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, (in) 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 the 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).](image)

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 framework 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 psychogeriatric 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.
References


