter 3, participation in the training and follow-up meetings is a first requirement for successful implementation. Foundation Theatre Veder anticipated on the irregular working hours of the caregivers by offering these training and follow-up meetings twice at each ward. Despite these efforts, the participation of caregivers in the training and follow-up meetings ranged between the six wards from 43% to 86%. This suggests that the managers of the wards intending to implement a care innovation have a major responsibility in 'reaching' the caregivers. During the present study all nursing homes were involved in reorganisations: driven by budget cuts, four of the six experimental nursing home wards lost their team manager and transformed into self-managing teams. Inadequate management supervision appeared to affect the participation of the caregivers in the training and coaching program and subsequently affected adoption and sustainable implementation. Also in the literature this is mentioned

as one of the main barriers in improving nursing home care (Brooker et al., 2015; Van de Ven, 2014; Van Haeften-Van Dijk et al., 2015, 2015). Corazzini et al. (2015) suggested that caregivers need an adaptive leadership style when making cultural changes. An adaptive leadership style is characterized by managers who facilitate caregivers to participate in for example trainings, care plan discussions and multidisciplinary meetings, who explicitly value caring attitudes and behaviour, who motivate caregivers to be proud of providing good care, who encourage individual growth and professional development, and interpret rules and regulations with attention to their underlying rationale and practical implications (Brooker & Latham, 2015). It should be noted that attending the training and follow-up meetings is just a first step in the implementation process. In addition, it does not necessarily imply that the caregivers who participated in the training fully understood the information offered and acquired the necessary skills and attitudes to apply VCM in daily care (Slaughter et al., 2015) (See 'Adoption' and 'Implementation').

Effectiveness

Deviating from our review, but in line with the original definition of Glasgow et al. (1999; 2006), we defined 'effectiveness' in this thesis as the positive outcomes (on the quality of life of the residents), taking into account also the negative outcomes. In figure 1 only positive outcomes are included, as we did not find any negative outcomes (negative *p*-values). The median effect size for both groups was calculated for the QUALIDEM subscales 'positive affect' and 'social relations' which showed both significant small effects (d = 0.37 and 0.32 resp.) according to Cohen's standard (Carson, 2012). The other seven subscales of the QUALIDEM did not show significant negative *p*-values, and therefore were excluded in figure 1. Though it were small effects, these demonstrate that by implementing VCM, caregivers were able to improve the quality of life of the residents with dementia. The reason that effect sizes were small may be caused by the fact that VCM includes elements of well-known person-centred care approaches, such as validation, reminiscence and neuro-linguistic programming, which have been shown effective in previous research (Bandler & Grinder, 1975; Feil, 1992; Woods et al., 2005). It is likely that the residents of the control groups were also more or less exposed to these care approaches, since these forms of person-centred care are widely disseminated in nursing home care in the Netherlands in the last decades. Another possible explanation for the relatively small effect sizes is the way caregivers used theatrical elements in their communication with the residents. Results of Van Dijk et al. (2012) showed that when professional actors applied the Veder method people with dementia benefitted more regarding their behaviour (i.e. more laughing, more recalling memories) and quality of life (social involvement and feeling at home) as compared to when caregivers applied the Veder Method. Learning the specific skills needed for effectively applying the theatrical, poetic and musical elements of the Veder Contact Method seemed quite difficult for caregivers. Moreover, some caregivers reported in the process evaluation that theatrical, poetic and musical communication did not fit their personality, as they felt uncomfortable when using it. Although this barrier has been reported before (De Lange, 2004; Götell et al., 2009), Foundation Theatre Veder is convinced that for every caregiver

a form of theatrical, poetic or musical communication can be found and that trainers should have a keen eye for this. In retrospect, more 'experiential learning' (Snoeren, 2015) during training sessions is likely to support caregivers to familiarize themselves with the communication tools of VCM.

Adoption

In this thesis, 'adoption' was defined as the proportion of caregivers that are willing to change their behaviour due to the implemented intervention, i.e. for example showing more positive communicative behaviour (QCB). In contrast to the original definition of Glasgow et al. (1999), our definition of 'adoption' focused on the individual level instead of the organisational level. The score of 'adoption' in figure 1 represents the effect size of the subscale PPW (positive communicative behaviour of caregivers) which showed a significant effect: caregivers of the high implementation wards showed an improvement in positive communicative behaviour after implementation of VCM compared to caregivers of the low implementation ward and the control group. The effect size of the high implementation group was small (d = 0.20), and of the low implementation score was set on zero (d = -0.19). As can be seen in figure 2 (see chapter 5) the control group also improved their positive communicative behaviour during the study period. Possibly this was caused by the 'Hawthorne effect', meaning that caregivers of the control wards also changed their professional behaviour merely by the fact that they were involved in the research and received attention for their professional activities (Polit, 2003). The results of the focus groups showed that - at least for some caregivers - improved knowledge and skills needed for executing person-centred care enriched their practice and professionalised their work: caregivers reported that the VCM-training and coaching program created professional awareness and contributed to better communicative behaviour when in contact with the residents. This benefit has been reported before as a potential asset of psychosocial interventions in dementia care (Eggenberger et al., 2013; Chenoweth, 2015). An important surprising benefit of the implementation of VCM was the effect of doing the training and coaching program together as complete integral ward teams. During the training and follow-up meetings, caregivers were invited to share their own (life) experiences with each other and dared to be vulnerable in the presence of colleagues. This collaborative process created mutual trust, stimulated reflection and learning together, contributed to multidisciplinary collaboration (caregivers, therapists, hostesses and volunteers) and team building. In previous research, this was regarded as an independent intervention, stimulating 'ongoing learning' (Eggenberger et al., 2013; Snoeren, 2015). Corazzini et al. (2015) found in their study that poor staff-and-staff relations obstructed the cultural change needed to work in a person-centred way. The team of caregivers needs to trust each other, to know that their colleagues support them when for example, the workload is overwhelming and demanding. The VCM training and coaching program contributed to this.

Implementation

The definition of implementation used in this thesis was the extent to which the intervention was implemented as intended, including all encountered implementation facilitators and

barriers. On the five high implementation wards, caregivers showed significantly more VCM fidelity in comparison with the caregivers of the low implementation ward. In figure 1 the effect sizes of VCM fidelity of the high and low implementation wards are shown, as measured by observations of caregivers applying VCM as intended, with the Veder checklist. Again, the effect size of VCM fidelity of the five experimental wards where VCM was well implemented is small (d = 0.14), but of reasonable contrast with the group with low implementation score (d = -0.23, in figure 1 set on zero). In general, the more complex an intervention is, the lower the implementation ratings are (Glasgow et al., 2001). In the focus groups and interviews, caregivers and managers reported that VCM is a cheerful intervention enabling cheerful reactions of the people with dementia leading to reciprocity in the contact with them. VCM could be easily applied in daily care by caregivers, which is an important facilitator as reported earlier (Brooker et al., 2015; Eggenberger et al., 2013; Lawrence et al., 2012; Van Haeften-Van Dijk et al., 2015). Given the low, but sufficient implementation score (7.0/7.5) and in combination with the small effect sizes on professionals' behaviour and residents' outcomes, it can be questioned whether these statements on easy application are true in clinical practice. Small effect sizes on VCM fidelity actually mean a small change in caregiver behaviour. Some caregivers reported that the high workload hindered them to take the time needed for making one-on-one contact with residents. In addition, caregivers still tend to work according to fixed 'setting priorities' and working by 'the clock'. Van Weert et al. (2004) reported on this issue thirteen years ago, our study showed that 'setting priorities' is still present in nursing home care. Even today, caregivers still find it difficult to approach the nursing home care as a 24-hour business and to let go of the fixed and clock driven schedule (Den Ouden, 2017). This is a particularly fixed pattern, which is difficult to change and hindered caregivers, for example, to take time for making one-on-one contact with the people with dementia.

In this implementation study VCM fidelity was also measured by analyzing the care plans of the residents. Contrary to our expectations, we did not find a significant improvement in the care plans, regarding for example information about the residents' experiences, preferences or life history, after implementation of VCM. This is congruent with the low effect size of VCM fidelity in the present study. In future implementation trajectories VCM trainers should pay more attention to critical factors like the use of the care plan in relation to VCM (Slaughter et al., 2015).

Maintenance

The definition of 'maintenance' in this thesis is the extent to which the intervention is sustained over time. In the present study we did not conduct follow-up measurements over a longer period. We measured at two occasions, T0 (baseline) and T1 (nine to twelve months after the start of the implementation). For this reason 'maintenance' in figure 1 is based only on a qualitative impression, two years after the implementation. For 'maintenance', Glasgow et al. (2006) recommend also taking into account the attrition rate of caregivers. In the nursing home care attrition is a serious issue. All six experimental wards were asked three questions by phone and email: How many of the trained caregivers and managers

still work on the ward? Do caregivers still apply the procedural steps of VCM? Do caregivers still use the key elements of VCM (i.e. *theatrical, poetic* and *musical* communication)? Based on the data collected, the 'maintenance' in figure 1 is indicated for the high versus the low implementation wards (figure 1). Two years after the implementation of VCM, all location managers of the six experimental wards had left, as well as the team managers of four experimental wards. Also, 33% to 90% of the trained caregivers left the six wards. A minority of the remained caregivers of the five high experimental wards made efforts into individually contacting the person with dementia (i.e. the first step of VCM) and using the key elements of VCM (i.e. *theatrical, poetic* and *musical* communication) in their communication. None of the caregivers from the low implementation ward still used aspects of VCM. We must conclude that two years after the implementation VCM is not maintained enough. Organisational barriers such as staffing changes and sickness leave, but also concurrent innovations, lack of vision on long term implementation appeared to be serious barriers in our study and are well-known from earlier studies (Lawrence et al., 2012; Meiland et al., 2005; Van Haeften-Van Dijk et al., 2012; Van Weert et al., 2004). Although Foundation Theatre Veder, the managers and the researchers were aware of these barriers, they were not able to minimize the negative influences on the implementation of VCM. The drafted contracts between the management of the nursing homes and Foundation Theatre Veder in which some of these potential barriers were described, did not contribute sufficiently to sustainable implementation. From our study findings we conclude that the persistence of organisational barriers and the lack of a solid long-term implementation plan which continues also after a management shift hindered the maintenance of VCM implementation. So the question is, is it advisable to continue VCM implementation? From the research point of view, we do advise to continue implementation of VCM, as the method has shown significant added value for the caregivers as well as for the people with dementia. In addition, caregivers who had left the ward and started working on another nursing home ward took their learned skills and knowledge with them. Although we 'lost' those caregivers within the context of our study, for psychogeriatric practice in general their improved skills and knowledge due to the VCM implementation remains valuable. Though, integrating the method in vocational programs for caregivers may be more effective for maintaining VCM.

Methodological issues and limitations

Our study into the Veder Contact Method was designed as an implementation study, with a focus on tracing factors that influence successful implementation and at the same time assessing the implementation effectiveness of VCM. This type of research studies in which components of effectiveness trials and implementation research are blended are called hybrid designs (Curran et al., 2012) which can improve the speed of gaining knowledge and increase the successfulness and policy relevance of clinical research (Glasgow et al., 2003; Wells, 1999). Challenging is to look for possibilities to combine quantitative and qualitative research within the traditional research (budget) limits (Curran et al., 2012). With our study we aimed to investigate the adaptive implementation of VCM, including the treatment fidelity

in a real-world care setting. We therefore tried to control the implementation error: meaning that the intervention was not implemented according to a fixed plan, which could have threatened the internal validity (Hulscher et al., 2005). Vernooij-Dassen & Moniz-Cook (2014) called this the type III error, which should be treated equally to type I and type II errors in research. Looking at figure 1, it appears that the implementation of VCM failed on one ward and was partly successful on the five other wards. From these facts, we conclude that we could not fully prevent an implementation error. Several hindering factors were found in the process analysis that appeared to have contributed to this (see discussion of the findings).

The six experimental wards involved in our study differed in type of care organisation (i.e. open or closed wards, small-scale care or large conventional wards), the number of residents living on the ward (6 – 23), care culture and the geographical region. A limitation is that we cannot make clear statements about how these variables were associated with the implementation success of VCM, because the numbers of participating caregivers and residents on the individual wards were too small for analysing this statistically.

A further limitation is that - due to practical reasons - we were not able to randomize the participating wards. Instead, we matched the control wards with the experimental wards. Although we did not inform the trained observers on the conditions of this study, blinding of the caregivers was of course not possible in this intervention study. Both limitations related to the study design are a threat to the internal validity (Livingston et al., 2014; Olazarán et al., 2010). Nevertheless, we can be fairly sure that the experimental and control groups were comparable on the residents' background characteristics, as we did not find differences on residents' baseline characteristics. However, we are not sure if the quality of the care provided on the experimental and control wards was comparable. Although we measured on both conditions at T0 the communicative behaviour of the caregivers, we did not establish elements of the Care-As-Usual on the control wards, for example if caregivers were recently trained in the use of validation or reminiscence.

Another limitation was the duration of the study. We carried out a nine-month implementation study in each nursing home, and it is evident that reaching sustainable implementation needs long term efforts. We measured at two moments in time, before and nine to twelve months after the start of the implementation trajectory. For the evaluation of sustainable implementation (maintenance in the RE-AIM framework), a third measurement after a longer span of time would have been desirable. Gaglio et al. (2014) advised to have a minimal follow-up of six months after finishing the implementation trajectory. Following this advice, our study duration would ideally have been 15 months for each nursing home ward. However, taking into account the high turnover in nursing home care and the vulnerability of the patient population in combination with the aim for sufficient statistical power, such a long study duration would probably have caused other limitations (Van der Kooij et al., 2013).

As described earlier many people with dementia and many caregivers dropped out during the implementation study and the study into caregivers' job satisfaction. Based on the power analysis, we needed 64 participants in both groups in the two studies. In both studies this number was not reached for the control group, therefore these studies were somewhat underpowered. Although, it is unlikely that a larger sample would have led to significant results

in the study about job satisfaction: one subscale (social support of colleagues) showed small differences between pre- and posttest on the median scores only in the control group. The final limitation that needs to be mentioned was the self-report questionnaire for measuring job satisfaction of caregivers. The results showed us that most caregivers tended to answer all questions, both at pre- and posttest, with a score three on a scale of one to four, meaning that they were satisfied with their job both before and after implementation. Brodaty et al. (2003) found comparable findings and reported that caregivers overall are quite satisfied with their jobs. Looking back, it would have been more appropriate to ask caregivers whether the implementation of VCM influenced their satisfaction about the contact with the people with dementia instead of their job satisfaction.

