REMINISCENCE BOXES FOR ELDERLY WITH DEMENTIA

Masterthesis Health Psychology

A study on the implementation of reminiscence boxes and their effects on depressive symptoms and quality of life of elderly with dementia.

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Abstract

Background: Dementia is a growing health problem. Often symptoms of cognitive decline occur together with psychiatric symptoms like depression and a decline in quality of life. It is expected that reminiscence therapy has positive effects on the well-being of elderly suffering from dementia. It has been demonstrated that the use of reminiscence can reduce depressive symptoms, improve mood, and therefore increase quality of life. Health care organization Livio started their project with reminiscence boxes back in September 2013.

Goal: The first goal of this study is to investigate the effectiveness of the reminiscence boxes. It is expected that the use of reminiscence boxes helps to decrease depressive symptoms and therefore increase quality of life. Second goal of this study it to investigate the factors that facilitate or hinder the implementation process. Literature states that the implementation process has to be controlled carefully to guarantee the effectiveness of an innovation.

Method: For the present research, a mixed-method design was used. Elderly diagnosed with dementia were randomly assigned to either the control group or the experimental group. The control group received usual care. The experimental group participated in 8 weekly sessions with the reminiscence boxes. In both groups, observational scales were filled in by professionals: *The Cornell Scale for Depression in Dementia*, and the *Qualidem*, measuring quality of life. The present study is a preliminary study investigating the effectiveness of the intervention after 4 weeks. After week 4, a lot of the data was not yet available. A semi-structured interview was conducted with health professionals to investigate their opinion on the implementation process of the reminiscence boxes. The *Consolidated Framework for Implementation Research* from Damschroder et al. (2009) was used as an overarching typology for the interview schedule and later analysis.

Results: The present study showed that relevant stakeholders were generally very positive about the use of reminiscence boxes for elderly with dementia. They reported that the intervention was more or less effective and that the intervention fits well within the organization and within current trends in dementia care. However, results from the analysis of the preliminary dataset did not show significant effects on depression and quality of life. Different barriers were mentioned by stakeholders like for example the lack of rooms, lack of promotion among colleagues, or the lack of staff. This resulted in different suggestions to improve the intervention and the implementation process, for example: promoting the intervention among colleagues, offering the intervention more often, doing the sessions together with another health professional, or adding fresh sweets.

Conclusion: The present study showed that relevant stakeholders were positive about the reminiscence boxes. However, positive results on depression and quality of life could not yet be demonstrated. It has been shown that the CFIR (Damschroder et al., 2009) offers an overarching framework helping to provide insight into important factors facilitating or hindering the implementation of health innovations. Suggestions that were formulated based on the results from the present research can be used to improve the intervention and its implementation. Future research including the complete dataset is needed to examine the effect of the reminiscence boxes.

Samenvatting

Achtergrond: Dementie is een groeiend gezondheidsprobleem. Vaak treden naast symptomen van cognitieve achteruitgang ook psychiatrische symptomen zoals depressie en een afname van kwaliteit van leven op. Het wordt verwacht dat reminiscentie therapie positieve effecten op het welzijn van patiënten met dementie teweeg zal brengen. Literatuur laat zien dat het gebruik van reminiscentie symptomen van depressie kan verminderen en kwaliteit van leven kan vergroten. Zorginstelling Livio heeft in september 2013 een project gestart met reminiscentie koffers.

Doel: Het eerste doel van dit onderzoek is de effectiviteit van de reminiscentiekoffers te bestuderen. Het wordt verwacht dat het gebruik van deze koffers depressieve symptomen kan verminderen en dat zo de levenskwaliteit van de bewoners met dementie stijgt. Het tweede doel van dit onderzoek is te onderzoeken welke factoren het implementatieproces belemmeren of juist bevorderen. Uit de literatuur blijkt dat het implementatieproces van de koffers zorgvuldig geregeld moet worden om de effectiviteit van de interventie te garanderen.

Methode: Het werd gebruik gemaakt van een mixed-method design. Ouderen met dementie werden gerandomiseerd toegevezen aan de controlegroep of de experimentele groep. De controlegroep kreeg gebruikelijke zorg. De experimentele groep naam deel aan 8 wekelijkse sessies met de reminiscentiekoffers. In beide groepen werden observationele schalen ingevuld door de professionals: *Cornell Scale for Depression in dementia* en de *Qualidem*, welke de kwaliteit van leven meet. Deze studie onderzoekt de voorlopige data tot en met week 4. Na week 4 was een groot deel van de data nog niet beschikbaar. Semi-gestructureerde interviews werden gehouden om meer te ervaren over de mening van stakeholders over het implementatieproces en de effectiviteit van de interventie. Het *Consolidated Framework for Implementation Research* van Damschroder et al. (2009) werd gebruikt als een overkoepelende typologie voor het interviewschema en de latere analyse.

Resultaten: Stakeholders denken over het algemeen zeer positief over het gebruik van de reminiscentiekoffers. Uit de interviews bleek dat de interventie meer of minder effectief is en dat ze goed past binnen de organisatie en binnen juidige trends in de dementiezorg. Echter lieten de statistische analyses van het voorlopige dataset geen significante effecten op depressie en kwaliteit van leven zien. Verschillende barrieres werden genoemd zoals het gebrek aan kamers, gebrek aan promotie onder collega's of het gebrek aan personeel. Stakeholders noemden verschillende suggesties om de interventie en het implementatieproces te verbeteren: de interventie onder collega's aanprijzen, de interventie vaker aanbieden, de sessies samen met een collega doen en het toevoegen van verse snoep.

Conclusie: De betrokken stakeholders waren heel positief over de reminiscentiekoffers. Echter, positieve effecten op depressie en kwaliteit van leven konden nog niet worden aangetoond. Het is aangetoond dat het CFIR (Damschroder et al., 2009) een overkoepelend kader biedt om inzicht de krijgen in belangrijke factoren die de implementatie van innovaties belemmeren of faciliteren. Suggesties werden geformuleerd die gebruikt kunnen worden om te interventie en de uitvoering te verbeteren. Toekomstig onderzoek is nodig om de effectiviteit van de reminiscentiekoffers na 8 weken te bestuderen.

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Introduction

Dementia

Dementia is an umbrella term describing the irreversible decline in cognitive ability. Because people in the world get older, it is expected that in 2040 more than 500.000 people in the Netherlands will suffer from dementia (Alzheimer Nederland, 2016). Therefore, dementia will be a growing health problem in the future. The prevalence of dementia increases with age. After the age of 65, the prevalence of dementia increases exponentially (Slavin et al., 2013) and ranges from 3% to 11% (Lyketsos et al., 2000). It affects 5% of the population older than 65 and 20-40% of those older than 85 (Sadock, Sadock, 2008). At the moment there are 260.000 people with dementia living in the Netherlands (Alzheimer Nederland, 2016).

Dementia is a progressive illness that can lead to death. One of the most prevalent symptoms is the decline in cognitive ability. The sort of symptoms that occur together with the cognitive decline depends on the type of dementia and also on the location of cerebral damage (Vandereycken, Hoogduin, Emmelkamp, 2000). Most often, people suffer from different symptoms of cognitive decline like memory disorders, problems with orientation, problems with executive functions, and a loss of memory and other mental abilities (Vandereycken et al., 2000). These symptoms can be subtle at the beginning. In later stages they can worsen in a way that the person needs 24 hours' care.

There are different types of dementia. Alzheimer is with 70% one of the most occurring forms of dementia in the Netherlands (Alzheimer Nederland, 2016). Symptoms that occur frequently during the course of Alzheimer are hallucinations, delusions, or misidentifications (Drevets, Rubin, 1989). On top of that, mental disturbances like depression can occur (Lyketsos et al., 2000). According to the DSM-IV, there are five different criteria for the diagnosis of Alzheimer (see Table 1). Usually the diagnosis of dementia in general is given when there are cognitive and behavioural symptoms that interfere with daily activities or that show a decline from earlier functioning.

Some of the symptoms that occur during the course of dementia are the same as in depression. People with dementia most often also suffer from changes in mood and personality (Storandt et al., 1989). According to Chaves et al. (1991), this makes the detection of early dementia difficult because the symptoms of dementia can be mistaken with those of depression.

Table 1.
Criteria for the diagnosis of Alzheimer (Vandereycken et al., 2000).

a.	Memory disorders (inability to learn new information or to recall previously learned information)
b.	One or more of the following impairments: Aphasia, apraxia, agnosia, and disturbance in executive functioning
c.	The cognitive disorder causes significant impairment in social or job-related functioning (meaning a significant decline compared to the functioning before the illness)
d.	The course of the illness is characterized by gradual onset and progressive cognitive decline
e.	The cognitive disorders are not caused by a delirium or by other disorders

Treatment

When people are diagnosed with dementia they usually get pharmacological treatment first. Acetylcholinesterase inhibitors (AChEIs) are frequently used in Europe to improve cognition and slow down the progression of Alzheimer's disease (Popp et al., 2011). However, studies from the past years show that AChEIs did not show promising results (Popp et al., 2011). Another drug that is used to treat cognitive symptoms in moderate to severe Alzheimer's disease is Memantine (Schwarz et al., 2012). However, further research is needed to draw clear conclusions on the effects of Memantine (Popp et al., 2011).