Scientific, clinical, and societal relevance

Our aim with this study into the adaptive implementation of VCM was to provide insight into the implementation and implementation error (Hulscher et al., 2005). Although implementation research combining outcome research with a process evaluation has been carried out previously (De Lange, 2004; Dröes et al., 2004; Finnema et al., 2005; Meiland et al., 2005; Van Haeften-Van Dijk, 2016; Van Weert, 2004), our study pioneered in using the RE-AIM framework with its variety of indicators of implementation: reach, effectiveness, adoption, implementation and maintenance in nursing home care (Glasgow et al., 1999; 2006). In recent years, also other researchers have used this framework in community dementia care (Altpeter et al., 2015; Gitlin et al., 2010; Paone, 2014; Samia et al., 2014; Stevens et al., 2012).
The relevance of the literature review and the process evaluation into the implementation of VCM for clinical psychogeriatric practice is that it shows a variety of facilitators and barriers of successful implementation that need to be acknowledged by managers, innovators, researchers and policy makers when implementing person-centred care or psychosocial interventions in daily care. Although some of the inventoried barriers are well known in research and practice, they still seem difficult to solve as we experienced also in our implementation study. For promoting successful future implementation of innovations, attention to the sometimes persistent barriers is therefore still needed (Lawrence et al., 2012; Van de Ven, 2014; Van Haeften-Van Dijk et al., 2015; Van Weert et al., 2004; Verkaik et al., 2011). A good example is the availability or absence of supportive leadership: our review and process analysis showed that a supportive manager is often not present during the implementations of innovations in nursing homes, which of course negatively influences the implementation.
The present study was the first, which investigated the implementation and implementation success of VCM in daily 24-hour nursing home care. Before, an effect study and a process evaluation were conducted into the Veder method as a 'living-room theatre performance' in nursing homes (Van Dijk et al., 2012; Van Haeften-Van Dijk et al., 2015). As implementation of VCM positively influenced communicative behaviour of caregivers and some aspects of quality of life and behaviour of the residents, the clinical relevance of this thesis is that it informs caregivers and their managers on the value of using VCM in daily nursing home care. From a social and societal perspective, it is important that there is attention and recognition

for the individual person behind the resident with dementia. In line with Van Haeften-Van Dijk (2016) who stated in her thesis that the Veder method as a 'living-room theatre performance' enhanced social participation of nursing home residents with dementia, VCM contributes also to this: VCM stimulates the social contact and reciprocity in the contact between the people with dementia and their environment (e.g. professional caregivers).

This thesis demonstrates that the implementation of VCM, including providing person-centred care, is not easy. The contexts of the participating wards in the present study were 'not ideal': all had to deal with, for example, budget cuts, reorganisations and specific ward related factors that hindered optimal sustainable implementation. However, we expect policy institutes, innovators, nursing homes and research institutes will continue to implement (new) person-centred care methods in the years ahead. In future implementation studies, even more anticipation on the expected barriers beforehand is recommended (see recommendations).

Results of our study did not show that VCM positively influenced caregivers' job satisfaction. Contrary to other studies about the influence of a person-centred intervention on the job satisfaction of caregivers in nursing homes (Barbosa et al., 2014; Van de Pol et al., 2012), we measured job satisfaction with a mixed method design. Using this design strengthened our study, but this did not fully clarify the relation between the implementation of VCM and its possible influences on different aspects of job satisfaction of caregivers. Although in the qualitative part of the study, some caregivers and managers reported that applying the cheerful method VCM did affect some aspects of the caregivers' work: handling cumbersome behaviour and a depressed mood of residents and contributed positively to teambuilding. This last comment can be heard as a call for more attention for team building. Corazzini et al. (2015) and Brooker & Latham (2015) previously reported that teambuilding is an important aspect of the work of caregivers in nursing homes that should receive more attention (see also recommendations for clinical psychogeriatric care practice).

Recommendations for future research

Although the present study shows that VCM is applicable in daily care and positively impacted the behaviour of residents with dementia, future well designed studies should be executed to investigate the effectiveness of VCM, taking into account our implementation recommendations.

With the use of the RE-AIM framework, we gained insight into how successful VCM was implemented in the nursing homes. As the RE-AIM framework represents the complete implementation trajectory, we recommend future researchers to use this model for evaluating the implementation process and outcomes. We also recommend future researchers using the RE-AIM framework to develop additional indicators for the five constructs of the RE-AIM frame work and to precisely report the calculation of these indicators (e.g. effect sizes in figure 1)(Glasgow et al., 2006).

We recommend researchers who are planning to execute an effect study into a psychosocial or person-centred intervention, to always carry out a process evaluation, which is in fact

a hybrid design. A process evaluation, together with the outcomes of the program fidelity (Slaughter et al., 2015), gives insight into the implementation error (Vernooij-Dassen & Moniz-Cook, 2014). Using such a hybrid research design and having a dual focus on effectiveness and implementation as described by Curran et al. (2012), yields more enriched data and is likely to be a shorter and more attractive route, which at the same time benefits the clinical nursing home practice. Though we are not giving a plea for letting go of traditional clinical effectiveness and implementation trials, we agree with Curran et al. (2012) that hybrid designs are suitable when certain preconditions such as 'strong face validity' and 'indirect evidence' are met.

Though we restricted our study to the behaviour of caregivers and people with dementia in the living-rooms of the nursing homes, caregivers reported VCM was very useful also during other caring moments, for example, in the bedroom or bathroom. In a future study, it would be worthwhile to observe caregivers and people with dementia also during these care moments, because we expect that this could demonstrate improvements in, for example, cumbersome behaviour and well-being of people with dementia.

A follow-up measurement (e.g. six months later) as recommended by Gaglio et al. (2014) might have motivated nursing homes to pay more attention to the maintenance of VCM. Despite the high attrition rate of caregivers and the high loss of people with dementia during our study we therefore recommend future researchers to execute a long term research with more than two measuring moments over time.

Finally, we assume that implementation of a person-centred care method in itself does not sufficiently influence the daily work of the caregivers to increase their overall job satisfaction. There are many other factors that contribute to job satisfaction (see chapter 6). We recommend researchers to measure job satisfaction not only at one or two moments in time, but for example by using a diary for a few days, or to observe behaviour specifically related to job satisfaction (Bakker et al., 2014). We also advise researchers to conduct more (qualitative) research to find out if caregivers are satisfied with their contact with the resident with dementia after learning the (new) person-centred method instead of affecting their overall job satisfaction.

Recommendations for clinical psychogeriactric care practice

We derived four recommendations for clinical psychogeriatric practice from this thesis.

Nursing homes with the intention to promote the quality of life of their residents with dementia are recommended to improve the communication between caregivers and people with dementia by implementing VCM.

It should be clear that VCM is an inspiring method for caregivers and for most caregivers easily to adopt and implement in their daily care practice, and therefore an attractive person-centred care method to apply in the nursing home care for people with dementia. We therefore advise nursing homes to implement VCM, to promote a better communication between caregivers and people with dementia resulting in a better quality of life of their

residents. Additionally, we advise nursing teams to accurately describe the life history of every resident and their personal preferences on for example activities, food, social contacts, music and poems in the individual care plans (see van der Kooij, 2003). For caregivers, this is vital information from the very moment the person with dementia moves into the nursing home. This will ensure that caregivers can support people with dementia maintaining their personhood. The present study on VCM and the study of Van Dijk et al. (2012) on the 'Veder method as a living-room theatre performance' both showed positive influences on the behaviour and quality of life of the people with dementia. We recommend nursing homes to combine VCM with the Veder method as a 'living-room theatre performance'. By regularly organising a 'living-room theatre performance' executed by actors in the nursing home the mood and quality of life of the people with dementia will improve, and at the same time these performances will inspire caregivers to apply VCM.

Despite the hurdles, which will surely accompany the implementation, we recommend nursing homes to implement VCM and anticipate on potential implementation barriers beforehand.
It is tempting from the present study to advise nursing homes not to start with implementing VCM when potential barriers are present (e.g. reorganisation, instability in the team, budget cuts). However, as we all know often policy and organisation-related changes are present, which could hinder the implementation of person-centred care interventions. Therefore, despite hindering factors, wouldn't it still be advisable to carry on with implementing VCM and other person-centred care methods, and so to speak grasp every opportunity to sustain personhood of people with dementia? For this reason, we recommend nursing homes and Foundation Theatre Veder to continue implementing VCM and anticipate beforehand on the facilitators and barriers, which we traced in our study.

Valuing the team of caregivers must precede the implementation of person-centred care.
When nursing homes intend to implement person-centred care, we recommend the management of these homes, in line with Brooker & Latham (2015), to value not only the people with dementia, but also those who care for them. Brooker & Latham mention six aspects valuing the caregivers in a nursing home: having a clear vision, supporting human resource systems, staff who empowers the caregivers, offering continuous training and staff development, a stimulating environment for the people with dementia and ongoing quality improvements. We highly recommend the management of nursing homes when implementing VCM, that caregiver training and inspiration is ensured, for example, by investing in ongoing team training. An important positive side effect of doing trainings together is that caregivers get to know each other in a pleasant way, which will positively influence their collaboration. Long term implementation needs long term attention of innovators (e.g. Foundation Theatre Veder) and managers of nursing homes. Although a one year multi-faceted implementation strategy sounds as a long period, it appeared too short for reaching sustainable implementation. We therefore advise Foundation Theatre Veder and the management of nursing homes to compose a long term (two up to five year) collaboration agreement and implementation plan. In the first place to reach long term commitment of

all involved parties (management of the nursing home, team managers, team of caregivers, Foundation Theatre Veder, researchers), and in the second place to guarantee continuous (follow-up) training of VCM. It is our conviction that ongoing training of caregivers is the only way leading to sustainable implementation of VCM and innovations in general.

Person-centred care and more specific VCM, should be included in the nursing educational program.
We recommend including person-centred care in general and more specific VCM in the vocational nursing educational program and the curriculum of bachelors of nursing. Following the philosophy of Kitwood (1997), caregivers could learn from the beginning of their education to maintain the personhood of people with dementia. Developing this attitude and being able to imagine oneself from the perspective of the person with dementia should be common practice for any starting professional in dementia care. If these conditions can be met, successful long term implementation of VCM or any other person-centred care method is likely to be easier achieved. We agree with the manifest 'focus on elderly care [scherp op ouderenzorg]' of Borst and Gaemers (2016) which advocates that education of caregivers needs to be updated continuously with the latest scientific knowledge, and at the same time the conditions for receiving education must be simplified (https://www.scherpopouderenzorg.nl/). Meanwhile, Foundation Theatre Veder successfully certificated VCM. The Veder (contact) method is now recognised by Vilans (Dutch knowledge centre for long term care) as an effective method for making contact with people with dementia (http://www.vilans.nl/Pub/databank-interventies/Veder-Methode.html).

Concluding remarks

To date, offering person-centred care to people with dementia is still a challenge. From this thesis, we found that VCM is not a very demanding intervention, it is straightforward and uncomplicated to apply in daily care, and it does not take extra time and is not expensive.
Undoubtedly, nursing homes can easily adopt the method. Although VCM is an accessible method and Foundation Theatre Veder anticipated with the development of VCM on some important known barriers, sustainable implementation in nursing home care needs extra attention.

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Appendix

Appendix A. Reference list of the quantitative and mixed intervention studies

Table 3a: included quantitative studies

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Table 3b: included qualitative and mixed method intervention studies

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Appendix B. Quality of Caregivers' Behaviour in dementia care

Table A1 and Table A2 describe the original dialectical framework of Kitwood (1997), the adapted schemes of Van Weert et al. (2006) and the slightly modified scheme for the present study of the implementation of the Veder method in daily dementia care. Table A1 describes the positive person work categories and the descriptions of these categories. Table A2 describes the malignant social psychology and descriptions of these categories.

Positive person work (PPW) Dialectical framework*	Adapted observation scheme Van Weert et al. (2006)	Adapted observation scheme Present study
Recognition	Recognition	Recognition
Negotiation	Negotiation	Negotiation
Collaboration	Enabling	Enabling
Facilitation		
Play	Play	Play
Stimulation	Stimulation	ç
Validation	Validation	Validation
-	Distraction [s]	Distraction
-	Empathise [s]	Empathise
-	Making contact [s]	Making contact
-	Respecting privacy [s]	ç
	Sense activation [s]	Sense activation
Relaxation	[o]	Relaxation
Holding	[o]	Holding
Celebration	[o]	Celebration

Table A1. Original and modified schemes of Positive person work
*Kitwood interactions (1997).
[a] Excluded because not observed during pilot study Van Weert et al. (2006).
[o] Excluded because not applicable to morning care in study Van Weert et al. (2006).
[s] Added because observed in study Van Weert et al. (2006).
[x] Added because observed in present study.
[ç] Excluded because not applicable in present study.

Description of the positive person work (PPW) categories in the present study:

Recognition: Acknowledging a man or woman who has dementia as a person, knowing that person by name and affirming him/her in his/her uniqueness.

Negotiation: Consulting with the person with dementia about his/her preferences, desires and needs, rather than being conformed to others' assumptions.

Enabling: Giving the resident the opportunity to take care of him- or herself as much as possible and just 'completing' the care when necessary. The caregiver takes into account the capabilities of the resident, making it possible to optimise the actual interaction between caregiver and the person who needs care.