Because of the inconsistent results of pharmacological interventions, nonpharmacological treatments for dementia are getting more attention. Cohen-Mansfield, Libin, and Marx (2007) used a nonpharmacological treatment to reduce agitated behaviours in residents with dementia. Based on baseline agitation behaviours, an intervention was set up that fits the resident's needs and remaining abilities. For example, residents received interventions containing family videotapes, pictures, books, plush toys, or stress balls (Cohen-Mansfield et al., 2007). The use of personalized nonpharmacological interventions showed a significant decrease in agitation in the intervention group compared to the control group receiving usual care (Cohen-Mansfield et al., 2007). Teri, Logsdon, Uomoto, and McCurry also showed the significant positive effect of a nonpharmacological treatment focusing on pleasant events from the past.

During the diagnostic process, most attention is given to the cognitive symptoms. However, often these symptoms occur together with other (psychiatric) symptoms or behavioural symptoms like changes in personality, depression, hallucinations, or delusion (Vandereycken et al., 2000). Other non-cognitive symptoms can be due to the psychological response of the patient to his or her illness (Vandereycken et al., 2000). Statistics show that for example depressive symptoms occur in 30% of patients with Alzheimer's disease (Teri,

Gallagher-Thompson, 1991). This can also influence the well-being of the person suffering from dementia. According to Abrahamson Clark, Perkins, and Arling (2012), symptoms of cognitive decline are associated with decreased quality of life in domains like for example privacy, individuality, relationship, and mood. According to the World Health Organization (WHO, 1995), quality of life depends on the individual perception of a person's position in life in the context of the culture in which they live together with their goals and expectations for the future. It is said that quality of life has a subjective nature and that the personal sense of well-being defines the amount of quality of life (Gonzáles-Salvador et al., 2000). Whitehouse et al. (1997) defined quality of life in the context of dementia as the integration of cognitive functioning, activities of daily living, social interaction, and psychological well-being.

It is clear that interventions are needed to promote the well-being and quality of life of people with dementia. According to DiNapoli, Scorgin, Bryant, Sebastian, and Mundy (2015), the meaning people derive from their everyday activities can influence their well-being and therefore their quality of life. The interaction in social experiences is a crucial factor influencing an individual's well-being in a positive way (DiNapoli et al., 2015). Well-being can be enhanced by involving people with cognitive impairment into activities that are personally meaningful and that enable social contact. This means that quality of life can be enhanced by letting people with dementia participate in meaningful social activities. It has been shown that interventions including individualized social activities offer a promising way to improve quality of life in people with dementia (DiNapoli et al., 2015). Van Haitsma et al. (2013) also concluded that interventions that are individually tailored to the person's needs and abilities are meaningful for patients with dementia. Residents who participated in an individualized activity focusing on positive psychology experienced more pleasure, alertness and engagement than the control group (Van Haitsma et al., 2013).

Reminiscence

One intervention that offers the possibility to let people with dementia participate in meaningful activities is the use of reminiscence. Noris (1989) first introduced the use of reminiscence in dementia care. According to Woods et al. (2005), reminiscence "involves the discussion of past activities, events, and experiences, usually with the aid of tangible prompts (e.g. photographs, household, and other familiar items from the past, music and archive sound recordings)". (p.2). Different objects that can be used are old photographs, old job-related items, or other familiar items that people with dementia recognize from their life before the

diagnosis. Today reminiscence therapies are the most popular psychosocial interventions in dementia care (Cotelli, Manenti, & Zanetti, 2012).

While most interventions for people with dementia focus on the cognitive functions of the patient, reminiscence therapy also focuses on non-cognitive symptoms affecting the person's well-being (Sadowsky, & Galvin, 2012). Because of the fact that there are no treatments that can cure dementia, it is important to search for an intervention that provides emotional and social benefits (Gonzalez, Mayordomo, Torres, Sales, Meléndez, 2015). By using stimulation, communication, socialization, and entertainment, reminiscence therapy tries to recollect memories from the past in elderly people with dementia (Gonzalez et al., 2015). Several studies have shown that the use of reminiscence can have positive effects on elderly with dementia. It has been demonstrated that reminiscence therapy can reduce depressive symptoms, improve mood and therefore increase life satisfaction (Tadaka, & Kangawa, 2007; Serrani, 2012). Westerhof and Bohlmeijer (2014) state that there are three broad functions of reminiscence: *social*, *instrumental*, and *integrative* functions. Social functions are served by using reminiscence to let people share personal memories with others. On top of that, people can recall and learn coping strategies when participating in interventions using reminiscence. Therefore, reminiscence has instrumental functions which means that people might recollect coping strategies which they have used in the past. Furthermore, a journey to the past can have coping effects as well. Thinking about positive experiences from the past can have positive effects on emotional well-being. Furthermore, thinking about the past can have integrative functions because it can help people to accept negative events or to resolve conflicts.

Reminiscence Therapies for elderly with dementia

Studies have shown that the use of reminiscence has positive effects for elderly with dementia. These effects include improved mood, reduced depressive symptoms, increased life satisfaction, and reduced agitation behaviours (Tadaka et al., 2007). According to Gonzalez (2015), different parts of interventions using reminiscence must be flexible so that they can be tailored to the remaining abilities and needs of the participants. Furthermore, materials should be used that are familiar to the participant so that memories can be triggered. Different interventions can be found in the literature where forms of reminiscence are used to treat people with dementia. It is expected that the use of reminiscence therapy has other effects than solely decreasing depressive symptoms and increasing quality of life. Cotelli et al. (2012) reviewed the effectiveness of reminiscence therapy to improve cognitive functioning and mood. They reviewed different studies showing that reminiscence therapy is a useful way

to improve mood, cognitive abilities, well-being, and behaviour. They also found evidence that autobiographical memory of patients can be improved by using reminiscence therapy (Cotelli et al., 2012). There are different forms of therapies where reminiscence is used to treat elderly with dementia. Some of these therapies are explained in the following.

Music Therapy

The use of music and musical elements like rhythm, sound, or harmony have beneficial effects for health and well-being of a patient with dementia. The use of music in a therapeutic way is called music therapy (McDermott et al., 2013). Music therapy can be conducted in different ways. First, there is an *active* form of music therapy, which means that a trained music therapist invites the patient to participate in music making. Second, there is *receptive* music therapy. This means that patients listen to live music or music that was recorded beforehand. Third, music therapy can be conducted individually or in group sessions. The form of music therapy depends on the individual assessment of the patient so that the therapy fits the patient's needs and wishes (McDermott et al., 2013). Music therapy is also a form of reminiscence when music is used that triggers memories from the past. Studies have shown that the use of music therapy can reduce psychological and behavioural symptoms in patients with moderate to severe dementia (Raglio et al., 2008). Ashida (2000) investigated the effects of reminiscence music therapy sessions on depressive symptoms in elderly with dementia. In her study a combination of active and receptive music therapy was used. At the beginning and the end of the sessions an active form of music therapy was used and participants started with a drumming activity. The main part of the session was a receptive form of music therapy. The songs that were sang by the therapist were familiar to the residents so that reminiscence could be stimulated. This study has shown a significant decrease in depressive symptoms after participants received five days of reminiscence music therapy treatment (Ashida, 2000). Furthermore, health professionals have reported that during and immediately after the sessions, interaction skills and mood of the patients have improved dramatically (Ashida, 2000). However, although the data showed that the improvement was also present at the end of the intervention (after 3 weeks), staff members reported that the improvement did not retain that long. Ashida (2000) then suggested to keep video records of the participants to observe the progress of the patients with dementia in more detail.

Together with music, Arakawa-Davies (1997) included dance/movement therapy to awaken brain functions and encourage patients with dementia to share their thoughts. Dance/movement therapy is aimed at maintaining bodily movement, releasing the sense of isolation and stimulating recall and social interaction (Arakawa-Davies, 1997). According to

the researchers, dance/movement therapy helped stimulating the patient's sense of self-expression and therefore the patient's ability to reminisce about the past (Arakawa-Davies, 1997).

Spiritual reminiscence

Back in 1984, Frankl stated that finding out who we are and why we exist is an important aspect of finding meaning when people grow older. According to McKinlay et al. (2010), discovering the "why" of our existence is especially important for those suffering from dementia. They describe the use of spiritual reminiscence as "a way of reconnecting and enhancing meaning, reviewing their life story, and thinking about their hopes for the future." (p.395). Therefore, spiritual reminiscence offers a way to emphasize what gives meaning to our lives. It is aimed at identifying issues from the past that have brought anger, guilt, sadness, or joy (MacKinlay, 2010). MacKinlay (2010) made a model describing different themes of broad questions that can be used during spiritual reminiscence. An example of one of the themes that are used is "Meaning in Life". According to MacKinlay (2010) one goal of spiritual reminiscence is to focus on the meaning of experiences rather than only describing what happened. In their study, they found that most of the patients with dementia were able to understand and answer the following questions: What gives greatest meaning to your life now? Is life worth living, and if not, why not? MacKinlay et al. (2010) concluded that the use of spiritual reminiscence offers patients with early-stage dementia an opportunity to talk about their fears and hopes as their cognitive abilities decline. Quantitative data showed that the use of spiritual reminiscence results in improved relationships among the group members that participated in the intervention. The relationships that were developed between residents also improved their life in aged care facilitation (Mac Kinlay et al., 2010).

Effectiveness of reminiscence in general

One psychiatric disorder that is often diagnosed together with Alzheimer's disease is depression (Olin, Katz, Meyers, Schneider, Lebowitz, 2002). Jo and Song (2014) state that interventions to treat depressive symptoms are needed to improve quality of life in patients with dementia. Research has shown that the use of reminiscence therapy is effective in a way that it can decrease depressive symptoms in elderly with dementia (Bohlmeijer, Smit, Cuijpers, 2003). Okumura et al. (2008) investigated the effectiveness of a five-session reminiscence therapy and compared the results to an everyday conversation group. They used different reminiscence themes in their intervention like for example "helping with housework" or "school memories". At the end, short-term reminiscence group therapy was

more effective than general everyday conversation. They observed a positive change in patient's everyday life circumstances and improved conversations with other demented patients (Okumura et al., 2008).

Reminiscence Boxes

One possibility to organize a reminiscence therapy session is to use reminiscence boxes, first introduced by Aleid van der Meer (1997). Health care organization Livio is interested in the implementation of those reminiscence boxes because it is expected that it can improve health care by promoting the well-being of the residents suffering from dementia. The preparation for this project started back in September 2013 with a research investigating which objects should be included in the reminiscence boxes and how they should be used in practice.

The use of reminiscence boxes involves the discussion of past activities, events, or memories with the aid of different items from the past. Hagens et al. (2008) created individual remembering boxes for patients with dementia. The content of the boxes was determined based on the knowledge they had gained from the participants and their family members. The boxes contained photographs and other objects that were meaningful in the life of the patient. They concluded that the use of the individual Remembering Boxes helped staff to communicate in an individualized manner with the patients. Furthermore, staff members reported that if patients were anxious, the use of the Remembering Boxes helped to redirect their attention to more pleasant memories to improve their mood (Hagens et al., 2008). Therefore, it can be said that the use of reminiscence boxes is a promising intervention for the treatment of elderly suffering from dementia.

Health care organization Livio is now interested in investigating the effectiveness of the use of reminiscence boxes to be able to substantiate the use of these boxes at different locations of Livio. If the current research detects the expected positive results, also other care organizations can profit by the use of reminiscence boxes for elderly with dementia. However, the effectiveness of the reminiscence boxes and other health innovations in general can only be guaranteed if different aspects of the implementation process are controlled carefully.

Implementation of innovations into healthcare

For interventions to be successful, the implementation process has to be controlled carefully. Cooney et al. (2013) state that it is important to ask for opinions and experiences of different stakeholders to find out whether different factors are present that hinder the implementation process. Different theories can be found in the literature that describe how interventions

should be implemented to guarantee their success. Damschroder et al. (2009) brought together different theories from the literature and formulated a theoretical framework covering what they have found in their literature review. The *Consolidated Framework for Implementation Research (CFIR)* offers a list of constructs that are important for implementation processes. The CFIR consists of five different domains that together influence the implementation process: *the intervention, inner and outer setting, the individuals involved,* and *the process by which implementation is accomplished* (Damschroder et al., 2009). The first domain is the intervention. This domain describes characteristics of the intervention that is going to be implemented, for example costs, relative advantage, or complexity (Damschroder et al., 2009). The next domains from the CFIR are the inner and outer setting. The inner setting includes the structure, political and cultural aspects of the organization. On top of that, the social architecture of an organization is associated with the inner setting. This describes the amount of people working in an organization, how they are divided into smaller groups, and how their independent actions can produce an overall product. According to Damschroder et al. (2009), these factors can also influence the process of implementation. The outer setting compromises the political, social, and economic context of the organization (Damschroder et al., 2009). Competitive pressure from peer organizations or pay-for-performance collaborations are examples of aspects that can be associated with the outer setting. The fourth domain is the individuals that are involved in the intervention and the implementation process. The unequal distribution of power, the ability to make choices, their self-efficacy and their beliefs about the intervention play an important role in the implementation process (Damschroder et al., 2009). The last domain belonging to the CFIR is the implementation process. Here the other domains come together. The inner and outer setting has to work together to reach the goal of successful implementation (Damschroder et al., 2009). Planning the intervention, engaging staff, and executing the intervention according to plan are important aspects associated with the fifth domain.

The CFIR offers a useful framework providing insight into factors that facilitate or hinder the implementation process. Literature is lacking that shows how especially reminiscence boxes should be implemented. Because health organization Livio wants to investigate how the implementation process is going and how it could be improved in the future, the CFIR will be useful to investigate the meanings of different stakeholders towards the implementation process.

Reminiscence Boxes at health care organization Livio

The current study has two goals. First, this study is aimed at investigating the effectiveness of the reminiscence boxes. It is expected that the use of reminiscence boxes can reduce symptoms of depression and improve quality of life in elderly with dementia. If this study has proven the intervention to be effective, the intervention can be offered at all locations from Livio. Livio expects that the use of reminiscence boxes improves mood and quality of life in elderly with dementia. However, literature misses research showing whether the use of reminiscence boxes like the ones that are used at Livio are effective.

The second goal of this study is to gain insight into the implementation process of the reminiscence boxes. According to Damschroder et al. (2009) there are different aspects that together influence the implementation of an intervention. Different stakeholders who are involved in the implementation process are asked to give their opinion on the implementation process of the reminiscence boxes.

Research Questions

The current study is a preliminary study because after week 4 a lot of the data was not yet available. The study has two aims. First, during the effect study, the effectiveness of the reminiscence boxes on depression and quality of life after 4 weeks is going to be investigated. Second, a qualitative implementation study is conducted to investigate the factors that facilitate or hinder the implementation process of the reminiscence boxes. The following research questions are formulated:

1. *What are the effects of reminiscence boxes on depression and quality of life after 4 weeks of use for elderly with dementia?*
2. *Which of the factors identified in the CFIR facilitate/hinder the implementation process according to the opinion of stakeholders?*

Method

The present study is a mixed-method study consisting of a quantitative effect study and a qualitative implementation study. In the following, both methods are going to be described.

Effect Study

Design

For the present study a quasi-experimental design was used. In every location, two groups were selected to participate. An information letter was given to the contact person of the participant. If they agreed, informed consent was signed by the contact person. Participants living together in one group also formed one group for the intervention. The groups were

assigned randomly to either the experimental group or the control group. The experimental group participated in weekly sessions with the reminiscence boxes. The control group received usual care during the time of the intervention. The duration of the intervention was eight weeks. At the beginning, a baseline measurement was done in both groups. After that, the scales were filled in once a week in both groups. There were 9 measurements in total in both groups. One baseline measurement (T0) before the start of the intervention and 8 weekly measurements (T1 – T8) that were done after the residents participated in the sessions with the reminiscence boxes. In the control group, observational instruments were filled in once a week for 8 weeks (T1-T8). In the current study, only the measures from T0 to T4 were used.

Intervention

The duration of the intervention was eight weeks. One session with the reminiscence boxes was organized every week. The boxes that were used contained different objects that were able to stimulate reminiscence in elderly with dementia. The reminiscence boxes were filled with objects belonging to three different themes: *eating and drinking, women and men,* and *school*. During earlier research Livio investigated what types of objects the boxes should contain. Table 2 shows some examples of objects belonging to the three different themes.

Table 2.
Examples of objects that can be found in the reminiscence boxes

Theme	**Objects**
eating and drinking	coffee tin "Buisman"*, "Douwe Egberts"*
	mints "Wilhelmina" *
	potholder
	coffee grinder
	old fashioned sweets
women and men	*men:*
	Pipe & pipe cleaner
	box with cigars
	aftershave "Tabac" *
	ties
	razor
	women:
	old fashioned make-up
	perfume "4711" *
	hand mirror
	yarn & needles
	baby clothing
school	school board with chalk
	old fashioned schoolbook
	fountain pen with inkpot
	skipping rope
	slate and slate pencil

*these are well-known brands in the Netherlands

About 4-6 elderly participated in every session. The duration of one session was 1 hour. The sessions were coordinated by the health care professionals and sometimes by other volunteers. During the intervention the elderly sat together at a table standing in their living environment. The health care professionals got an instruction on how to structure the sessions with the reminiscence boxes. There are different possibilities to start a session. First, the health professional can pick the objects one by one and asking the participants if they recognize these objects. Second, different objects are standing on the table before the participants sit down. By using this option, the health care professional hopes that the participants start talking about the objects by themselves. The third option that can be used to start a session is to let the participants pick an object by themselves and asking why they have chosen this object. To stimulate reminiscence, different types of questions can be asked. It is expected that open questions work best to start a conversation. Other questions that can be used are questions about facts or feelings.

Participants and procedure

In total, 36 residents who are diagnosed with dementia were selected to participate in the intervention (see Table 3). The contact person of the residents was informed about the research and asked to sign informed consent to allow the person with dementia to participate. The participating groups were randomly assigned to either the experimental group or the control group. 25 residents formed the experimental group and 11 formed a waiting list control group, meaning that they will participate in the intervention after the research is finished.

Table 3.
Overview of study sample participating in the effect study

	Experimental group N= 25 (69%)	**Control group** N=11 (31%)
Age, mean (SD)	86 (5.17)	88 (5.12)
Gender (N, %)		
Male	3 (12)	0 (0)
Female	22 (88)	11 (100)
Dwelling form (N, %)		
Daycare	13 (52)	5 (46)
Small-scale living	12 (48)	6 (54)

The residents were assigned from three different locations where different types of care are offered. Some residents live together with other residents in a small group. This form of living is called *"kleinschalig wonen"*, meaning that a small group of residents share a home with other residents. They get the possibility to participate in daily activities like cooking and

cleaning. Residents from other locations are living in a "*woongroep"*, which means that they are living together in a small group. The difference is that residents have their own room where they can live privately. The residents are sharing the household as far as possible. Residents living together in one group at Livio also formed one group during the intervention.