Play: Showing spontaneity and self-expression (an experience that has value in itself), making jokes, laughing with the resident.
Validation: Acknowledging the (subjective) reality of a person's emotions and feelings, and giving a response on the feeling level, without correcting the residents' reality. Validation involves accepting the subjective truth of a resident, attempting to understand a person's entire frame of reference even if it is chaotic, paranoid, or filled with hallucinations.
Distraction: Distracting a resident in a positive way by guiding the conversation away from something unpleasant for the resident or to take the resident's mind off things. The aim of distracting is to influence mood and behaviour of the resident in a positive way.
Empathise: Accepting the feelings and emotions of a resident and showing warmth and affection to meet the needs of a resident.
Making contact: Giving the resident attention as a person explicitly to contact. Making contact means responding to what a resident indicates but also giving attention to a resident when he/she does not specifically ask for it.
Sense activation: Trying to find a way into the experienced world of the resident by means of active sensory stimulation (setting in motion the senses such as smell, hearing, sight, taste and touch).
Relaxation: Seeing the importance of creating a relaxing atmosphere. Of all forms of interaction this has the lowest level of intensity and speed.
Holding: Providing safety, comfort and security for the resident.
Celebration: Sociability; recognise, support and experience joy for what the resident can do and achieve. This results in a shared joyful experience. So there is no distinction between the two parties (the caregiver and the resident), they go together hand in hand.

Malignant social psychology (MSP) Dialectical Framework*	Adapted observation scheme Van Weert et al. (2006)	Adapted observation scheme Present study
Treachery	Treachery	Treachery
Disempowerment	- [a]	-
Infantilization	Infantilization	Infantilization
	Disabling [s]	Disabling
Intimidation	- [a]	-
Labelling		
Stigmatization	Prejudice	Prejudice
Objectification		
Outpacing	Outpacing	Outpacing
		Ignoring feelings and emotions [x]
Ignoring	Ignoring	Ignoring
Banishment		
Imposition	Imposition	Imposition
Withholding	Withholding	Withholding
Accusation	Accusation	Accusation
Disruption	Disruption	Disruption
Mockery	- [a]	-
Disparagement	- [a]	-
-		
-	Testing knowledge [s]	Testing knowledge
Invalidation	Invalidation	Invalidation

Table A2. Original and modified schemes of malignant social psychology (MSP).
*Kitwood interactions (1997).
[a] Excluded because not observed during pilot study Van Weert et al. (2006).
[o] Excluded because not applicable to morning care in study Van Weert et al. (2006).
[s] Added because observed in study Van Weert et al. (2006).
[x] Added because observed in present study.
[ç] Excluded because not applicable in present study.

Description of the malignant social psychology (MSP) categories in the present study:
Treachery: Using some form of deception to mislead or manipulate a person, or force them into compliance.
Infantilisation: Treating a person very patronizingly, like a parent who is insensitive or insecure might treat a very young child.
Disabling: Not allowing a person to use the abilities that he/she does have; failing to help him/her to complete actions that they have initiated. Not taking notice of the possibilities of a person.
Prejudice: Not looking upon a resident and treating the resident as a human being or 'normal' person. Always thinking the resident is confused and does not understand anything. In the worst case, the resident is treated as an object, an alien or an outcast.

Outpacing: Providing information, presenting choices, and so on, at a rate too fast for a person to understand; putting him/her under pressure to do things more rapidly than he/she can bear.
Ignoring feelings and emotions: Failure to accept the subjective reality of a resident and neglect the feelings of a resident.
Ignoring: Carrying on (in action or conversation) in the presence of a person as if he/she is not there.
Imposition: Forcing a person to do something, overriding desire or denying the possibility of choice on his/her part.
Withholding: Refusing to respond to, and ask for, attention or to meet an evident need; for example for affectionate contact.
Accusation: Blaming a person for actions or failures of action that arise from his/her lack of ability or his/her misunderstanding of the situation.
Disruption: Roughly intruding on a person's action or inaction; crudely breaking his/her 'frame of reference'.
Testing knowledge: Asking questions about (for a resident difficult) facts instead of trying to fit in the resident's environment.
Invalidation: Failing to acknowledge the subjective reality of a person's experience and especially what he/she is feeling

Appendix C. Change of caregivers' behaviour and attitude between T0 and T1, including post hoc analyses

Observationlist Veder Contact Method

Veder Contact Method (range 16-64)	Δ	Std. Error	95% Confidence Interval			
			Lower Bound	Upper Bound	*p*-value	Cohen's *d*
Δ0[a]	2.30	1.46	-0.60	5.19	**0.006**[c]	
Δ1[b]	6.56	2.03	2.53	10.58		
Post hoc analysis						
Change between E1 and C	-3.99	2.00	-7.98	0.01	0.15[d]	-0.23
Change between E2 and C	2.31	1.51	-0.68	5.29	0.13	0.14
Change between E2 and E1	6.56	2.02	2.54	10.59	**0.005**[d]	0.37

E1: experimental group with low implementation, E2: experimental group with high implementation
C: control group
Δ0[a]: difference in change from T0 to T1 between C and E2
Δ1[b]: difference in change from T0 to T1 between E1 and E2
[c] overall change between the three groups
[d] p-value corrected with Bonferroni test

Quality of Caregivers' Behaviour in dementia care (PPW & MSP)

Subscale PPW (range 0 - 36)	Δ	Std. Error	95% Confidence Interval			
			Lower Bound	Upper Bound	*p*-value	Cohen's *d*
Δ0[a]	3.43	1.56	0.33	6.53	**0.003**[c]	
Δ1[b]	7.36	2.22	2.98	11.75		
Post hoc analyses						
Change between E1 and C	-3.74	2.29	-8.30	0.81	0.106	-0.19
Change between E2 and C	3.37	1.56	0.28	6.46	0.099[d]	0.20
Change between E2 and E1	7.52	2.23	3.07	11.97	**0.004**[d]	0.38

E1: experimental group with low implementation, E2: experimental group with high implementation
C: control group
Δ0[a]: difference in change from T0 to T1 between C and E2
Δ1[b]: difference in change from T0 to T1 between E1 and E2
[c] overall change between the three groups
[d] p-value corrected with Bonferroni test

Subscale MSP (range 0 - 39)	Δ	Std. Error	95% Confidence Interval			
			Lower Bound	Upper Bound	*p*-value	Cohen's *d*
Δ0[a]	-2.02	0.99	-3.99	-.061	0.078[c]	
Δ1[b]	-2.30	1.37	-5.01	0.42		
Post hoc analyses						
Change between E1 and C	.38	1.09	-1.77	2.53	0.728	0.04
Change between E2 and C	-2.06	0.97	-3.98	-0.14	0.108[d]	-0.20
Change between E2 and E1	-2.18	1.64	-5.45	1.09	0.187	-0.15

E1: experimental group with low implementation, E2: experimental group with high implementation
C: control group
Δ0[a]: difference in change from T0 to T1 between C and E2
Δ1[b]: difference in change from T0 to T1 between E1 and E2
[c] overall change between the three groups
[d] p-value corrected with Bonferroni test

Approaches to Dementia Questionaire

ADQ total score (range 19-95)	Δ	Std. Error	95% Confidence Interval			
			Lower Bound	Upper Bound	*p*-value	Cohen's *d*
Δ0[a]	0.044	1.336	-2.604	2.692	0.969[c]	
Δ1[b]	-0.513	2.161	-4.798	3.772		

ADQ subscale 'person-centred' (range 11-55)	Δ	Std. Error	95% Confidence Interval			
			Lower Bound	Upper Bound	*p*-value	Cohen's *d*
Δ0[a]	-0.721	0.930	-2.565	1.123	0.652[c]	
Δ1[b]	0.494	1.505	-2.491	3.478		

ADQ subscale 'hope' (range 8-40)	Δ	Std. Error	95% Confidence Interval			
			Lower Bound	Upper Bound	*p*-value	Cohen's *d*
Δ0[a]	0.770	0.775	-0.767	2.307	0.241[c]	
Δ1[b]	-1.416	1.254	-3.903	1.071		

E1: experimental group with low implementation, E2: experimental group with high implementation
C: control group
Δ0[a]: difference in change from T0 to T1 between C and E2
Δ1[b]: difference in change from T0 to T1 between E1 and E2
[c] overall change between the three groups

Appendix D. Changes of residents' behaviour and their careplan between T0 and T1, including post hoc analyses

Information about preferences and life history of residents in the care plan

Information about life history in care plan	Δ	Std. Error	95% Wald Confidence Interval		
			Lower	Upper	*p*-value
Δ0[a]	-0.028	0.4645	-0.938	0.883	0.952
Δ1[b]	[d]				
Information about personal preferences in care plan	**Δ**	**Std. Error**	**95% Wald Confidence Interval**		
			Lower	**Upper**	***p*-value**
Δ0[a]	-0.656	0.5207	-1.677	0.364	0.241[c]
Δ1[b]	0.428	0.7526	-1.047	1.903	

E1: experimental group with low implementation, E2: experimental group with high implementation
C: control group
Δ0[a]: difference in change from T0 to T1 between C and E2
Δ1[b]: difference in change from T0 to T1 between E1 and E2
[c] overall change between the three groups
[d] p-value corrected with Bonferroni test

Subscale items 'Working with a care plan' (ESID)

Items 'Working with a care plan'	Δ	Std. Error	95% Wald Confidence Interval		
			Lower	Upper	*p*-value
C-21: Writing important observations in care plan					
Δ0[a]	0.10	0.37	-0.62	0.82	0.96
Δ1[b]	0.11	1.03	-1.91	2.13	
C-22: Knowing where to write observations in care plan					
Δ0[a]	0.23	0.39	-0.53	0.98	0.74
Δ1[b]	0.52	0.84	-1.14	2.17	
C-23: It is clear how to use observations in the care plan					
Δ0[a]	0.16	0.513	-0.83	1.15	0.73
Δ1[b]	-0.58	0.93	-2.40	1.24	
C-24: Working according instructions in the care plan					
Δ0[a]	0.44	0.40	-0.35	1.23	0.49
Δ1[b]	0.71	1.02	-1.29	2.72	

C-25: Finding it easy to report positive topics for the care plan					
Δ0[a]	1.28	0.43	0.43	2.12	**0.012**
Δ1[b]	0.41	0.84	-1.23	2.06	
Change between E1 and C	1.22	1.14	-1.01	3.4	0.28
Change between E2 and C	1.27	0.43	0.42	2.12	**0.010[d]**
Change between E2 and E1	0.47	0.78	-1.02	1.95	0.54
C-26: Reporting psychosocial problems					
Δ0a	0.38	0.36	-0.32	1.07	0.005
Δ1b	-2.45	0.87	-4.16	-0.74	
Post hoc analyses					
Difference between E1 and C	2.88	1.13	0.67	5.08	**0.032[d]**
Difference between E2 and C	0.49	0.36	-0.21	1.18	0.17
Difference between E2 and E1	-2.35	0.55	-3.42	-1.27	**0.000[d]**
C-27: Discussing and presenting the care plan in the multidisciplinary consultation					
Δ0a	0.92	0.36	0.21	1.64	0.029
Δ1b	1.19	0.96	-0.69	3.08	
Post hoc analyses					
Difference between E1 and C	0.19	0.80	-1.38	1.76	0.82
Difference between E2 and C	0.90	0.36	0.20	1.59	**0.034[d]**
Difference between E2 and E1	1.30	1.04	-0.74	3.34	0.21
C-28: Appeal colleagues to work according instructions of the care plan					
Δ0a	0.21	0.39	-0.56	0.97	0.83
Δ1b	-0.24	1.13	-2.45	1.96	
C-29: Reporting expressions of feelings of the residents					
Δ0a	0.38	0.35	-0.31	1.06	0.56
Δ1b	0.27	0.90	-1.48	2.03	
C-30: Reporting their own reactions on residents					
Δ0a	0.62	0.33	-0.04	1.28	0.11
Δ1b	-0.47	0.79	-2.02	1.08	
C-31: Report on the reaction of the residents to me					
Δ0a	0.28	0.33	-0.36	0.93	0.56
Δ1b	-0.39	0.89	-2.14	1.35	
C-32: Writing about moments of close contact					
Δ0a	0.26	0.37	-0.46	0.99	0.77
Δ1b	0.33	1.22	-2.07	2.73	
C-33: Giving feedback					
Δ0a	0.26	0.39	-0.49	1.02	0.46
Δ1b	-0.76	0.90	-2.53	1.01	

E1: experimental group with low implementation, E2: experimental group with high implementation
C: control group
Δ0[a]: difference in change from T0 to T1 between C and E2
Δ1[b]: difference in change from T0 to T1 between E1 and E2
[c] overall change between the three groups

QUALIDEM (nine subscales)

Parameter	Δ	Std. Error	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound	*p*-value	Cohen's *d*
Care relation: 7 items (range 0-21)						
Δ0[a]	-0.33	0.57	-1.46	0.79	0.052[c]	
Δ1[b]	0.57	0.81	-1.02	2.16		
Positive affect: 6 items (range 0-18)						
Δ0[a]	2.29	0.58	1.17	3.43	**0.00**[c]	
Δ1[b]	0.88	0.82	-0.72	2.49		
Post hoc analyses						
Change between E1 and C	1.41	0.79	-0.14	2.96	0.07	0.21
Change between E2 and C	2.29	0.58	1.15	3.43	**0.0003**[d]	0.37
Change between E2 and E1	0.90	0.84	-0.75	2.56	0.28	0.12
Negative affect: 3 items (range 0-9)						
Δ0[a]	0.27	0.23	-0.16	0.70	0.46[c]	
Δ1[b]	0.16	0.31	-0.45	0.76		
Restless behaviour: 3 items (0-9)						
Δ0[a]	0.29	0.34	-0.38	0.95	0.25[c]	
Δ1[b]	-0.50	0.48	-1.45	0.44		
Positive self-image: 3 items (range 0-9)						
Δ0[a]	0.099	0.19	-0.29	0.46	0.75[c]	
Δ1[b]	-0.11	0.27	-0.63	0.42		
Social relations: 3 items (range 0-9)						
Δ0[a]	1.55	0.46	0.65	2.45	**0.003**[c]	
Δ1[b]	1.10	0.65	-0.18	2.38		
Post hoc analyses						
Change between E1 and C	0.44	0.65	-0.85	1.73	0.50	0.078
Change between E2 and C	1.56	0.46	0.66	2.46	**0.002**[d]	0.32
Change between E2 and E1	1.10	0.64	-0.17	2.37	0.09	0.20
Social isolation: 3 items (range 0-9)						
Δ0[a]	-0.15	0.22	-0.58	0.29	0.44[c]	
Δ1[b]	-0.40	0.32	-1.02	0.22		
Feeling at home: 4 items (range 0-12)						
Δ0[a]	0.40	0.33	-0.24	1.04	0.46[c]	
Δ1[b]	0.30	0.46	-0.61	1.21		
Having something to do: 2 items (range 0-6)						
Δ0[a]	0.34	0.20	-0.061	0.73	0.18[c]	
Δ1[b]	0.38	0.29	-0.18	0.95		