Before the random assigned took place, a baseline measurement was done (T0) and the two observational questionnaires were filled in for every participant. Then one measurement was done every week during the time of the intervention. For the control group the measurement was done once a week. In the experimental group, the questionnaires were filled in immediately after the weekly session with the reminiscence boxes has taken place. The questionnaires were filled in by the health professional who was present on that day and who did the sessions together with the elderly. Therefore, the observational questionnaires were not completed by the same health professional every week. In the control group, the questionnaires were also filled in by the health professional who was currently present on the day where the questionnaires were completed.

Every intervention group received the boxes filled with all objects belonging to the three different themes. On top of that, they received an old fashioned suitcase. The health professionals were free to pick objects from the box before every session. When all participants were sitting together, the health professional started the session by putting the suitcase on the table and picking one object to start a conversation with the participants. Another option was to let the participants pick one object by themselves. The duration of the sessions was around 1 hour.

Measurements

For the present study, two observational instruments were used to investigate the effectiveness of the intervention on depressive symptoms and quality of life. The two instruments are described in the following.

Depression

Depression was measured using the Dutch version of the Cornell Scale for Depression in Dementia (appendix 1) which was first introduced by Alexopoulos, Abrams, Robert, Young, and Shamojan in 1988. It is a 19-item observational instrument constructed to rate depressive symptoms in patients with dementia. The observer is asked to rate how often a behaviour or situation has occurred during the last week. The rating of severity ranges from 0-2 (0=absent, 1=mild or intermittent, 2=severe). The items (see Table 4) belong to five different subscales:

mood-related signs (4 items), *behavioural disturbance* (4 items), *physical signs* (3 items), *cyclic functions* (4 items), and *ideational disturbance* (4 items) (Alexopoulos et al., 1988). The original version of the Cornell Scale consists of two parts: one part that is filled in by the caregiver and another part consisting of an interview with the demented person (Alexopoulos et al., 1988). In this study only the first part of the scale is used.

A mean score was calculated for the 19 different items from the Cornell Scale. After that, the mean score was multiplied by the number of items to get a total sum score. This total score was only calculated if 9 or less scores were missing. A score lower than 6 indicates the absence of depressive symptoms. Scores higher than 10 indicate major depression. If the participants score 18 or higher, a definite major depression can be diagnosed (Alexopoulos et al., 1988). Amuk et al. (2003) state that the Cornell Scale for Depression in Dementia is reliable and valid for diagnosing depression in an elderly population with dementia. Acoording to Alexopoulos et al. (1988) the Cornell scale is internally consistent, which is shown by the coefficient alpha (.84). In the current study, the coefficient alpha is .72.

Table 4.
Subscales and example items of the Cornell Scale for Depression in Dementia

Subscale	**Items**
Mood Related Signs	Anxiety: anxious expression, ruminations, worrying
Behavioural Disturbance	Agitation: restlessness, handwringing, hairpulling
Physical Signs	Appetite Loss: eating less as usual
Cyclic Functions	Diurnal variation of mood: symptoms worse in the morning
Ideational Disturbance	Suicide: feels life is not worth living, has suicidal wishes, or makes suicide attempt

Quality of Life

For this study the Dutch version of the observational instrument Qualidem was used (appendix 2). This instrument was constructed by Ettema et al. (2005) and it measures quality of life in people with dementia living in residential homes. By using this instrument, it is possible to measure quality of life of residents with different forms and severities of dementia (Bouman et al., 2011). The Qualidem consists of nine subscales with 40 items in total (see Table 3): *care relationship* (7 items), *positive affect* (6 items), *negative affect* (3 items), *restless tense behaviour* (3 items), *positive self-image* (3 items), *social relations* (6 items), *social isolation* (3 items), *feeling at home* (4 items), and *having something to do* (2 items). The 3 remaining items belong to the category *other*. Every subscale contains statements that the health professionals have to rate (see table 5). In order to do so, four different options can

be chosen. The rating is based on the previous week and it ranges from 0-3, depending on the appearance of the behaviour that is described: 0= *never,1= rarely, 2= sometimes,* and 3= *frequently*. The scales were scored in a way that a higher score indicates a higher quality of life. The items are scored for every subscale by adding the scores from the items belonging to one subscale. Therefore, the higher the total score on the Qualidem, the higher the quality of life of the resident with dementia. A mean total score ranging from 0-27 can be calculated by adding the mean score of every subscale (Verbeek et al., 2010). In the current study, a mean score was calculated for the different mean scores belonging to the different scales. This mean score was multiplied with the number of subschales (9). The mean total score was only calculated if 6 or more scores were available. Bouman et al. (2011) rate the validity and reliability of the Qualidem as good. Cronbachs alpha was calculated for the mean scores on the different subschales. In the present study, Cronbachs alpha was good (.75).

Table 5.
Subscales and example items of the Qualidem

Subscale (number of items)	**Examples items**
Care relationship (7)	Rejects help from nursing assistants
Positive affect (6)	Is capable of enjoying things in daily life
Negative affect (3)	Makes an anxious impression
Restless tense behaviour (3)	Makes restless movements
Positive self-image (3)	Indicates he or she would like more help
Social relations (6)	Has contact with other residents
Social isolation (3)	Rejects contact with others openly
Feeling at home (4)	Indicates that he or she is bored
Having something to do (2)	Finds things to do without help from others
Other questions for further research (3)	Does not want to eat

Data analysis

The data that was obtained during the current research was analysed using IBM SPSS Statistics 20. First of all, normal probability plots were used to check whether the total scores on depression and quality of life were normally distributed. The Q-Q Plots showed that there is a natural variation in the sample. The plots confirmed that the depression and quality of life scores were normally distributed. To investigate the effectiveness of the intervention on depression and quality of life after 4 weeks (research question 1), a factorial repeated measures ANOVA was used. It is expected that changes in depression and quality of life are the result of an interaction between the type of condition (experimental- or control group) and the duration of participation (number of weeks of participation. Line graphs were made with

SPSS showing the course of depression and quality of life for the experimental- and the control group from T0 to T4.

Implementation Study

Design

For the qualitative part of this study, interviews were conducted face-to-face with stakeholders that were involved in the development and execution of the intervention. Different stakeholders were asked via e-mail if they were interested to participate. If they agreed, an appointment was made to conduct the interview. Before the interview, informed consent was signed by the participants if they agreed that the interview is going to be recorded on tape.

Participants and procedure

In total, 8 stakeholders were invited via e-mail to participate in an interview. Only stakeholders were asked who are in some form familiar with the intervention: stakeholders who developed and executed the intervention, supervisors, or for example volunteers. At the end, 5 of them reacted and were interested to participate in this study. An appointment was made via e-mail or phone call if the participant intended to participate. Reminders were sent to the remaining 3 stakeholders, but again they did not react. Table 6 gives an overview of the stakeholders who participated in the implementation study.

Table 6.

Stakeholders who participated in the implementation study

Respondent	Function	How long do they work at Livio?	How many sessions done?	participants
1	Caregiver (EVV)	25 years	8	5 (3 at the end)
2	Vaktherapeut	23 years	She did something similar for 5 years	4-5
3	Caregiver (EVV)	23 years	4	8
4	Coach/Manager	4 years	None	-
5	Caregiver (3IG)	24 years	4	6

Before the interview started, the researcher gave a short introduction about the aim of the interview. Than the participant was asked to read the information letter and sign the informed consent which was given in form of a letter they had to sign (appendix 3). The letter included information about the reasons to conduct this interview. On top of that, the participant was asked to give his consent to record what has been said during the interview. In addition, the

participant got the possibility to leave his or her e-mail address behind to receive information about the results after the research has finished. A copy of the information letter was given to the participant. Than the participant got the possibility to ask any remaining questions. After that the audiotape was started and the interview was conducted. A transcript was made using the audio tape for later analysis.

At the end, three of the 5 stakeholders who were interested to participate in the current study did the sessions with the reminiscence boxes by themselves. The first and third interview partner (see Table 6) was an employee *EVV*. They are responsible for the optimal support of the elderly. Their task is to ensure the quality of life of the residents at Livio. On top of that they coordinate the multidisciplinary health care in consultation with the client or his/her family members. The second interview was conducted with a *vaktherapeut*. This is an umbrella term for different types of therapies like music therapy, psychomotor therapy, drama therapy, or dance therapy. At Livio they primarily focus on life stories and the application of principles from modern dementia care. The fourth stakeholder who was interested in participating in this study was a coach/manager. He provides leadership and coaching to employees within the psycho-geriatric departments at one of the locations from health organization Livio. The fifth stakeholder that was interviewed was a *caregiver 3 IG*. She is a nurse who provides basic care to the patients. This is done in consultation with other professionals like (physio)therapists or doctors. She is also allowed to carry out nursing actions like inserting catheters or giving injections.

Interview

A semi-structured interview was conducted with different stakeholders from health organization Livio. Two different versions of the interview schedule were made (see appendix 4). One version of the interview was made for stakeholders who conducted the sessions with the reminiscence boxes. A second version was made for stakeholders who were involved in the intervention but did not participate in the sessions. The interviews were aimed at exploring the opinion of different stakeholders towards the implementation process of the intervention and the effectiveness.

The questions that were asked during the interview were based on findings from the literature. The five domains from the *Consolidated Framework for Implementation Research* (CFIR) from Damschroder et al. (2009) were used as a basis for the interview schedule (appendix 4). Questions were formulated based on the aspects from each of the five different domains (*the intervention*, *inner setting*, *outer setting*, *individuals involved*, and *process by*

which implementation is accomplished). Table 7 gives an overview of the five domains from the CFIR and examples of questions that were asked during the interview.

Table 7.
Examples of questions from the interview used in the present study

Domain from the CFIR	Example question from the interview
The intervention	Do you think the intervention should be adjusted?
Inner setting	What do your colleagues think about the use of the reminiscence boxes?
Outer setting	Are there things that facilitate/hinder the implementation process?
Individuals involved	You already did a number of sessions with the reminiscence boxes.
	Do you get enough support / preparation?
Process of implementation	How does the use of reminiscence boxes fit into your weekly schedule?
	Is it difficult to implement the sessions into your weekly schedule?

To give the interview a clearly structure, the interview consisted of two parts. In the first part, questions regarding the implementation process of the reminiscence boxes were asked. Stakeholders were asked about the quality of the implementation process. On top of that, they were asked about possible barriers they experience and how they would rate the intervention in terms of advantages and disadvantages. The second part of the interview included questions about the perceived effectiveness of the intervention. The second version of the interview was used for stakeholders who did not conduct the sessions with the reminiscence boxes. The questions that they were not able to answer were left out in this interview schedule.

Data analysis

Transcripts were made of every interview. The transcripts were analysed using Atlas.ti. The analysis was done by two encoders, the researcher (T.B.) and a Health Psychology master student (L.N.). In case of disagreement, the two encoders tried to come to an agreement to find the code that is most applicable.

First of all, the most relevant fragments from the transcripts were selected by the researcher. Second, deductive coding was used by the two independent encoders to analyse the qualitative data. The five different domains from the CFIR model from Damschroder et al. (2009) were used as categories: *the intervention, inner setting, outer setting, the individuals involved,* and *the process by which implementation is accomplished.* The two encoders separately distributed the selected fragments over the five domains. Fragments belonging to one domain were then further analysed into suitable subcategories. The two encoders together

determined the relevance of the different codes to see whether enough information was found to answer the research questions.

Results

Effect Study

At the time of the baseline measurement, 61,1% (N=22) of all residents participating in this study (N=36) had a score ranging from 1-5 on the Cornell Scale, meaning that depressive symptoms were absent. 22,2% (N=8) had scores ranging from 6 to 10, meaning that symptoms of depression are possible. In total, 14% (N=5) had a score ranging from 11 to 15, meaning that they are probably suffering from major depression at the time of the baseline measurement. Residents had a mean score of 19.63 (SD= 3.90) on the QUALIDEM at the baseline measurement. Possible scores on the Qualidem are ranging between 0 and 27, meaning that the participants scored relatively high on quality of life.

Effects of reminiscence boxes on depression and quality of life

Table 8 gives an overview of the mean scores on depression and quality of life for both conditions from the baseline measurement (T0) to week 4 (T4). There was no significant difference in the scores on quality of life (t (33) = -.157, p= .975) and depression (t (33) = .778, p= .77) between the experimental group and the control group at T0. When looking at the mean quality of life scores (see Table 8) it can be said that the experimental group shows a decrease in quality of life (after T1) whereas the control group showed a small improvement in quality of life. The mean depression score showed an increase in week 2 (T2) in the experimental group. After week 2, the experimental group showed a small decrease in depression.

Table 8.
Overview of mean total scores of depression and quality of life in both conditions (T0-T4)

		experimental group			control group		
		M	SD	N	M	SD	N
Depression *Cornell Scale for Depression in Dementia*	T0	5.15	3.93	24	6.55	3.93	11
	T1	5.89	3.91	20	6.09	3.83	11
	T2	6.94	4.53	20	6.63	3.75	11
	T3	5.47	4.10	20	6.70	3.37	10
	T4	4.91	3.05	16	5.82	3.79	11
Quality of life *Qualidem*	T0	19.56	4.01	24	19.78	3.84	11
	T1	21.80	12.41	24	20.31	4.25	11
	T2	18.03	4.50	23	20.12	4.10	11
	T3	18.61	4.00	21	20.09	4.23	11
	T4	18.02	3.43	16	20.11	3.94	11

When looking at the mean scores (see Table 8), it can be concluded that the use of reminiscence boxes did not have the desired effects on depression and quality of life after the first four sessions. This was confirmed by the statistical analyses. In the first ANOVA, no significant interaction could be indicated between the scores on the Cornell Scale and the type of condition, F (1,21) = 1.08, p= .349. No significant main effect of the type of condition could be found (F (1,21) = .098, p= .757). Also no significant main effect of the time of participation (F (1,21) = 1.68, p= .198) could be found. It can be concluded that there is no difference in depression over the different time points (T0-T4).

In the second ANOVA, no significant interaction could be found between the scores on the QUALIDEM and the type of condition, F (1,25) = 2.11, p= .12. There was also no significant main effect of the time of participation (F (1,25) = 1.28, p= .309) and type of condition (F (1,25) = .07, p= .798). Table 8 shows that the differences in quality of life are only small. The statistical analysis confirms this by showing no significant differences in quality of life between the different time points (T0-T4).

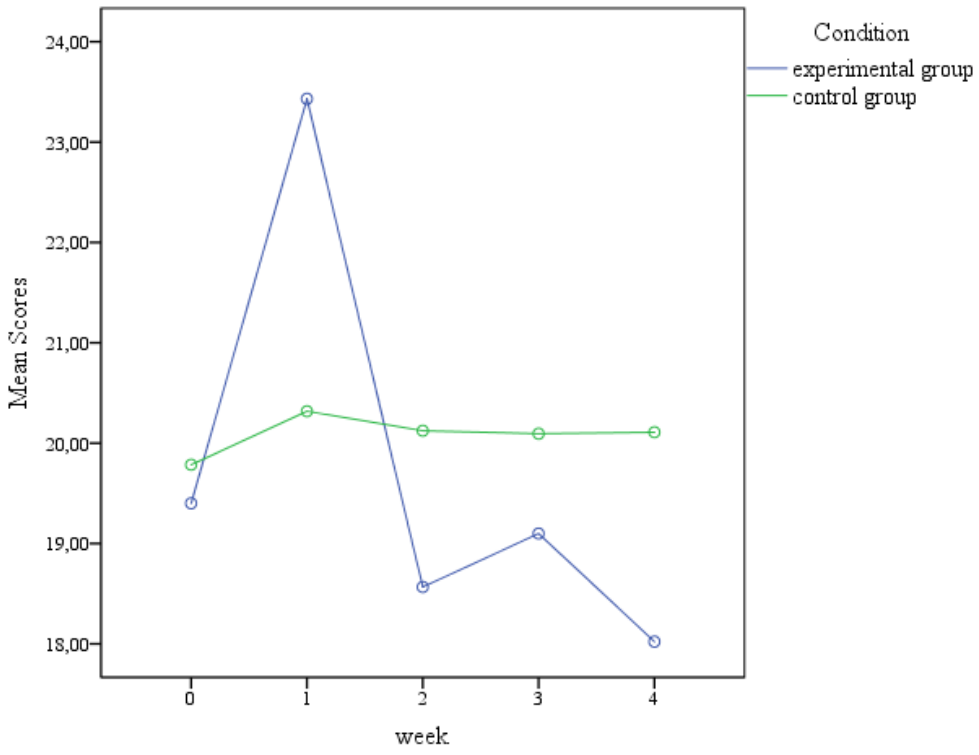

Figure 1.
Figure showing the course of the mean scores on the Qualidem (T0-T4) for both the experimental group (N=16) and the control group (N=11)

Figure 1 shows the mean scores on the Qualidem for both the experimental (N=16) and the control group (N=11) from the baseline measurement to week 4 of the intervention. The line for the control group shows that there was only a slight change in scores on quality of life over the four weeks. However, because of the fact that this change is very small, it can be concluded that the control group showed no change in quality of life. After the baseline measurement, the line for the experimental group showed a peak in week 1. However, the difference in change between the two groups was not significant (F (1,32) = .24, p= .63). After that, quality of life scores decreased. At week 4, the experimental group showed slightly lower scores on quality of life when compared to the baseline measurement.