E1: experimental group with low implementation, E2: experimental group with high implementation
C: control group

Δ0[a]: difference in change from T0 to T1 between C and E2
Δ1[b]: difference in change from T0 to T1 between E1 and E2
c overall change between the three groups; d significant p value corrected with Bonferroni test

INTERACT items

			95% Wald Confidence Interval		
Mood:	**Δ**	**Std. Error**	**Lower**	**Upper**	***p*-value**
Fearful / anxious					
Δ0[a]	0.46	0.54	-0.60	1.52	**0.633[c]**
Δ1[b]	0.39	0.55	-0.69	1.47	
Laughing					
Δ0[a]	0.45	0.31	-0.17	1.06	0.29[c]
Δ1[b]	0.52	0.41	-0.29	1.32	
Enthusiasm					
Δ0[a]	0.68	0.33	0.042	1.32	0.10[c]
Δ1[b]	0.57	0.46	-0.32	1.47	
Talked spontaneously					
Δ0[a]	0.529	0.271	-0.0018	1.059	0.096[c]
Δ1[b]	0.607	0.388	-0.1533	1.366	
Recalled memories					
Δ0[a]	-0.22	0.54	-1.28	0.83	0.68[c]
Δ1[b]	[e]				
[e] Unable to compute due to numerical problems					
Spoke clearly					
Δ0a	0.46	0.27	-0.077	0.99	**0.020[c]**
Δ1b	1.35	0.51	0.34	2.35	
Post hoc analyses					
Difference between E1 and C	-0.87	0.52	-1.89	0.14	0.091
Difference between E2 and C	0.47	0.27	-0.066	1.00	0.086
Difference between E2 and E1	1.33	0.49	0.368	2.29	**0.020[d]**
Speech: Spoke sensibly					
Δ0a	0.30	0.31	-0.29	0.90	**0.034[c]**
Δ1b	1.28	0.49	0.32	2.24	
Post hoc analyses					
Difference between E1 and C	-1.03	0.50	-1.99	-0.054	**0.12[d]**
Difference between E2 and C	0.33	0.30	-0.26	0.91	0.28
Difference between E2 and E1	1.25	0.47	0.32	2.18	**0.025[d]**

Speech: Talked with normal length sentences	Δ	Std. Error	95% Wald Confidence Interval		*p*-value
			Lower	Upper	
Δ0a	0.16	0.27	-0.38	0.70	**0.039**[c]
Δ1b	1.25	0.49	0.29	2.21	
Post hoc analyses					
Difference between E1 and C	-1.08	0.49	-2.05	-0.11	**0.087**[d]
Difference between E2 and C	0.16	0.27	-0.37	0.70	0.555
Difference between E2 and E1	1.26	0.48	0.33	2.20	**0.025**[d]
Relating person: Appropriately eye contact					
Δ0a	0.51	0.32	-0.11	1.14	**0.030**[c]
Δ1b	1.13	0.46	0.24	2.03	
Post hoc analyses					
Difference between E1 and C	-0.66	0.49	-1.63	0.31	**0**.18
Difference between E2 and C	0.51	0.32	-0.11	1.14	**0**.11
Difference between E2 and E1	1.09	0.44	0.23	1.95	0.**038**[d]
Relating person: Touching					
Δ0a	0.55	0.40	-0.24	1.34	0.038[c]
Δ1b	0.58	0.87	-1.12	2.27	
Relating person: Related well					
Δ0a	0.98	0.32	0.35	1.61	**0.006**[c]
Δ1b	0.83	0.41	0.03	1.64	
Post hoc analyses					
Difference between E1 and C	-0.09	0.38	-0.85	0.66	0.808
Difference between E2 and C	0.91	0.37	0.19	1.64	0.030[d]
Difference between E2 and E1	0.90	0.41	0.093	1.71	0.086[d]
Relating person: listen to voice					
Δ0a	0.46	0.30	-0.13	1.04	0.011[c]
Δ1b	0.94	0.52	-0.08	1.96	
Relating person: responded to speaking					
Δ0a	0.54	0.28	-0.009	1.09	**0.044**[c]
Δ1b	0.87	0.41	0.071	1.67	
Post hoc analyses					
Difference between E1 and C	-0.36	0.42	-1.19	0.46	0.39
Difference between E2 and C	0.60	0.28	0.043	1.16	0.10d
Difference between E2 and E1	0.89	0.41	0.088	1.70	0.089[d]

Environment relating: tracked stimuli					
Δ0a	0.51	0.29	-0.064	1.09	**0.028[c]**
Δ1b	1.36	0.58	0.23	2.49	
Post hoc analyses					
Difference between E1 and C	-0.87	0.62	-2.07	0.34	0.16
Difference between E2 and C	0.50	0.29	-0.071	1.07	0.086
Difference between E2 and E1	1.35	0.56	0.25	2.46	**0.049[d]**
Environment relating: touched appropriately					
Δ0a	-0.060	0.33	-0.71	0.59	0.62[c]
Δ1b	0.43	0.51	-0.57	1.43	
Environment relating: attentive to activity					
Δ0a	0.40	0.29	-0.18	0.97	**0.009[c]**
Δ1b	1.20	0.40	0.43	1.98	
Post hoc analyses					
Difference between E1 and C	-0.83	0.43	-1.66	0.012	0.053
Difference between E2 and C	0.40	0.29	-0.17	0.96	0.171
Difference between E2 and E1	1.20	0.40	0.41	1.98	**0.009[d]**
Environment relating: responding to activity					
Δ0a	0.35	0.32	-0.27	0.98	0.14[c]
Δ1b	0.83	0.43	-0.005	1.67	
Environment relating: comments or questions about activities					
Δ0a	0.74	0.34	0.077	1.41	**0.027[c]**
Δ1b	1.16	0.59	-0.002	2.31	
Post hoc analyses					
Difference between E1 and C	-0.31	0.63	-1.54	0.93	0.63
Difference between E2 and C	0.72	0.34	0.041	1.40	**0.001[d]**
Difference between E2 and E1	1.20	0.60	0.012	2.38	0.14[d]
Prompting: did things from own initiative					
Δ0a	0.45	0.34	-0.21	1.11	**0.026[c]**
Δ1b	1.22	0.46	0.33	2.11	
Post hoc analyses					
Difference between E1 and C	-0.77	0.46	-1.67	0.12	0.089
Difference between E2 and C	0.48	0.34	-0.19	1.15	0.16
Difference between E2 and E1	1.18	0.44	0.33	2.04	**0.021[d]**
Prompting: Wandering / restless					
Δ0a	0.15	0.40	-0.64	0.94	0.93[c]
Δ1b	0.12	0.55	-0.96	1.19	
Prompting: Enjoying self					
Δ0a	0.58	0.31	-0.028	1.18	0.17[c]
Δ1b	0.36	0.42	-0.45	1.18	

Prompting: Bored / inactive					
Δ0a	0.56	0.33	-0.091	1.20	0.11[c]
Δ1b	-0.29	0.41	-1.10	0.51	
			95% Wald Confidence Interval		
Prompting: Alert / inactive	**Δ**	**Std. Error**	**Lower**	**Upper**	***p*-value**
Δ0a	0.37	0.28	-0.18	0.92	**0.19[c]**
Δ1b	0.48	0.28	-0.077	1.03	
Prompting: angry talking					
Δ0a	-0.43	1.06	-2.51	1.64	0.68[c]
Δ1b	[b]				
[b] Unable to compute due to numerical problems					
Prompting: aggressive					
Δ0a	-0.74	0.92	-2.55	1.07	0.034[c]
Δ1b	0.87	1.14	-1.36	3.11	
Prompting: negativism / complaining					
Δ0a	-0.87	0.47	-1.79	0.045	**0.015[c]**
Δ1b	0.75	0.61	-0.45	1.94	
Post hoc analyses					
Difference between E1 and C	-1.60	0.61	-2.80	-0.40	**0.028[d]**
Difference between E2 and C	-0.88	0.47	-1.80	0.047	0.063
Difference between E2 and E1	0.68	0.58	-0.46	1.82	0.24
Prompting: reluctance					
Δ0a	0.15	0.60	-1.02	1.33	0.80[c]
Δ1b	0.49	0.73	-0.94	1.91	
Prompting: repetitious mannerism					
Δ0a	0.16	0.37	-0.57	0.89	0.66[c]
Δ1b	0.91	1.03	-1.12	2.93	

E1: experimental group with low implementation, E2: experimental group with high implementation
C: control group
Δ0[a]: difference in change from T0 to T1 between C and E2
Δ1[b]: difference in change from T0 to T1 between E1 and E2
c overall change between the three groups; d significant p value corrected with Bonferroni test
The four deleted items in analysis of INTERACT were Mood: Tearful/sad (κ=0.16); Mood: Happy/content (κ=0.17); Mood: Confused (κ=0.19); Relating to person: cooperated (κ=0.19).

Mood of the residents (FACE)

Mood:	Δ	Std. Error	95% Wald Confidence Interval		*p*-value
			Lower	Upper	
Δ0[a]	0.17	0.47	-0.75	1.09	0.84[c]
Δ1[b]	0.30	0.50	-0.68	1.28	

E1: experimental group with low implementation, E2: experimental group with high implementation

C: control group / Δ0a: difference in change from T0 to T1 between C and E2.

Δ1[b]: difference in change from T0 to T1 between E1 and E2 / c overall change between the three groups.

In DSM-5 (2013), the dementia syndrome diagnosis was replaced by the term 'major neurocognitive disorders'. However, for the sake of continuity and in view of the general use of the term dementia, DSM-5 indicates it can still be used, as is the case in this thesis.
A 'major neurocognitive disorder' includes diseases such as Alzheimer's disease, vascular dementia and frontotemporal dementia. It is diagnosed when cognitive deficits interfere with independence in occupational or daily functioning, but are not caused by a delirium or other psychiatric disorder. The World Alzheimer Report states that there were 46.8 million people with dementia worldwide in 2015, and this number is expected to double every 20 years. In the Netherlands, approximately 260.000 people had dementia in 2014, of whom about 50.000 live in a nursing home. This thesis focuses on the latter group, people with dementia living in a nursing home and their caregivers.

Person-centred care is care that meets the individual preferences, needs and values of the person with dementia. Several studies show that personal care can positively affect the quality of life and behaviour of people with dementia living in nursing homes, as well as the job satisfaction of their caregivers. A new personalised intervention programme designed specifically for use in the daily 24-hour care is the Veder Contact Method (VCM).
VCM facilitates making contact with the person with dementia. In a four-step approach using theatrical, poetic and musical means of communication a reciprocal contact is encouraged in communication because feelings of recognition, confidence, and therefore also the wellbeing of the person with dementia are promoted.

Successful implementation of new (person-centred) interventions in 24-hour nursing home care proves to be difficult. This dissertation reports on a study into the implementation of VCM. In order to assess the success of the implementation, the theoretical framework RE-AIM was used. The RE-AIM framework maps the implementation process and implementation results through five constructs (Reach, Effectiveness, Adoption, Implementation, and Maintenance).

Chapter 1: General introduction
The introduction describes the issues associated with dementia. It then addresses the background of person-centred care in general and VCM in particular, and how this form of communication can improve connections to individual preferences, needs and values of the person with dementia. This is followed by an explanation of the problems associated with the implementation of new innovations / methods in the care for people with dementia, and a description of the central topic of this dissertation, namely the evaluation of the implementation of person-centred methods, more specifically VCM, in 24-hour nursing home care based on the RE-AIM framework. The introduction concludes with the description of the objectives and research questions of this thesis.

Chapter 2: The art of successful implementation of psychosocial interventions in residential dementia care: a systematic review of the literature based on the RE-AIM framework
Chapter 2 describes the systematic literature review conducted to gain insight into the

strategies used for and by professional caregivers that promote successful implementation of psychosocial interventions in nursing homes for people with dementia. Our aim was to find out how interventions were implemented in daily care and which factors made a positive or negative contribution to the implementation. We searched the digital databases PubMed, PsychInfo and Cinahl for empirical studies published between 1980 and December 2012 that described both interventions and implementation activities for integration in 24-hour care.
With an additional search based on to the 'snowball method' we included a total of 54 studies. Based on the five constructs of the RE-AIM framework (Reach, Effectiveness, Adoption, Implementation, Maintenance) these 54 studies were then analysed. In this analysis, we excluded the outcomes regarding residents. Different types of psychosocial interventions were described in the studies, such as communication training, training aimed at dealing with difficult behaviour, interventions using music, interventions that use the life history of the person with dementia, snoezelen and interventions aimed at introducing person-centred care. The used implementation strategies varied in duration, intensity and supervision. Both single (e.g. training only) and multiple implementation strategies (e.g. training with follow-up and project leader) were used. The training ranged from one-hour workshops to multi-day training sessions. Sometimes there was support from a project manager or supervisor and sometimes follow-up meetings and / or on-the-job coaching were offered.
Our review showed that a multiple implementation strategy is more likely to result in successful implementation. The included studies provided fair descriptions of the number of caregivers reached by the implementation of the intervention (Reach) and the attention given to providing caregivers with knowledge and skills needed for the effective implementation of the new intervention (Effectiveness). Less attention was paid to the constructs 'adoption', 'implementation' and 'maintenance'. It is recommended that care innovators, managers and researchers take into account before the start of the implementation how caregivers can adopt the new method and anticipate any potentially impeding (and promoting) factors of the implementation. Of importance is how the intervention can proceed, even after the project has been completed, for example by reflecting on future funding and writing a long-term implementation plan to anchor the intervention in daily care.