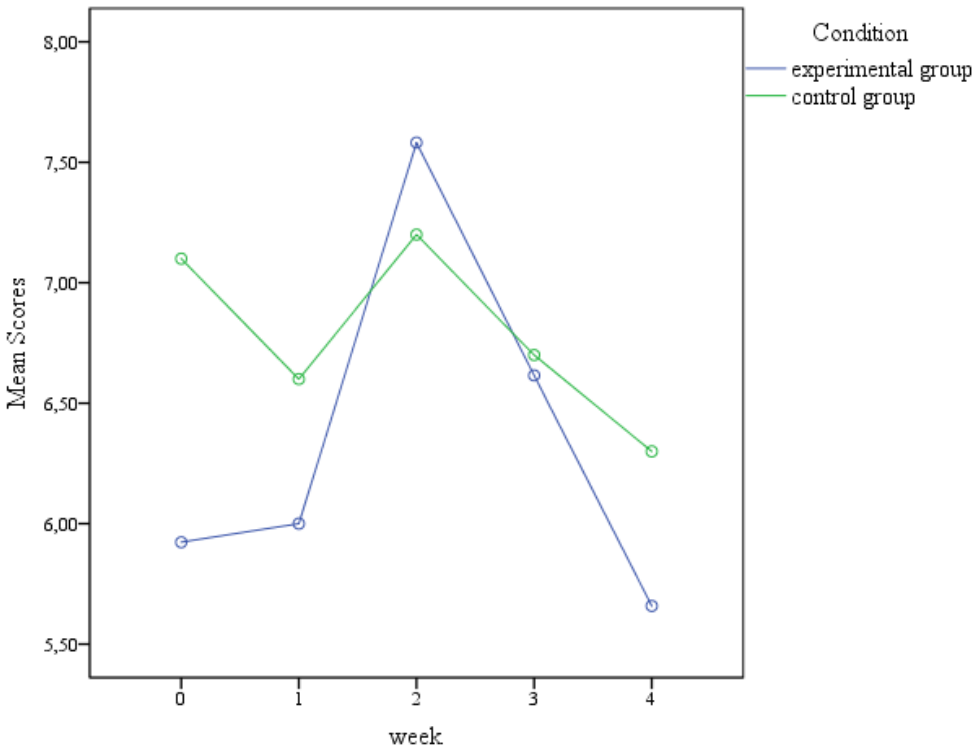

Figure 2.
Figure showing the course of the scores on the Cornell Scale (T0-T4) for both the experimental group (N=13) and control group (N=10)

The course of the mean scores on the Cornell Scale for the experimental (N= 13) and the control group (N=11) are shown in Figure 2. The line for the control group showed a little drop in depressive symptoms in week 1. After that, the mean score on the Cornell scale was slightly higher in week 2. Between week 2 and 4, the mean depression score dropped again. At week 4, the control group showed mean depression scores that are minimally lower than at the baseline measurement. The line for the experimental group showed a decrease in depressive symptoms in week 2. After week 2, the mean depression score dropped again and

is slightly lower than at the baseline measurement. All in all, the course of depression over the first few weeks can be described as changeful. Therefore, it can be concluded that the intervention does not show any effects.

Implementation Study

The second part of the current study considered the factors that facilitate or hinder the implementation process of the reminiscence boxes. The domains from the *Consolidated Framework for Implementation Research* (CFIR) from Damschroder et al. (2009) were used as overarching themes to structure the results from the interviews.: *the intervention, inner setting, outer setting, the individuals involved,* and *the process by which implementation is accomplished.* The original Dutch versions of the citations can be found in appendix 5.

The intervention

The first domain from the CFIR model relates to the intervention itself. Table 9 gives an overview of the points that stakeholders mentioned when they were asked to give their opinion on the intervention. All participants had mostly positive impressions on the reminiscence boxes, especially on the content of the boxes because the objects are easy to use, easy to adapt and helpful to get in contact with the elderly suffering from dementia. The fact that there were only three different themes was described as being negative because after a few sessions there were no objects left that were new to the residents. Other negative impressions mentioned during the interviews were that objects were not really suitable for men and that the scales that had to be filled in every week were not relevant.

Stakeholders were asked to give their opinion on the effectiveness of the reminiscence boxes. Different positive effects were mentioned: improved communication, improved reminiscence of old memories, improved quality of life and depression. On top of that, the sessions were described as a nice weekly activity where also the reminiscence of painful memories can have healing effects. The sessions with the reminiscence boxes also have positive effects for the health professionals because the professional skills that they learn during the sessions can be used 24 hours a day.

Table 9.
Opinions of the stakeholders on the intervention

The intervention		
Category	**Subcategory**	**Citations**
Positive impressions	Social contacts	"I think it's a nice way to get in contact with people with dementia."
	Content boxes	"To me the quality is good. Beautiful things gathered together. Yes, that was satisfying." "The themes were nice. Also the one for men, especially because we had a couple of men in the group."
	Easy to use	"The objects fit in a plastic container with lid and you have a suitcase. It is easy to put the box into the room. That's nice."
	Adaptability of the boxes	"I missed quite a few things in the boxes. So we have added some things and we want to give this as a tip to you."
Negative impressions	Scales	"And the scales that I had to fill in were not really relevant to me (…)"
	Content of boxes	"There were three different themes and you noticed that after the fifth of sixth session you had used everything…than you had to repeat it again!" "The objects had to do with wool. (…) But please provide something with wool of knitting needles. Make if more alive for them." "Shaving is something that happens every day. But if they want to tell you something about their job, their hobbies… that you add some things about that."
	Suitability for men	"We did not encounter many objects for men in the boxes…"
Positive effects	Improved communication	"The lady finally said: 'I am sad, but it is also nice to be able to talk about it!'". "You see when you look at the people that they feel safe. (…) To be here, to be allowed so say whatever they want … or to say nothing if they don't want to."
	Helping with memories	"And it helps people with their memories. Even for people who are normally very quiet. (…) So that also they come up with memories to talk about."
	Improved quality of life	"Quality of life will be improved I think. Definitely during the sessions."
	Improved depression	"And then the outcome would be huge. And perhaps it also influences depressive symptoms."
	Healing effects	"Yes, maybe it can have healing effects… and they are not alone!"
	Nice weekly activity	"I am happy that I can offer her that special moment. That's the moment of the week where I can say: this was my contribution. So that she has a more positive vision to the world."
	Improved professional skills	"If you have managed this way of communicating with elderly with dementia you will also use it in the rest of the 24 hours."
No effects/ adverse effects	Only short term effects	"But it is only a snapshot. If the session is over, most of the people fall back into their normal habits."
	Painful memories	"You do not know what memories can be painful. Then you find out that this confrontation has been painful every time!"
	Effects absent	"No, I see no change in that. (…) No, it is a pity that I do not see the effect that I hope to see."
	Effects depend on phase of dementia	"I think in an earlier stage of dementia we could achieve greater effects. Now we have to find satisfaction in the small things."
Suggestions for improvement	More/other objects that can be used	"There were old sweets in the box but some people do want to taste them. So maybe you should use fresh sweets every time."
	Offering more interventions in a week	"I think there should be more interventions like this one in one week."
	Filling in scales on another weekday	"Actually, we should fill in a questionnaire on a day when the reminiscence boxes are not used."
Effectiveness of questions	Own approach	"It is different for every session and every participant. Sometimes one participant is slightly tired, and sometimes the other…".

However, stakeholders did not only mention positive effects of the intervention. The duration of the effects is only short-term because they disappear very quickly if the sessions are over. For some residents the intervention did not provide any effects, maybe because the effectiveness of the intervention depends on the phase of dementia. On top of that, reminiscing about painful memories was described as being negative. Different suggestions were mentioned to improve the intervention: adding fresh sweets, offering the intervention not only once a week, and filling in the scales on an additional day where the boxes are not used.

According to the instruction, different types of questions can be asked during a session: closed questions, open questions, questions about facts, deepening questions, or questions about feelings. There is no type of question that worked best for all of the participants (see appendix 5 for an overview). Health professionals have to approach individually to see what types of questions work best.

Inner setting

The second factor of the CFIR, the "inner setting", relates to facilitators and barriers within the organization. Only one facilitator but many barriers were mentioned (see Table 10). The use of reminiscence boxes belongs to the modern way of dementia care, which Livio wants to provide. Therefore, all stakeholders agreed that the reminiscence boxes should be used in the future. There are different barriers that hinder the implementation process: the availability of rooms, resistance from colleagues, the availability of time and money, and the lack of staff. No barriers are expected by the coach because the intervention is accessible and easy to use. All in all, it can be said that the coach had different opinions than the other stakeholders who did the sessions with the reminiscence boxes by themselves.

Different suggestions for improvement were mentioned that can be related to the inner setting. First, a clinical coaching/training should be done to let the sessions with the reminiscence boxes become a part of the daily process. Second, it has been suggested that the sessions should be done together with somebody else because sometimes the sessions have to be disturbed when health tasks have to be done. There are also requirements that have to be fulfilled to guarantee the success of the intervention. First, good staff that is trained to do the intervention is important. Second, useful material must be available to the staff. Third, the intervention has to be promoted to give more publicity and to show how important the project is. All in all, also colleagues who were not directly engaged in the intervention had a positive opinion on the reminiscence boxes.

Table 10.
An overview of the aspects that were mentioned by the participants about the inner setting

Inner setting Category	Subcategory	Citations
Goals for the future	Modern dementia care	"This is also a part of modern dementia care…that's where we have to go!"
	Using the reminiscence boxes in the future	"Yes of course! Sure!"
Barriers	Rooms	"And then I had booked a room and then there were other colleagues who claimed it, too. That was very annoying the first times because the session was disturbed."
	Colleagues not familiar with the intervention	"I think the staff should also be informed about how important it is to do the sessions."
	Time and money	"I had to fill in a lot of scales but I was not able to take the time for that. We had to fill in the scales during the working hours."
		"Managers think the intervention is good if it does not cost too much time or extra money! That's what they said."
	Lack of staff	"When you are alone with the group you do not have the time to fill in the scales immediately. So what did we do? Yes, we took them home."
		"If anyone had to go to the toilet the session had to stop. And then the others could not go on because there was no one who could pick up the conversation."
	No barriers	"No... because it is very accessible and also very simple. I do not expect big barriers…"
Suggestions for further improvement	Offering coaching/clinical training	"A training around psychogeriatrics… and if this is going to be a part of the process I think this would be beneficial."
	Doing the sessions together with somebody else	"It would have been nice to do the session with somebody else. (…) Two hands extra is so much."
Requirements	Training of staff	"It is also important that you have staff that got good training. Who understands what the elderly want…!"
	Promote the intervention	"That you enthuse the people. Give it a positive label and make clear how important this is."
		"It is important to give more publicity and to show how important this is!"
	Provide useful material to work with	"But then you also need to make material available…"
Opinion of colleagues/ Managers	Positive opinion	"wonderful! But they do not see themselves doing it."
		"My colleagues are very cooperative. (…) They really like it!"
		What I like about for example the coach (…) he said 'am I allowed to take a look?' He began to pick things from the box. 'Oh I remember this one from my childhood', he said."