Chapter 3: Study protocol: Implementation of the Veder Contact Method (VCM) in daily nursing home care for people with dementia: an evaluation based on the RE-AIM framework
This chapter describes the design of a mixed-methods study to evaluate the implementation of VCM. In this study, both qualitative and quantitative research methods were used. Over a period of nine months, Foundation Theatre Veder implemented VCM on six experimental wards. The implementation process started with a team meeting. Subsequently, the interaction between residents and caregivers was observed using the Dementia Care Method (DCM) and feedback was given to the team. Then, over a period of three months, three trainings of each three hours were given. At months six and nine a three-hour follow-up training was provided. Caregivers received on-the-job coaching before to the second and third training and before to the first follow-up training.

After the implementation of VCM, a process analysis (multiple case study) was carried out first, in order to gain insight into the adoption of VCM by caregivers, and into the barriers and facilitators associated with the implementation of VCM. Caregivers and managers of the six experimental departments were interviewed.
In addition, a quasi-experimental study (pretest-posttest control group design) was conducted to measure the impact of VCM implementation on the behaviour of caregivers and on the behaviour and quality of life of the people with dementia. Six wards where VCM was implemented were compared to six similar control wards from the same nursing homes that provided care as usual. Before (T0) and after implementation of VCM (T1) caregivers were observed for three hours, and residents for six hours in the living room. During the observations, the communicative behaviour of caregivers was evaluated as well as the extent to which the caregivers applied VCM. In addition, caregivers were asked to fill in two questionnaires before and after VCM implementation; one about their attitude towards dementia and another about their job satisfaction. During the observations, the quality of life, behaviour, and mood of residents was also assessed. The extent to which personal preferences and information about the life history of the people with dementia were described in their care plans was surveyed using a specifically designed checklist. Finally, at the end of the implementation trajectory, Foundation Theatre Veder rated each of the six experimental wards with a score (between one and ten) on the extent to which their implementation was successful. We performed qualitative analysis on the data of the process evaluation based on the RE-AIM framework.
Multilevel analysis and non-parametric tests for difference-scores were performed on the collected data before and after the implementation to test whether the behaviour, attitude and job satisfaction of caregivers, and the care plan, quality of life, behaviour and mood of residents in the VCM group had changed in comparison with the control group.

Chapter 4: Implementation of the Veder Contact Method in daily nursing home care for people with dementia: a process analysis according to the RE-AIM framework
Before testing the implementation-effectiveness, the process of the VCM implementation was evaluated. In this process analysis (multiple case study), the six experimental wards (n = 6) formed the 'unit for analysis'. The aim of the process analysis was to determine the successfulness of the implementation of VCM, according to the RE-AIM framework and, on the other hand, to identify the facilitators and barriers of the implementation of VCM. Forty-two caregivers participated in focus groups and twelve stakeholders (managers and trainers of Foundation Theatre Veder) were interviewed. The 'reach' of the intervention of VCM on the six wards ranged between 43% and 86% (participation of caregivers in training and follow-up meetings). Qualitative analyses indicated that application of VCM increased the attention caregivers had for the person behind the person with dementia and this resulted in greater reciprocity in the contact with the residents (Effectiveness). This stimulated caregivers from five of the six wards to apply the method. As regards to 'adoption', caregivers indicated that the VCM training had helped them to further develop their professional competencies, both competencies needed for contact with residents and for cooperation with colleagues. Some caregivers felt uncomfortable with the theatrical aspects of the method, which created a barrier

for them to use the method. Although it did not apply to everyone, most caregivers indicated under 'implementation' that applying VCM cost them almost no extra time, which was perceived as an important facilitating factor. Barriers were insufficient management support and organisation-related problems on the ward. Sustainable implementation, i.e. 'maintenance', of VCM was not adequately addressed on five of the six wards. The management of the nursing homes was often preoccupied with inspection visits, budget cuts and staff changes.

Chapter 5: Testing the implementation of the Veder Contact Method, a theatre-based communication method in dementia care

The implementation of VCM was assessed in a one-year quasi-experimental study (pretest-posttest control group design), in which both caregivers (*n* = 136) and people with dementia (*n* = 141) participated. Foundation Theatre Veder implemented VCM on six wards and rated the degree of implementation with a score between one and ten. Six comparable control wards provided usual care. These implementation scores showed that on five of the six wards, the implementation of VCM was sufficient (scores 7.0 or 7.5). On one ward, the implementation was insufficient (score of 4.5), as evidenced by the analyses of the behavioural observations of both caregivers and residents.

On the five wards where VCM was successfully implemented, caregivers used significantly more positive communicative behaviour in contact with the residents, and were found to be able to apply VCM effectively as compared to the control wards and the ward with a low implementation score. At the same time caregivers indicated that their attitude towards dementia had not changed and they did not provide more personal background information about residents in their care plan after the implementation. Compared to the control wards and the ward where VCM was poorly implemented, the residents of the five experimental wards with a high implementation score showed a significantly higher quality of life on the aspects 'positive affect' and 'social relations'. The behaviour of the residents of the five wards with high implementation scores also improved significantly on eleven items related to speech, eye contact, responding to the environment / activities and taking initiative. No change was found in the mood of residents. The changed behaviour of caregivers and residents confirms the partial success of the implementation of VCM on five of the six experimental wards. Distinguishing between wards on how well they implemented provided important insight into factors that are critical to implementation.

Chapter 6: Does working with the Veder Contact Method influence the job satisfaction of caregivers? A nonrandomized controlled trial in nursing homes for people with dementia

Results of previous studies show ambiguous results regarding the influence of the use of person-centred care on the job satisfaction of caregivers. In the same quasi-experimental study (pretest-posttest control group design) we examined whether the use of VCM had positively affected the job satisfaction of caregivers of six experimental wards (*n* = 75) as compared to caregivers of the six control wards (*n* = 36) who had provided usual care to people with dementia. Before and after the implementation of VCM caregivers of all twelve departments completed a questionnaire on job satisfaction. Additional qualitative research was conducted

among 42 caregivers and eleven managers of the experimental wards using data from the previously held focus groups and interviews. The quantitative analyses showed that the application of VCM in daily care had not affected the caregivers' work and time pressure, job satisfaction, autonomous decision making, social support from colleagues or supervisors. In the focus groups and interviews, some caregivers and managers reported that implementing VCM had contributed to their job satisfaction: by using VCM they were more able to handle difficult behaviour and a depressed mood of the residents, and the implementation trajectory had made a positive contribution to team building. It is concluded that further research into the relationship between the provision of person-centred care and the job satisfaction of caregivers is desirable. It is also necessary to reflect on whether the instruments chosen to determine job satisfaction in the nursing home setting were the correct ones.

Chapter 7: General Discussion

This last chapter describes the results of this dissertation, followed by a reflection on the results. In addition, some methodological considerations are described as well as recommendations for future research and clinical psychogeriatric care. This thesis shows that person-centred communication, for example in the form of the Veder Contact Method, has an important added value for the quality of life (positive affect, social relations, communication) of the people with dementia. Simultaneously, this thesis demonstrates that sustainable implementation of a person-centred communication method in daily 24-hour care is still difficult. Despite the fact that the method was specifically adapted for implementation in daily 24-hour care, a multiple implementation strategy was utilised and clear agreements were made with managers prior to the implementation, the implementation of VCM has been partially successful on five of the six experimental wards. Also, it remains to be seen whether the five wards will be able to achieve sustainable implementation of the method. Due to the limited duration of our study, we could not evaluate the long-term implementation.

With our research, we did not fully control the implementation error. As sustainable implementation proves to be particularly difficult, we recommend the use of so-called hybrid designs for future research on the effects of (new) person-centred interventions for psychogeriatric practice. These designs focus on (limited) effect research as well as the implementation process (prevention of implementation error and understanding of facilitating and hindering factors). We also advise use of the RE-AIM framework as an implementation model, as it focuses on both outcomes and the implementation process. Despite the expected (long-term) unstable circumstances of psychogeriatric practice, we recommend that VCM can be widely implemented, and a long-term (two to five-year) implementation plan be drawn up in cooperation with Foundation Theatre Veder and the management of the nursing homes.

Finally, we recommend to educational institutions that they include person-centred communication methods in general and the Veder Contact Method specifically in the vocational nursing education programme and the curriculum of bachelors of nursing, so that caregivers get used to recognising the human being behind the person with dementia from the very beginning of their careers, and learn how to validate the personhood of people with dementia.

Samenvatting

(Summary in Dutch)

In de DSM-5 (2013) is het syndroom dementie als diagnose vervangen door de term 'ernstige neurocognitieve stoornis'. Vanwege de continuïteit en de algemene bekendheid van de term dementie, geeft DSM-5 tegelijkertijd aan dat dementie als term nog wel gebruikt kan worden, zo ook in dit proefschrift. 'Ernstige neurocognitieve stoornissen', onder andere de ziekte van Alzheimer, vasculaire dementie en frontotemporale dementie, worden gediagnosticeerd wanneer het cognitieve functioneren achteruitgaat in combinatie met veranderingen in gedrag die het dagelijks functioneren zichtbaar beperken. Uitgesloten moet worden dat het verminderd cognitief functioneren wordt veroorzaakt door een delier of een andere psychiatrische stoornis. Het Wereld Alzheimer Rapport beschrijft dat er in 2015 wereldwijd 46.8 miljoen mensen met dementie waren, en zij verwachten dat dit aantal elke 20 jaar zal verdubbelen. In Nederland hadden in 2014 ongeveer 260.000 mensen dementie, waarvan ongeveer 50.000 in een woonzorg/instelling (verpleeghuis) verbleven. Dit proefschrift richt zich op deze laatste groep, mensen met dementie die in een woon/zorginstelling verblijven en hun zorgverleners.

Persoonsgerichte zorg is zorg, die aansluit bij de individuele voorkeuren, behoeften en waarden van de persoon met dementie. Verschillende studies tonen aan dat persoonsgerichte zorg de kwaliteit van leven en het gedrag van mensen met dementie in woon/zorginstelling, als ook de arbeidstevredenheid van hun zorgverleners positief kan beïnvloeden. Een nieuwe persoonsgerichte interventie, speciaal ontwikkeld voor toepassing in de dagelijkse 24-uurs zorg, is de Veder Contact Methode (VCM). VCM helpt het contact met de persoon met dementie te vergemakkelijken. In vier stappen en gebruik makend van theatrale, poëtische en muzikale communicatie wordt een wederkerig contact in de communicatie gestimuleerd, doordat gevoelens van herkenning, zelfvertrouwen en daarmee ook welbevinden bij de persoon met dementie worden bevorderd.

Het goed implementeren van nieuwe (persoonsgerichte) interventies in de 24-uurs verpleeghuiszorg blijkt lastig te zijn. Dit proefschrift doet verslag van een onderzoek naar de implementatie van VCM. Om het succes van de implementatie te kunnen beoordelen werd als theoretisch kader het RE-AIM framework gebruikt. Het RE-AIM framework brengt aan de hand van vijf constructen (Reach, Effectiveness, Adoption, Implementation and Maintenance) het proces en de resultaten van de implementatie in kaart.

Hoofdstuk 1: Algemene introductie
De introductie beschrijft de problematiek die met dementie gepaard gaat. Vervolgens wordt de achtergrond beschreven van persoonsgerichte zorg in het algemeen en van VCM in het bijzonder en hoe deze vorm van communicatie de aansluiting bij individuele voorkeuren, behoeften en waarden van de persoon met dementie kan verbeteren. Daarna worden de problemen die gepaard gaan met de implementatie van nieuwe innovaties/methodes in

de zorg voor mensen met dementie beschreven, alsmede het centrale onderwerp van dit proefschrift, namelijk de evaluatie van de implementatie van persoonsgerichte methoden in de 24-uurs verpleeghuiszorg, meer specifiek VCM, aan de hand van het RE-AIM framework. De introductie wordt afgesloten met de beschrijving van de doelen en onderzoeksvragen van dit proefschrift.

Hoofdstuk 2: De kunst van het succesvol implementeren van psychosociale interventies in de 24-uurs zorg in woon/zorginstellingen voor mensen met dementie: een systematisch literatuuronderzoek gebaseerd op het RE-AIM framework
In hoofdstuk 2 wordt het systematisch literatuuronderzoek beschreven dat we hebben uitgevoerd om inzicht te krijgen in de voor en door professionele zorgverleners gebruikte strategieën om een succesvolle implementatie van psychosociale interventies in woon/zorginstellingen voor mensen met dementie te bevorderen. We wilden weten hoe de interventies in de dagelijkse zorg waren geïmplementeerd en welke factoren een positieve dan wel negatieve bijdrage aan de implementatie hadden geleverd. We zochten in de digitale databanken van PubMed, PsychInfo en Cinahl naar empirische studies gepubliceerd tussen 1980 en december 2012, die interventies én implementatie-activiteiten voor integratie in de 24-uurs zorg beschreven. Met aanvullend zoeken volgens de 'sneeuwbal-methode' includeerden we in totaal 54 studies. Aan de hand van de vijf constructen van het RE-AIM framework (Reach, Effectiveness, Adoption, Implementation, Maintenance) werden 54 studies vervolgens geanalyseerd. Bij deze analyse lieten we in de studies beschreven uitkomsten van bewoners buiten beschouwing. Verschillende typen psychosociale interventies werden in de studies beschreven, zoals communicatietrainingen, trainingen gericht op omgaan met onbegrepen gedrag, interventies die gebruik maakten van muziek, interventies die de levensgeschiedenis van de persoon met dementie inzetten, snoezelen en interventies die gericht waren op het invoeren van persoons-georiënteerde zorg. De gehanteerde implementatie strategieën varieerden wat betreft duur, intensiteit en begeleiding. Zowel enkelvoudige (bijvoorbeeld alleen een training) als meervoudige implementatie strategieën (bijvoorbeeld training met follow-up en projectleider) werden ingezet. De trainingen varieerden van workshops van één uur tot meerdaagse trainingen. Soms was steun van een projectleider of leidinggevende aanwezig en soms werden follow-up bijeenkomsten en/of coaching-on-the-job aangeboden. Uit dit literatuuronderzoek blijkt dat een meervoudige implementatie strategie meer kans geeft op een succesvolle implementatie. De geïncludeerde studies beschreven redelijk goed het aantal zorgverleners dat met de implementatie van de interventie was bereikt (reach) en de aandacht die werd besteed om zorgverleners kennis en vaardigheden bij te brengen voor een goede uitvoering van de nieuwe interventie. Er bleek echter weinig aandacht voor de aspecten adoption, implementation en maintenance (duurzame implementatie). Aanbevolen wordt dat zowel zorgvernieuwers als onderzoekers al voor de start van de implementatie rekening houden met hoe zorgverleners zich de interventie eigen kunnen maken (adopteren), anticiperen op potentiële belemmerende (en bevorderende) factoren van de implementatie en ook nadenken hoe de interventie op langere termijn, ook na afloop van het project, voortgang kan vinden, bijvoorbeeld door na te denken over de toekomstige financiering en

het schrijven van een lange termijn implementatieplan voor borging van de interventie in de dagelijkse zorg.

Hoofdstuk 3: Onderzoeksopzet: Implementatie van de Veder Contact Methode (VCM) in de dagelijkse zorg voor mensen met dementie in woon/zorginstellingen: een evaluatie gebaseerd op het RE-AIM framework

Dit hoofdstuk beschrijft de onderzoeksopzet van een gecombineerde studie om de implementatie van VCM te evalueren. In dit onderzoek werden zowel kwalitatieve als kwantitatieve onderzoeksmethoden gebruikt. Gedurende negen maanden implementeerde Stichting Theatre Veder VCM gefaseerd op zes experimentele afdelingen. Het implementatietraject startte met een teambijeenkomst. Vervolgens werd de interactie tussen bewoners en zorgverleners geobserveerd met behulp van de Dementia Care Method (DCM) en werd dit aan het team teruggekoppeld. Daarna werden gedurende drie maanden drie trainingen van ieder drie uur gegeven. Na zes en negen maanden werd een follow-up bijeenkomst van drie uur gehouden. Voorafgaande aan de tweede en de derde training en voorafgaande aan de eerste follow-up bijeenkomst werd op de afdeling coaching-on-the-job gegeven.

Na de implementatie van VCM werd eerst een procesanalyse uitgevoerd (multiple case study), om daarmee inzicht te krijgen in de 'adoptie' van VCM door de zorgverleners en in de bevorderende en belemmerende factoren die gepaard gaan met de implementatie van VCM. Zorgverleners en managers van de zes experimentele afdelingen werden geïnterviewd.

Daarnaast werd een quasi-experimenteel onderzoek (voor- en nameting met controlegroep) opgezet om het effect van de implementatie van VCM op het gedrag van zorgverleners en op het gedrag en de kwaliteit van leven van de mensen met dementie te meten. Zes afdelingen waar VCM was geïmplementeerd werden vergeleken met zes vergelijkbare controle afdelingen van dezelfde instellingen waar gebruikelijke zorg werd verleend. Voor (T0) en na afloop van de implementatie (T1) werden zorgverleners gedurende drie uur en bewoners gedurende zes uur in de huiskamer geobserveerd. Tijdens de observaties werd zowel het communicatief gedrag van zorgverleners beoordeeld als de mate waarin de zorgverleners VCM toepasten. Bovendien werden zorgverleners voor- en na afloop van de implementatie gevraagd in een enquête hun attitude ten opzichte van dementie aan te geven en werden zij gevraagd hun mening te geven over hun arbeidstevredenheid. Tijdens de observaties werd ook de kwaliteit van leven, gedrag en stemming van de bewoners beoordeeld. De mate waarin persoonlijke voorkeuren en informatie over de levensgeschiedenis van de bewoners in het zorgplan terug te vinden was, werd geïnventariseerd met behulp van een zelf ontworpen checklist. Tot slot beoordeelde Stichting Theatre Veder na afloop van de implementatie met behulp van een rapportcijfer (cijfer tussen één en tien) de mate waarin de implementatie op de zes experimentele afdelingen volgens hun was geslaagd. De data van de procesevaluatie zijn aan de hand van het RE-AIM framework kwalitatief geanalyseerd. Multilevel analyses en non-parametrische verschiltoetsen zijn uitgevoerd op de verzamelde gegevens voor en na de implementatie om te toetsen of het gedrag, de attitude en de arbeidstevredenheid van zorgverleners en het zorgplan, de kwaliteit van

leven, het gedrag en de stemming van bewoners in de VCM groep waren veranderd ten opzichte van de controle groep.

Hoofdstuk 4: Implementatie van de Veder Contact Methode in de 24-uurs zorg in een woon/ zorginstelling voor mensen met dementie: een procesanalyse volgens het RE-AIM framework
Voordat het implementatie-effect van VCM is getoetst, is het proces van de implementatie van VCM geanalyseerd. In de procesanalyse (multiple case study) vormden de zes experimentele afdelingen (*n* = 6) de 'eenheid van analyse'. De procesanalyse had tot doel om enerzijds de mate van implementatie aan de hand van het RE-AIM framework in kaart te brengen en anderzijds de bevorderende en belemmerende factoren van de implementatie van VCM te achterhalen. Twee en veertig zorgverleners participeerden in focusgroepen, en twaalf stakeholders (managers en trainers van Stichting Theatre Veder) werden geïnterviewd. De 'reach' van de interventie op de zes afdelingen varieerde tussen 43% en 86% (deelname van zorgverleners aan de training en follow-up bijeenkomsten). Kwalitatieve analyses gaven aan dat bij het toepassen van VCM de zorgverleners meer aandacht hadden voor de mens achter de persoon met dementie en er meer wederkerigheid in het contact met de bewoners ontstond ('effectiveness'). Dit stimuleerde zorgverleners van vijf van de zes afdelingen om de methode toe te passen. Voorts gaven de zorgverleners aan dat de VCM training hen had geholpen hun professionele competenties verder te ontwikkelen ('adoption'), zowel competenties voor het contact met de bewoners als voor de samenwerking met collega's. Sommige zorgverleners gaven aan zich ongemakkelijk te voelen bij de theatrale aspecten van de methode, wat hun belemmerde om de methode uit te voeren. Hoewel dat niet voor iedereen gold, gaven de meeste zorgverleners aan dat het toepassen van VCM hen vrijwel geen extra tijd kostte, wat als een belangrijke bevorderende factor voor implementatie werd ervaren ('implementation'). Belemmerende factoren waren onvoldoende steun van het management en organisatiegerelateerde problemen op de afdeling. Aan duurzame implementatie ('maintenance') van VCM werd op vijf van de zes afdelingen onvoldoende aandacht besteed. Het management werd veelal in beslag genomen door inspectiebezoek, bezuinigingen en personeelswisselingen.

Hoofdstuk 5: Toetsen van de implementatie van de Veder Contact Methode, een op theatrale aspecten gebaseerde communicatiemethode in de zorg voor mensen met dementie
Met behulp van een één jaar durend quasi-experimenteel onderzoek (voor- en nameting met controlegroep), waarin zowel zorgverleners (*n* = 136) als bewoners met dementie (*n* = 141) participeerden, is de implementatie van VCM getoetst. Stichting Theater Veder implementeerde VCM op zes afdelingen en beoordeelde de mate van implementatie met een rapportcijfer van één tot tien. Zes vergelijkbare controle afdelingen verleenden de gebruikelijke zorg. Uit de implementatie scores van Stichting Theater Veder bleek dat op vijf van de zes afdelingen het implementatietraject van VCM redelijk goed was verlopen (cijfer 7.0 of 7.5). Op één afdeling was de implementatie onvoldoende tot uitvoer gekomen (cijfer 4.5), wat ook bleek uit de analyses van de gedragsobservaties van zowel zorgverleners als bewoners. Op de vijf afdelingen waar VCM succesvol was geïmplementeerd bleken

zorgverleners in vergelijking met de controle afdelingen en de slecht geïmplementeerde afdeling, na afloop van de implementatie significant meer positief communicatief gedrag te vertonen in het contact met de bewoners en bleken zij VCM effectief toe te kunnen toepassen. Tegelijkertijd bleek dat de attitude van zorgverleners ten opzichte van dementie niet was veranderd. Zorgverleners beschreven na afloop van de implementatie ook niet meer persoonlijke achtergrondinformatie over de bewoners in het zorgplan. De bewoners van de vijf experimentele afdelingen toonden, in vergelijking met de controle-afdeling en de afdeling waar VCM slecht geïmplementeerd was, na afloop van de implementatie een significant hogere kwaliteit van leven op de aspecten 'positief affect' en 'sociale relaties'. Ook bleek hun gedrag op elf items (gerelateerd aan spraak, oogcontact, reageren op de omgeving/ activiteiten en initiatief nemen) significant te zijn verbeterd. Er werd geen verandering gevonden in de stemming van bewoners. Het veranderde gedrag van zorgverleners en bewoners bevestigt dat de implementatie van VCM op vijf van de zes experimentele afdelingen (gedeeltelijk) is geslaagd. Onderscheid maken tussen afdelingen waar het implementatietraject goed en minder goed is verlopen gaf een belangrijk inzicht in factoren die cruciaal zijn voor de implementatie.

Hoofdstuk 6: Beïnvloedt de implementatie van VCM de arbeidstevredenheid van de zorgverleners? Een niet-gerandomiseerd onderzoek in woon/zorginstellingen voor mensen met dementie

Resultaten van eerdere onderzoeken geven ambigue uitkomsten wat betreft de invloed van het toepassen van persoonsgerichte zorg op de arbeidstevredenheid van zorgverleners. Binnen het onderzoek naar de VCM methode is tevens door middel van een pretest-post test controlegroep design (quasi-experimenteel onderzoek) getoetst in hoeverre het toepassen van VCM de arbeidstevredenheid van zorgverleners (n = 75) van de zes experimentele afdelingen positief had beïnvloed in vergelijking met zorgverleners (n = 36) van de zes controle afdelingen die gebruikelijke zorg hadden verleend aan mensen met dementie. Voor en na de implementatie van VCM vulden de zorgverleners van alle twaalf afdelingen een enquête in. Aanvullend kwalitatief onderzoek werd uitgevoerd onder 42 zorgverleners en elf managers van de experimentele afdelingen, gebruik makend van data uit de eerder gehouden focusgroepen en interviews. Uit de kwantitatieve analyses bleek dat het toepassen van VCM in de dagelijkse zorgverlening geen invloed had gehad op de zorgverleners' werkdruk, arbeidstevredenheid, zelfstandig beslissingen nemen, en sociale steun van collega's of hun leidinggevende. In de focusgroepen en interviews gaven sommige zorgverleners en managers aan dat de implementatie van VCM hun arbeidstevredenheid wel in positieve zin had beïnvloed: met behulp van VCM konden zij onbegrepen gedrag en een sombere stemming van de bewoners beter hanteren, en ook had het implementatietraject een positieve bijdrage geleverd aan de teambuilding. Geconcludeerd wordt dat nader onderzoek naar de relatie tussen het verlenen van persoonsgerichte zorg en de arbeidstevredenheid van zorgverleners wenselijk is. Reflectie op de juistheid van de gekozen meetinstrumenten voor het bepalen van de arbeidstevredenheid in de verpleeghuissetting is eveneens nodig.

Hoofdstuk 7: Algemene discussie

Dit laatste hoofdstuk beschrijft een samenvatting van de resultaten van dit proefschrift, gevolgd door een reflectie op de resultaten. Daarnaast worden enkele methodologische overwegingen beschreven, alsmede aanbevelingen voor toekomstig onderzoek en voor de klinische psychogeriatrische zorg. Dit proefschrift toont aan dat persoonsgerichte communicatie, bijvoorbeeld in de vorm van de Veder Contact Methode, een belangrijke meerwaarde heeft voor de kwaliteit van leven (positief affect, sociale relaties, communicatie) van mensen met dementie. Tegelijkertijd toont dit onderzoek aan dat duurzaam implementeren van een persoonsgerichte communicatiemethode in de 24-uurszorg lastig is. Ondanks het feit dat de methode specifiek aangepast is voor uitvoering tijdens het dagelijks handelen van de zorgverleners, er gebruik is gemaakt van een meervoudige implementatiestrategie en er voorafgaande aan de implementatie concrete afspraken met managers zijn gemaakt, is de implementatie van VCM gedeeltelijk geslaagd op vijf van de zes experimentele afdelingen. Het is bovendien de vraag of het de vijf afdelingen lukt de methode duurzaam te implementeren. Door de beperkte duur van ons onderzoek konden we dit niet op de lange termijn toetsen.

Met ons onderzoek hebben we de 'implementatie error' niet volledig onder controle gehad. Juist omdat duurzame implementatie zo bijzonder lastig blijkt te zijn, bevelen wij aan om in toekomstig onderzoek naar effecten van (nieuwe) persoonsgerichte interventies voor toepassing in de psychogeriatrische praktijk gebruik te maken van zogenoemde 'hybride designs', waarin zowel aandacht is voor (beperkt) effect onderzoek alsmede voor het implementatieproces (voorkomen van de implementatie-error en inzicht krijgen in bevorderende en belemmerende factoren). Tevens adviseren wij om het RE-AIM framework als implementatie model te gebruiken, waarin aandacht is voor zowel uitkomsten als het proces. Ondanks de naar verwachting blijvende instabiele omstandigheden van de psychogeriatrische praktijk adviseren wij de methode breed te implementeren, waarbij, van tevoren, in samenwerking met Stichting Theater Veder en het management van de instellingen een langdurig (twee tot vijf jaar) implementatieplan wordt opgesteld. Tot slot bevelen wij middelbaar en hoger verpleegkundig beroepsonderwijs aan om persoonsgerichte communicatie methoden in het algemeen en de Veder Contact Methode in het bijzonder, op te nemen in het onderwijsprogramma, zodat zorgverleners vanaf het begin van hun loopbaan aandacht hebben voor het erkennen van de mens achter de persoon met dementie en leren hoe zij de persoonlijkheid van mensen met dementie kunnen bevestigen.