Outer setting

The third domain from the CFIR deals with the "outer setting", including the economic, political, and social context of the organization. Only one hindering aspect was mentioned that has to do with the outer setting. It got clear that health care institutions like Livio have to deal with budgetary restrictions nowadays: "Health care has to deal with restrictions and you have to come up with alternatives!". Therefore, also Livio has to find alternatives do deal with financial constraints.

Individuals involved

The fourth factor from the CFIR considers the individuals that are involved in the intervention and/or the implementation process (see Table 11). Individuals who were part of the current intervention showed their own initiative. They were interested and willing to search for useful material that can be used during the sessions. Individuals who were part of the intervention received enough explanations and support. Therefore, their self-efficacy was high and they felt able to carry out the intervention according to plan.

Table 11.
An overview of the aspects that were mentioned about the individuals that were involved

Individuals involved		
Category	**Subcategory**	**Citations**
One's own initiative	Searching for useful material	"Once I have exchanged some things in the box. Own initiative!"
	Being interested	"You have to be interested. If you say that you do not care it won't work. You need to have the drive (…)"
Self-Efficacy	Received enough explanations	"Yes, I have had enough explanation."
	Received enough support	"I received a letter with tips on how to deal with different situations."

Process of implementation

The last domain of the CFIR is the implementation process. When stakeholders described how they started and executed the sessions with the reminiscence boxes (see Table 12), it got clear that they followed the instructions that they received beforehand. To evaluate and reflect on the process of implementation, regular e-mail contact with the intervention took place to give feedback.

Table 12.
An overview of the aspects that were mentioned about the implementation process

Process of implementation		
Category	**Subcategory**	**Citations**
Executing	Carrying out the implementation according to plan	"I got the material and I have packed it into the bag. And then we collect the people and take them to the room. Then I put the box on the table and I say 'today I brought a suitcase with a lot of beautiful old things' (…)." "Yes, I always started with an open question. Also when I picked up an object…"
Reflecting and evaluating	Feedback about the progress and quality of implementation	"I have e-mailed her each time about how it went and then I got some tips from her."

Discussion and Conclusion

Goal of the present mixed-method study was to investigate not only the effectiveness of the reminiscence boxes but also the factors that facilitate or hinder the implementation process. The reminiscence boxes that are used at Livio are filled with objects aimed at helping elderly with dementia reminisce about their past. According to the literature, the use of interventions focusing on reminiscence in general seems to be a promising way to decrease symptoms of depression and therefore increase quality of life (Bohlmeijer et al., 2003; Okumura et al., 2003).

The duration of the intervention using the reminiscence boxes was 8 weeks. This report presents the preliminary results after 4 weeks of the intervention, because a lot of data after week 4 were not yet available. The quantitative data that was obtained by health professionals was used to answer the following question: *(1) What are the effects of reminiscence boxes on depression and quality of life after 4 weeks of use for elderly with dementia?* The second part of the current study was aimed at investigating the factors that facilitate or hinder the implementation process of the reminiscence boxes. *The Consolidated Framework for Implementation Research* from Damschroder et al. (2009) was used as a theoretical framework for the interviews used in the present study. The following research question was aimed to be answered by using the data from the interviews with stakeholders: *(2) Which of the factors identified in the CFIR facilitate/hinder the implementation process according to the opinion of stakeholders?* Results from the effect study and the implementation study are summarized and discussed in the following.

Effect study

Effect of reminiscence boxes on depression and quality of life

Participants in both conditions had the same levels of depression and quality of life at the beginning of the study. It was expected that the group who participated in the sessions would show an improvement in quality of life and symptoms of depression. However, the intervention did not show the desired effects. Various methodological issues can explain this lack of effect. The number of residents participating in the study was relatively small. On top of that, even though the elderly were randomly assigned to one of the two conditions, the experimental group was larger than the control group. Maybe this is because of the fact that the present study only used the preliminary data that was yet available. Ashida (2000) found positive effects on depressive symptoms after a 3-week study period although only 20 residents participated in her study. However, Ashida (2000) examined the effectiveness of a

reminiscence focused music therapy treatment. She only included participants who were able to express their feelings either verbally or nonverbally. The question remains in what way the current study can be compared with the one from Ashida (2000). In the present study, the availability of the residents to express their feelings was not officially assessed and therefore did not belong to the inclusion criteria. The residents who participated in the present study could possibly suffer from later stages of dementia, which means that their cognitive ability would be much lower. This could also describe the lack of effects of the reminiscence boxes. For future research it would be useful to include information about the phase of dementia to see whether there is a difference in effectiveness for residents in an early or later stage of dementia.

Elderly diagnosed with dementia suffer from a severe decline in cognitive ability. According to Cotelli et al. (2012) the remaining cognitive abilities have a significant impact on the well-being of elderly suffering from dementia. Tadata et al. (2007) also included the level of cognition as an additional outcome measure. They expected that reminiscence therapy can enhance the remaining capacities that are necessary for activities of daily life in elderly suffering from dementia. In turn, enhanced capacities are expected to support quality of life (Tadaka et al., 2007). Their reminiscence therapy programme included themes and objects suitable to the characteristics and life histories of the elderly. Results showed that the reminiscence programme enhanced remaining cognitive capacities and helped elderly with dementia to adapt to a daily life (Tadaka et al., 2007). When looking at the outcome measures from the present research, remaining cognitive abilities are not assessed. For future research it would be useful to include an outcome measure determining the level of cognition (e.g. the Mini-Mental State Examination, Folstein et al., 1975). Research demonstrates that the enhancement of cognitive abilities results in positive effects on well-being for elderly with dementia (Cotelli et al., 2012). When future research on the reminiscence boxes results in positive effects on cognitive abilities, positive effects on well-being are likely to occur.

The questionnaires used in the current study were filled in by different health professionals. This could have had an influence which makes it difficult to compare the scores on the different time points. When scales are completed by the same health professionals, differences in scores will be more visible. According to Ettema et al. (2007), the inter-rater reliability coefficients for the Qualidem are only modest. The inter-rater reliability for the Cornell Scale is rated as being high (Alexopoulos et al., 1988). Teri et al. (1997) completed the Cornell Scale based on interviews with caregivers and patients. They also used an additional depression outcome measure, the Beck Depression Inventory (Beck, Ward,

Mendelson, Mock, & Erbaugh, 1961) which was completed by caregivers. There is disagreement about the best way to measure depression in dementia (Teri, 1992) because symptoms of depression and dementia sometimes overlap (Teri et al., 1997). It gets clear that the assessment of depression in elderly with dementia is not yet perfected. Therefore, ratings from depression outcome measures should be regarded with some kind of suspicion.

During the present study, the scales measuring quality of life and depression were completed by the health professionals immediately after the sessions have taken place. It has been suggested to fill in the questionnaires on an additional day where the reminiscence boxes are not used to get a more detailed view on the duration of the effects. However, instructions from both the Qualidem and the Cornell Scale ask to give a rating on the different items based on the previous week. In the present study it seemed that this was not clearly communicated to the health professionals. When ratings in the present study were only based on observations from the sessions, the scores that were obtained cannot be used to give a rating on possible long-term effects of the intervention. In future research, instructions on how to complete the observational scales should be communicated more clearly.

When looking at the literature, it gets clear that it is difficult to choose the right tools to evaluate depression and quality of life in elderly with dementia. For example, Abrams and Alexopoulos (1994) argue that it is difficult to measure depressive symptoms in elderly with dementia because of their shrinking ability to think and communicate. In the present study, stakeholders were also unsure whether the observational instruments really measure depression and quality of life in elderly with dementia. According to Ettema et al. (2005), the Qualidem cannot be used to give a rating on quality of life for individual residents. For individuals, the measurement only gives an indication of quality of life if other ratings like for example the reconstruction of personal wishes or an evaluation of family members are included. Ashida (2000) used videotapes from the reminiscence sessions as an addition to analyse the data obtained by the observational scales more deeply. The addition of further rating scales or assessment instruments would be a recommendation for future research on the effectiveness of the reminiscence boxes.

Both conditions did not show worrisome levels of quality of life and depression. In the study from Ashida (2000), almost every resident participating in the study was taking antidepressant, anxiety, and/or mood stabilizing medication when the study was conducted. On top of that, three of the twenty participants had been diagnosed with depression, and three participants were diagnosed with an anxiety disorder. During her study, she found significant improvement in depressive symptoms, measured with the Cornell Scale for depression in

dementia. Maybe in the present study, no significant improvement could be seen because of the fact that all residents scored fairly well on both, depression on quality of life.
Taking these points into account, it gets clear that conclusions have to be drawn carefully. Based on the present preliminary dataset it can be said that the use of reminiscence boxes does not show positive effects on depression and quality of life after 4 weeks. The remaining data has to be analysed to see whether possible effects occur after the fourth week.