Gearfetting

(Summary in Frisian)

Yn 'e DSM-5 (2013) is it syndroom deminsy as diagnoaze ferfongen troch de term 'slimme neurokognitive steurnis'. Omreden fan kontinuiteit en 'e algemiene bekendens fan 'e term deminsy, jout DSM-5 tagelyk oan, dat deminsy as term noch wol brûkt wurde kin. Sa wurdt it yn dit proefskrift ek dien. 'Slimme neurokognitive steurnissen', ûnder oare de sykte fan Alzheimer, faskulêre deminsy en frontotemporale deminsy, wurde diagnostisearre as it kognitive funksjonearjen efterútgiet yn kombinaasje mei feroarings yn hâlden en dragen dy't it deistich funksjonearjen dúdlik ûnderstek dogge. Utsletten moat wurde, dat it fermindere kognityf funksjonearjen feroarsake wurdt troch in delier of in oare psychiatryske steurnis. It Wrâld Alzheimer Rapport beskriuwt dat der yn 2015 op 'e hiele wrâld 46.8 miljoen minsken mei deminsy wiene. De rapportskriuwers ferwachtsje, dat dat oantal elke tweintich jier twa kear sa grut wurde sil. Yn Nederlân hiene yn 2014 likernôch 260.000 minsken deminsy, fan wa't sawat 50.000 yn in wensoarch/ynstelling (ferpleechhûs) tahâlden. Dit proefskrift giet oer dy lêste groep, minsken mei deminsy dus dy't yn in wen/soarchynstelling sitte en dy harren soarchferlieners.

Op 'e persoan rjochte soarch is soarch, dy't oanslút by de yndividuele foarkarren, behoeften en wearden fan 'e persoan mei deminsy. Underskate stúdzjes toane oan, dat op 'e persoan rjochte soarch de kwaliteit fan libjen en it hâlden en dragen fan minsken mei deminsy yn wen/soarchynstellings, krektlyk as de arbeidstefredenens fan harren soarchferlieners, posityf beynfloedzje kin. In nije op 'e persoan rjochte yntervinsje, spesjaal ûntwikkele foar it tapassen yn 'e deistige 24-oere-soarch, is de Veder Contact Methode (VCM). VCM helpt om it kontakt mei de persoan mei deminsy makliker te meitsjen. Yn fjouwer stappen, en dêrby teatrale, poëtyske en muzikale kommunikaasje brûkend, wurdt in kontakt fan wjerskanten yn 'e kommunikaasje stimulearre, trochdat gefoelens fan werkenning, selsfertrouwen en dêrmei ek it wolbefinen by de persoan mei deminsy befoardere wurde.

It goed ymplemintearjen fan nije (op 'e persoan rjochte) yntervinsjes yn 'e 24-oere-ferpleechhûssoarch hat fan bliken dien, dat it in lestige saak is. Dit proefskrift docht ferslach fan in ûndersyk nei it ymplemintearjen fan VCM. Om it sukses fan it ymplemintearjen beoardielje te kinnen, waard as teoretysk ramt it RE-AIM framework brûkt. It RE-AIM framework bringt oan 'e hân fan fiif konstrukten (Reach, Effectiveness, Adoption, Implementation and Maintenance) it proses en 'e resultaten fan it ymplemintearjen yn kaart.

Haadstik 1: Algemiene yntroduksje
De yntroduksje beskriuwt de problematyk dy't mei deminsy anneks is. Dêrnei wurdt de eftergrûn beskreaun fan op 'e persoan rjochte soarch oer it generaal en fan VCM yn it bysûnder en hoe't dy foarm fan kommunikaasje it oansluten by yndividuele foarkarren, behoeften en wearden fan 'e persoan mei deminsy ferbetterje kin. Dêrnei wurde de tûkelteammen dy't mank geane mei it ymplemintearjen fan nije ynnovaasjes/metoades yn 'e soarch foar minsken mei

deminsy, beskreaun, en ek it sintrale ûnderwerp fan dit proefskrift, nammentlik it evaluearjen fan it ymplemintearjen fan op 'e persoan rjochte metoaden yn 'e 24-oere-ferpleechhûssoarch, mear spesifyk VCM, oan 'e hân fan it RE-AIM framework. De yntroduksje wurdt ôfsletten mei it beskriuwen fan 'e doelen en 'e ûndersyksfragen fan dit proefskrift.

Haadstik 2: De keunst fan it mei sukses ymplemintearjen fan psychososjale yntervinsjes yn 'e 24-oere-soarch yn wen/soarchynstellings foar minsken mei deminsy: in systematysk literatuerûndersyk basearre op it RE-AIM framework

Yn haadstik 2 wurdt it systematysk literatuerûndersyk beskreaun, dat wy útfierd hawwe om ynsjoch te krijen yn 'e foar en troch profesjonele soarchferlieners brûkte strategyen, om in suksesfolle ymplemintaasje fan psychososjale yntervinsjes yn wen/soarchynstellings foar minsken mei deminsy te befoarderjen. Wy woene witte, hoe't de yntervinsjes yn 'e deistige soarch ymplemintearre wiene en hokker faktoaren oft in positive of negative bydrage oan it ymplemintearjen levere hawwe. Wy sochten yn 'e digitale databanken fan PubMed, PsychInfo en Cinahl om empiryske stúdzjes dy't publisearre binne tusken 1980 en desimber 2012, en dy't yntervinsjes én ymplemintaasje-aktiviteiten foar yntegraasje yn 'e 24-oere-soarch beskreaune. Mei oanfoljend sykjen neffens de 'sniebal-metoade' ynkludearren wy mei-inoar fjouwerenfyftich stúdzjes. Oan 'e hân fan 'e fiif konstrukten fan it RE-AIM framework (Reach, Effectiveness, Adoption, Implementation, Maintenance) waarden dy fjouwerenfyftich stúdzjes dêrnei analysearre. By dy analyze lieten wy de útkomsten fan bewenners dy't yn 'e stúdzjes beskreaun waarden, gewurde. Underskate typen psychososjale yntervinsjes waarden yn 'e stúdzjes beskreaun, lykas kommunikaasjetrenings, trenings dy't rjochte binne op it omgean mei ûnbegrepen hâlden en dragen, yntervinsjes dêr't muzyk by brûkt waard, yntervinsjes dy't de libbensskiednis fan 'e persoan mei deminsy ynsetten, slûgjen en yntervinsjes dy't rjochte wiene op it ynfieren fan op 'e persoan tasniene soarch. De ymplemintaasjestrategyen dy't brûkt binne, fariearren wat doer, yntinsiteit en begelieding oanbelanget. Der waarden sawol inkelfâldige (bygelyks allinne in trening) as mearfâldige ymplemintaasjestrategyen (bygelyks trening mei in ferfolch en mei in projektlieder) ynset. De trenings fariearren fan wurkwinkels fan ien oere oant trenings fan mear dagen. Somtiden wie der stipe fan in projektlieder of liedingjaande en somtiden waarden ferfolchgearkomsten en/of begelieding-by-it-wurk oanbean. Ut dit literatuerûndersyk hat bliken dien, dat in mearfâldige ymplemintaasjestrategy mear kâns biedt op in suksesfol ymplemintearjen. De ynkludearre stúdzjes beskriuwe ridlik goed it tal soarchferlieners dat mei it ymplemintearjen fan 'e yntervinsje berikt wie (reach) en it omtinken dat jûn waard om soarchferlieners kunde en feardichheden by te bringen foar it goed útfieren fan 'e nije yntervinsje. It die lykwols bliken, dat der te min omtinken wie foar de aspekten adoption, implementation en maintenance (duorsume ymplemintaasje). Oanrikkemandearre wurdt, dat sawol soarchfernijers as ûndersikers al foar it begjinnen mei de ymplemintaasje rekken hâlde mei hoe't soarchferlieners harren de yntervinsje eigen meitsje kinne (adoptearje), antisipearje op potinsjele opkearende (en befoarderjende) faktoaren fan it ymplemintearjen en ek neitinke oer hoe't de yntervinsje op langere termyn, ek nei't it projekt dien is, fuortgong fine kin, bygelyks troch nei te tinken oer de takomstige

finansiering en it skriuwen fan in lange termyn-ymplemintaasjeplan foar it boargjen fan 'e yntervinsje yn 'e deistige soarch.

Haadstik 3: Undersyksopset: It ymplemintearjen fan 'e Veder Contact Methode (VCM) yn 'e deistige soarch foar minsken mei deminsy yn wen/soarchynstellings: in evaluaasje dy't basearre is op it RE-AIM framework

Dit haadstik beskriuwt de ûndersyksopset fan in kombinearre stúdzje, om it ymplemintearjen fan VCM te evaluearjen. Yn dit ûndersyk waarden sawol kwalitative as kwantitative ûndersyksmetoaden brûkt. Yn in tiid fan njoggen moannen ymplemintearre Stichting Theatre Veder yn ûnderskate fazen VCM op seis eksperimintele ôfdielings. It ymplemintaasjetrajekt begûn mei in tiimgearkomste. Dêrnei waard de ynteraksje tusken bewenners en soarchferlieners observearre mei help fan 'e Dementia Care Method (DCM) en waard soks oan it tiim weromkeppele. Neitiid waarden yn trije moannen trije trenings fan hieltyd trije oeren jûn. Nei seis en njoggen moannen waard in ferfolchgearkomste fan trije oeren hâlden. Foarôfgeand oan 'e twadde en 'e tredde trening en foarôfgeand oan 'e earste ferfolchgearkomste, waard op 'e ôfdieling begelieding-by-it-wurk jûn.

Nei it ymplemintearjen fan VCM, waard earst in prosesanalyze útfierd (multiple case study), om dêrmei ynsjoch te krijen yn it 'adoptearjen' fan VCM troch de soarchferlieners en yn 'e befoarderjende en opkearende faktoaren dy't anneks binne mei it ymplemintearjen fan VCM. Soarchferlieners en managers fan 'e seis eksperimintele ôfdielings waarden ûnderfrege.

Dêrnjonken waard in sabeare-eksperiminteel ûndersyk (foar- en neimjitten mei kontrôlegroep) opset, om it effekt fan it ymplemintearjen fan VCM op it hâlden en dragen fan soarchferlieners en op it hâlden en dragen en 'e kwaliteit fan libjen fan 'e minsken mei deminsy te mjitten. Seis ôfdielings dêr't VCM op ymplemintearre wie, waarden ferlike mei seis ferlykbere kontrôleôfdielings fan deselde ynstellings dêr't de wenstige soarch jûn waard. Foar (T0) en nei ôfrin fan it ymplemintearjen (T1) waarden soarchferlieners trije oeren lang en bewenners seis oeren lang yn 'e húskeamer observearre. Under de observaasjes waard sawol it kommunikatyf hâlden en dragen fan soarchferlieners beoardiele as yn hoefier't de soarchferlieners VCM tapasten. Boppedat waarden soarchferlieners fóár en nei ôfrin fan it ymplemintearjen frege om yn in enkête harren hâlding foar deminsy oer oan te jaan en waard harren frege om harren betinken te jaan oer harren arbeidstefredenens. Under de observaasjes waard ek de kwaliteit fan libjen, hâlden en dragen en moedstastân fan 'e bewenners beoardiele. Yn hoefier't persoanlike foarkarren en ynformaasje oer de libbensskiednis fan 'e bewenners yn it soarchplan werom te finen wie, waard ynventarisearre mei help fan in selsûntwurpen kontrôlelist. By einsluten beoardiele Stichting Theatre Veder nei ôfrin fan it ymplemintearjen, oan 'e hân fan in rapportsifer (sifer tusken 1 en 10), yn hoefier't it ymplemintearjen op 'e seis eksperimintele ôfdielings neffens harren slagge wie. De data fan 'e prosesevaluaasje binne oan 'e hân fan it RE-AIM framework kwalitatyf analysearre. Multilevel analyses en non-parametryske ferskiltoetsen binne útfierd op 'e data dy't sammele binne fóár en nei it ymplemintearjen. Soks, om neigean te kinnen oft it hâlden en dragen, de attitude en 'e arbeidstefredenens fan soarchferlieners en it soarchplan, de kwaliteit fan libjen,

it hâlden en dragen en 'e moedstastân fan bewenners yn 'e VCM-groep, feroare wiene yn ferliking ta de kontrôlegroep.

Haadstik 4: It ymplemintearjen fan 'e Veder Contact Methode yn 'e 24-oere-soarch yn in wen/soarchynstelling foar minsken mei deminsy: in prosesanalyze neffens it RE-AIM framework
Foardat it ymplemintaasje-effekt fan VCM hifke is, is it proses fan it ymplemintearjen fan VCM analysearre. Yn 'e prosesanalyze (multiple case study) wiene de seis eksperimintele ôfdielings (*n* = 6) de 'ienheid fan analyze'. De prosesanalyze hie oan 'e iene kant as doel om yn kaart te bringen yn hoefier't it ymplemintearjen oan 'e hân fan it RE-AIM framework slagge wie, en oan 'e oare kant om 'e befoarderjende en opkearende faktoaren fan it ymplemintearjen fan VCM te efterheljen. Twaënfjirtich soarchferlieners diene mei yn fokusgroepen, en tolve stakeholders (managers en treners fan Stichting Theatre Veder) waarden ûnderfrege. De 'reach' fan 'e yntervinsje op 'e seis ôfdielings fariearre tusken 43% en 86% (meidwaan fan soarchferlieners oan 'e trening en ferfolchgearkomsten). Kwalitative analyzes joegen oan, dat by it tapassen fan VCM de soarchferlieners mear omtinken hiene foar de minske efter de persoan mei deminsy en dat der mear kontakt fan wjerskanten mei de bewenners ûntstie ('effectiveness'). Dat motivearre soarchferlieners fan fiif fan 'e seis ôfdielings om 'e metoade ta te passen. Fierder joegen de soarchferlieners oan, dat de VCM-trening harren holpen hie om profesjonele kompetinsjes fierder te ûntwikkeljen ('adoption'); sawol kompetinsjes foar it kontakt mei de bewenners as foar it oparbeidzjen mei kollega's. Guon soarchferlieners joegen oan harren net sa noflik te fielen by de teatrale aspekten fan 'e metoade, dat harren tsjinhâlde om 'e metoade út te fieren. Hoewol't dat net foar elkenien jilde, joegen de measte soarchferlieners oan dat it tapassen fan VCM harren sa goed as gjin ekstra tiid koste, dat as in wichtige befoarderjende faktor foar ymplemintearjen ûnderfûn waard ('implementation'). Opkearende faktoaren wiene: net genôch stipe fan it management en organisaasjerelatearre tûkelteammen op 'e ôfdieling. Oan it duorsum ymplemintearjen ('maintenance') fan VCM waard op fiif fan 'e seis ôfdielings net genôch omtinken jûn. It management wie foaral besteld mei ynspeksjebesite, besunigings en personielswikselingen.

Haadstik 5: Hifkjen fan it ymplemintearjen fan 'e Veder Contact Methode, in op teatrale aspekten basearre kommunikaasjemetoade yn it soargjen foar minsken mei deminsy
Yn in in jier duorjend sabeare-eksperiminteel ûndersyk (foar- en neimjitten fan 'e kontrôlegroep), dêr't sawol soarchferlieners (*n* = 136) as bewenners mei deminsy (*n* = 141) oan meidiene, is it ymplemintearjen fan VCM hifke. Stichting Theater Veder ymplemintearre VCM op seis ôfdielings en hifke yn hoefier't it ymplemintearjen slagge wie mei it takennen fan in rapportsifer fan 1 oant 10. Seis ferlykbere kontrôleôfdielings joegen de wenstige soarch. Ut 'e ymplemintaasjeskoares fan Stichting Theater Veder docht bliken, dat op fiif fan 'e seis ôfdielings it ymplemintaasjetrajekt fan VCM ridlik goed ferrûn wie (sifer 7.0 of 7.5). Op ien ôfdieling wie it ymplemintearjen net fier genôch trochfierd (sifer 4.5), dat ek bliken die út 'e analyzes fan 'e hâlden en dragenobservaasjes fan sawol soarchferlieners as bewenners. Op 'e fiif ôfdielings dêr't VCM mei sukses ymplemintearre wie, die bliken dat de soarchferlieners, yn ferliking mei de kontrôleôfdielings en 'e net goed ymplemintearre

ôfdieling, nei ôfrin fan it ymplemintearjen signifikant mear posityf kommunikatyf hâlden en dragen fertoanden yn it kontakt mei de bewenners en waard VCM effektyf troch harren tapast. Tagelyk die bliken dat de hâlding fan soarchferlieners foar deminsy oer net feroare wie. Soarchferlieners skreaune nei ôfrin fan it ymplemintearjen ek net mear persoanlike eftergrûnynformaasje oer de bewenners yn it soarchplan. De bewenners fan 'e fiif eksperimintele ôfdielings toanden, yn ferliking mei de kontrôleôfdieling en 'e ôfdieling dêr't VCM net goed op ymplemintearre wie, nei ôfrin fan it ymplemintearjen in signifikant hegere kwaliteit fan libjen op 'e aspekten 'posityf affekt' en 'sosjale relaasjes'. Fierder die bliken, dat harren hâlden en dragen op alve items (relatearre oan spraak, eachkontakt, reagearjen op 'e omjouwing/aktiviteiten en inisjatyf nimmen) signifikant better wurden wie. Gjin feroaring waard fûn yn 'e moedstastân fan bewenners. It feroare hâlden en dragen fan soarchferlieners en bewenners befestiget dat it ymplemintearjen fan VCM op fiif fan 'e seis eksperimintele ôfdielings (foar in part) slagge is. Underskie meitsje tusken ôfdielings dêr't it ymplemintaasjetrajekt goed en minder goed ferrûn is, joech in wichtich ynsjoch yn faktoaren dy't krúsjaal binne foar it ymplemintearjen.

Haadstik 6: Beynfloedet it ymplemintearjen fan VCM de arbeidstefredenens fan 'e soarchferlieners? In net lok wat jouste ûndersyk yn wen/soarchynstellings foar minsken mei deminsy

As neigien wurdt wat oft eardere ûndersiken oan útkomsten opsmiten hawwe, dan docht bliken, dat dy útkomsten ambigu binne wat de ynfloed fan it tapassen fan op 'e persoan rjochte soarch op 'e arbeidstefredenens fan soarchferlieners oanbelanget. Yn it ramt fan it ûndersyk nei de VCM-metoade is ek mei help fan in pretest-post test kontrôlegroep design (sabeare-eksperiminteel ûndersyk) hifke yn hoefier't it tapassen fan VCM de arbeidstefredenens fan soachferlieners (*n* = 75) fan 'e seis eksperimintele ôfdielings posityf beynfloede hie, yn ferliking mei soarchferlieners (*n* = 36) fan 'e seis kontrôleôfdielings dy't wenstige soarch jûn hiene oan minsken mei deminsy. Foar en nei it ymplemintearjen fan VCM follen de soarchferlieners fan alle tolve ôfdielings in enkête yn. Oanfoljend kwalitatyf ûndersyk waard útfierd ûnder twaënfjirtich soarchferlieners en alve managers fan 'e eksperimintele ôfdielings. Dêrby waarden data brûkt dy't ôfkomstich wiene út 'e earder hâlden fokusgroepen en fraachpetearen. Ut 'e kwantitative analyzes die bliken, dat it tapassen fan VCM yn 'e deistige soarchferliening gjin ynfloed hân hie op 'e wurkdruk dy't de soarchferlieners fielden, op harren arbeidstefredenens, harren foech om selsstannich beslissings te nimmen, en op 'e sosjale stipe fan kollega's of harren liedingjaanden. Yn 'e fokusgroepen en fraachpetearen joegen guon soarchferlieners en managers oan, dat it ymplemintearjen fan VCM harren arbeidstefredenens wol op in positive wize beynfloede hie: troch VCM koene sy better mei ûnbegrepen hâlden en dragen en in mankelike moedstastân fan 'e bewenners omgean, en it ymplemintaasjetrajekt hie ek in positive bydrage levere oan 'e teambuilding. Konkludearre wurdt, dat neier ûndersyk nei de relaasje tusken it jaan fan op 'e persoan rjochte soarch en 'e arbeidstefredenens fan soarchferlieners, winsklik is. Refleksje op oft wol de goede mjitynstruminten foar kar nommen binne by it fêststellen fan 'e arbeidstefredenens yn 'e ferpleechhhûssitewaasje, is allyksa fanneden.

Haadstik 7: Algemiene diskusje

Dit lêste haadstik jout in gearfetting fan 'e resultaten fan dit proefskrift, dy't folge wurdt troch in refleksje op dy resultaten. Fierder wurde in stikmannich metodologyske oerwagings beskreaun en wurde oanrikkemandaasjes foar takomstich ûndersyk en foar de klinyske psychogeriatryske soarch dien. Dit proefskrift toant oan, dat op 'e persoan rjochte kommunikaasje, bygelyks yn 'e foarm fan 'e Veder Contact Methode, in wichtige mearwearde hat foar de kwaliteit fan libjen (posityf affekt, sosjale relaasjes, kommunikaasje) fan minsken mei deminsy. Tagelyk toant dit ûndersyk oan, dat duorsum ymplemintearjen fan in op 'e persoan rjochte kommunikaasjemetoade yn 'e 24-oere-soarch, lestich is. Nettsjinsteande dat de metoade spesifyk makke is foar it tapassen yn it deistich dwaan en litten fan 'e soarchferlieners, der in mearfâldige ymplemintaasjestrategy brûkt is en der, foarôfgeand oan it ymplemintearjen, konkrete ôfspraken mei managers makke binne, is it ymplemintearjen fan VCM mar foar in part slagge op fiif fan 'e seis eksperimintele ôfdielings. It is boppedat noch mar de fraach, oft it de fiif ôfdielings slagget om 'e metoade duorsum te ymplemintearjen. Troch de beheinde doer fan ús ûndersyk, koene wy dat net op 'e lange termyn hifkje.

By ús ûndersyk hawwe wy de 'ymplemintaasje-error' net alhielendal ûnder kontrôle hâlde kinnen. Krekt, om't duorsum ymplemintearjen sa tige lestich blykt te wêzen, rikkemandearje wy oan om yn takomstich ûndersyk nei effekten fan (nije) op 'e persoan rjochte yntervinsjes foar it tapassen yn 'e psychogeriatryske praktyk de saneamde 'hybride designs' te brûken. Dêr is nammentlik sawol omtinken yn foar (beheind) effektûndersyk as foar it ymplemintaasjeproses (tefoaren kommen fan 'e ymplemintaasje-error en ynsjoch krijen yn befoarderjende en opkearende faktoaren). Tagelyk riede wy oan, om it RE-AIM framework as ymplemintaasjemodel te brûken, om't dêr omtinken yn jûn wurdt oan sawol de útkomsten as it proses sels. Nettsjinsteande de nei alle gedachten bliuwende ynstabile omstannichheden fan 'e psychogeriatryske praktyk, advisearje wy om 'e metoade breed te ymplemintearjen, wêrby't, yn 't foar, yn oparbeidzjen mei Stichting Theater Veder en it management fan 'e ynstellings in lang duorjend (twa oant fijf jier) ymplemintaasjeplan opsteld wurdt. By einsluten rikkemandearje wy it middelber en heger ferpleechkundich beropsûnderwiis oan, om op 'e persoan rjochte kommunikaasjemetoaden yn it algemien en 'e Veder Contact Methode yn it bysûnder, op te nimmen yn it ûnderwiisprogramma, sadat soarchferlieners fan it begjin fan harren wurkpaad ôf omtinken hawwe foar it rjochtdwaan oan 'e minske efter de persoan mei deminsy en leare hoe't sy de persoanlikheid fan minsken mei deminsy befestigje kinne.

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Leave heit en mem , 'wat hasto dochs in leave âlders!' – dat hear ik gauris, as minsken jimme troffen hawwe. En dat is sa: jimme binne o sokke leave, soarchsume âlders. Ik bin tige wiis mei jimme. Fan alle fiif bern wie ik yn 't ferline net de grutste learder; ik wie leaver bûten oan 't boartsjen, as yn 'e hûs oan 't learen. Dochs haw ik yn 'e rin fan 'e jierren foar 't ferstân krigen,

dat 'geandewei-learen' hiel goed by my past. De kime dêrfoar hawwe jimme siedde, dêr sis ik jimme tank foar. Krektlyk as by in soad oare minsken, kloppe mynhear Alzheimer ek yn ús famylje op 'e doar. As puber kaam ik foar it earst yn 'e kunde mei deminsy en learde ik fan oma, dat gefoelens by minsken mei deminsy hiel lang bestean bliuwe, ek as in konversaasje net mear mooglik is. De lêste jierren wie der in lykoprinnend proses, dêr't behalve fertrietlike mominten ek gâns moaie mominten yn wiene. Heit en mem, wat hawwe wy geniete fan 'e moaie reis nei Israël en koartlyn fan in wike nei it waarme Grikelân. Ik hoopje, dat wy soks noch faker belibje meie!

Dit onderzoek was soms ook een leuk gezinsproject, de een hielp met vertalen, de ander corrigeerde mijn Engels en de derde hielp mee met het invoeren van formules in Excel. Lieve Hayo en lieve Ruth, het was heel leuk dat jullie op die manier betrokken waren bij dit proefschrift en langzaam maar zeker daadwerkelijk een idee kregen van het werk wat ik deed. Nog leuker is het om jullie ontwikkeling te zien. Jullie zijn prachtige mensen. En zou ik, nu het proefschrift geschreven is, gewoon 's avonds het gesprek met jullie weer af maken? Lieve Imre, jij had niet zo'n boodschap aan dit proefschrift en vond het alleen maar ongezellig als ik aan het computeren was. Jij was wel degene die ervoor zorgde dat ik elke avond gewoon even lekker heel wat anders ging doen. Samen een boekje lezen, eerst jij dan ik, en vervolgens (samen) in slaap vallen waren heerlijke ontspannende momenten voor mij. Ik kan het niet vaak genoeg zeggen, dus ook hier 'lieve Hayo, Ruth en Imre, ik hou ontzettend veel van jullie!' Lieve, lieve Fred, als er iemand een plekje op het erepodium in dit dankwoord verdient dan ben jij het. De afgelopen jaren zijn niet alleen vanwege dit proefschrift bewogen jaren voor ons geweest. Zonder jouw hulp bij het Engels, het opmaken van powerpoints en nog veel meer, was dit boekje er niet gekomen! Had je 24 jaar geleden toen je besloot met mij 'in zee' te gaan ooit kunnen bedenken dat je én drie kinderen zou krijgen én mij ooit nog eens dr. P zou noemen? (dat laatste had ik trouwens ook niet kunnen bedenken) Bewonderenswaardig vind ik het hoe je de afgelopen jaren bereid bent geweest mee te bewegen in mijn wensen, mij daarin verdroeg en geduld met me had. Het is elke dag weer heel fijn thuiskomen in, wat jij zo mooi verwoordde 'ons huis vol liefde'.

About the author

Petra Boersma was born as a farmer's daughter on July 10, 1967 in Allingawier (Friesland), the Netherlands. After graduating from the MAVO in 1983, and the HAVO in 1985, she started studying nursing in Groningen and received her bachelor degree in 1989.
Her nursing career started in the Alyn Hospital in Jeruzalem (1990) and returning from Israel, she worked on different wards in the psychiatric center of the Academic Medical Center in Amsterdam. Besides this work, she studied part time Psychology at the University of Amsterdam (1991 – 1994). Before ending this study, she took the opportunity to study 'Clinical Epidemiology and Biostatistics for nurses' at the Academic Medical Center in Amsterdam (precursor of the master Evidence Based Practice in Health Care) and completed this in 1998. Afterwards, a switch was made to elderly care as a policy consultant at R.K. Zorgcentrum Bernardus/ Fontis in Amsterdam. Three years later, she changed job to Inholland University of Applied Sciences, first as a policy consultant, followed by team manager. From 2012, she combined her work with the research into the implementation of the Veder Method in daily care for people with dementia, as described in this thesis. Now she still works as a nusing lecturer and training consultant of Inholland University of Applied Sciences in Amsterdam.

Petra lives together with Fred in the northern part of Amsterdam. They have three children, Hayo, Ruth and Imre.

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