Implementation Study

When looking at the results from the implementation study, it gets clear that the *Consolidated Framework for Implementation Research* (Damschroder et al., 2009) seems to be a good model helping to investigate possible barriers or facilitating factors influencing the quality of the implementation process of health innovations. Different models that can be found in the literature also state that barriers occurring during the implementation process can occur at different levels (Ferlie et al., 2001). Information that was obtained during the interviews shows that all stakeholders named aspects that could be assigned to the five different domains from the framework. The following paragraph is structured according to the domains from the CFIR. Key findings from the implementation study are summarized and discussed.

The intervention

Some stakeholders did not see any effects at all and they supposed that the effectiveness of reminiscence boxes depends on the phase of dementia. Svansdottir and Snaedal (2006) compared the effectiveness of music therapy in moderate and severe dementia. They indicated that music therapy is an effective method for both elderly with moderately severe and severe dementia. Therefore, it can be concluded that music therapy is useful for different stages of dementia. Research is lacking that shows whether the use of reminiscence boxes is only suitable for residents suffering from early dementia. Maybe this form of reminiscence therapy is only suitable for moderately severe dementia because in that stage, elderly are still able to communicate in some way. This should be investigated more deeply in future research.

Stakeholders mentioned that the positive effects only last for a short period of time. Svansdottir et al. (2006) examined the effectiveness of a 6-week reminiscence therapy using music. Four weeks after the intervention has finished, the positive effect mostly disappeared. Maybe it is unrealistic to expect long-term effects in elderly with dementia. As it has been mentioned before, the questionnaires during the present research were completed immediately after the sessions. It is not clear whether the health professionals based their ratings only on

observations they made during the sessions. If this is the case, it is not possible to make conclusions regarding the long-term effects of the intervention. It would be helpful to complete the questionnaires on another day where the reminiscence boxes are not used to see whether possible effects of the sessions remain for a longer period of time.

All in all, it can be said that in the present study, sessions with the reminiscence boxes were done by health professionals who are familiar with the elderly living at Livio. According to Lawrence et al. (2012) the personal contact between health professionals and elderly suffering from dementia is very important and helpful for the success of an intervention focusing on reminiscence.

The inner setting

The lack of rooms, lack of staff, and the lack of promotion of the intervention was named as a barrier. Damschroder et al. (2009) state that it is important to ensure that individuals in an organization have a shared perception of the importance of the intervention. It can be concluded that the implementation process is going to be hindered if involved individuals do not have the same opinion towards the intervention. However, the coach had slightly different opinions, especially towards the possible barriers of the intervention. In contrast to the health professionals who did the sessions by themselves, the coach did not expect any barriers. Damschroder et al. (2009) emphasize the importance of communication within an organization. They concluded that the effectiveness of an implementation process relies on the high quality communications between colleagues. Barriers that are experienced by the staff who did the sessions with the reminiscence boxes should be communicated to for example the coaches. However, it should be taken into account that in the present study, only one coach/manager participated in an interview. In future research, more coaches/managers should be asked to see whether they share the opinion of the coach who participated in the current study.

Stakeholders mentioned different requirements that should make the successful implementation of the intervention possible. First, the intervention should be promoted and staff should be trained by for example a clinical coaching or training. Second, the sessions should be done together with another health professional. Lawrence et al. (2012) also state that the availability of staff is important. When an insufficient amount of staff is available, the implementation process is going to be hindered because of nursing tasks that need to be done (Lawrence et al, 2012). Results from the present study show that staff wished to do the sessions not on their own, but together with somebody else. Suggestions like these have to be

communicated to colleagues, managers, or the leader of the intervention because peer collaboration, open feedback and review among colleagues is seen to be important to guarantee the success of the implementation process (Damschroder et al., 2009).

During the interviews it has been mentioned that the use of reminiscence boxes can be seen as a modern way of dementia care. Livio is working on the implementation of more modern ways of care to ensure the well-being of the elderly with dementia. Smalbrugge (2012) states that in modern dementia care, the individual identity of the elderly plays an important role. Therefore, maintaining the personal identity of an elderly suffering from dementia is one of the most important goals of modern dementia care. The use of reminiscence boxes offers a way to reach this goal because the boxes can be adapted with objects fitting to the individual interests of the elderly.

The outer setting

Stakeholders mentioned constraints relating to the outer setting. Especially financial constraints and the lack of staff were mentioned. According to Hsu and Wang (2009), reminiscence therapy offers a cost-saving intervention that can be used in nursing homes for elderly with dementia. Stakeholders agreed. The use of the reminiscence boxes has been mentioned as a good alternative to deal with the constraints from the outer setting.

In the present implementation study, only a few factors were named that could be related to the outer setting. Maybe health professionals found it difficult to come up with factors regarding the outer setting or they are unaware of the economic, political, and social context of the organization. When looking at the semi-structured interview schedule it can be said that the schedule does not include a lot of questions regarding the outer setting. Maybe the schedule that has been used during the current study did not include the right questions that are useful to yield information about possible hindering/facilitating factors regarding the outer setting. The interview schedule should be adapted when future research on the information process is planned.

Individuals involved

It got clear that stakeholders who were involved in the intervention received enough explanation and support to do the sessions properly. On top of that, they were motivated and proactive to search for useful additional material that could be used during the sessions. Therefore, their self-efficacy seems to be high and they feel confident to take the steps that are needed for successful implementation. According to Damschroder et al. (2009), individuals

with high self-efficacy feel more committed to the intervention and make more decisions that promote the implementation process. On top of that, factors like knowledge, skills, and experienced support from colleagues contribute to the success of the implementation of a health innovation (Fleuren et al., 2004).

Process of implementation

It got clear that stakeholders followed the instructions for the implementation from the leader of the intervention. They had regular contact with the intervention leader to reflect on the implementation process and to receive feedback. According to the CFIR model from Damschroder et al. (2009), open feedback and review between peers and across hierarchical levels is important to guarantee the effectiveness of the implementation process.

During the process of implementation, a series of processes at different organizational levels occur (Damschroder et al., 2009). Therefore, all facilitating/hindering factors belonging to the previously mentioned domains play a role during the process of implementation. For example, individuals from the inner setting have to be informed about the importance of the intervention. On top of that, the organization has to react on constraints from the outer setting, for example by saving money by implementing interventions like the reminiscence boxes (Hsu et al., 2009). Consequently, processes occurring at the different levels in and outside of an organization together influence the implementation process.

Strengths, limitations and future research

One of the strength of this study is the fact that residents who participated in the effect study were randomly assigned to one of the two conditions. In the present research, the distribution of residents over the two conditions was not equal. However, this is most likely because the present study only used the preliminary dataset. However, when future research takes the whole dataset into account, the distribution must be equal.

To examine the effectiveness of the intervention and the quality of the implementation process, a mixed-method approach has been chosen to answer the research questions. A strength of this mixed-method approach is that the data that was obtained during the interviews could be used in the interpretation of the results from the statistical analysis. On top of that, the use of semi-structured interviews gives the opportunity to get more in-depth information about the topics that were discussed. The use of semi-structured interview schedules allows the researcher to dig deeper if the participant can give more information about one specific topic. In the current study, the interviews were analysed independently by

two encoders. This resulted in a more reliable coding process. At last, it has been shown that the 5 stakeholders who did the sessions with the reminiscence boxes by themselves had approximately similar opinions when they were asked to give their opinion on the reminiscence boxes and their implementation. Only one coach/manager was interviewed and he had diverging opinions. Results have shown that health professionals who did the sessions by themselves experienced more problems during the implementation process than the coach. Future research is needed to see whether other managers/coaches agree. If future research also shows that the opinions differ, solutions have to be found to handle the divergence in opinions.

However, the present study also has limitations. In the present preliminary study, 11 participants together formed the control condition. 25 residents were part of the experimental condition, meaning that there was no equal distribution over the two groups. Therefore, it is difficult to formulate general conclusions. The researcher did not obtain all of the questionnaires from T0 to T8. After week 4, a lot of the data was missing. Therefore, the researcher decided to only use the data from the first four weeks because the data set only contained complete data from a few participants who completed the whole intervention. When the whole dataset is available, future research should be done to investigate the effectiveness of the reminiscence boxes more deeply. On top of that, the interview schedule that has been used during the present study did not contain enough questions regarding possible hindering/facilitating factors from the outer setting. Additional questions should be included in future research to gain more insight into the influences of the outer setting.

Table 13.
Suggestions for future improvement (spread over three categories)

Category	**Suggestion**
the intervention	- Adding fresh sweets
	- Using more than 3 different themes
the implementation process	Ensuring that at least two health professionals do the sessions together
	- Promoting the intervention among colleagues
	- Communicating more clearly where completed scales are collected
	- Give clear instructions on how observational scales have to be completed
	- Arrange regular meetings of coaches and performers to receive feedback on barriers and problems
future research	- Offering the intervention more often
	- Including additional outcome measures (e.g. the *Mini-mental State Examination*, the *Beck Depression Inventory*)
	- Analysing the complete dataset (T0-T8)
	- Completing observational scales on a day where the reminiscence boxes are not used
	- Adding more questions regarding the outer setting to the interview schedule
	- Investigating the effectiveness of the intervention for elderly suffering from different phases of dementia
	- Additional interviews with coaches/managers

Suggestions for Livio

The present research resulted in some possible modifications for the reminiscence boxes and their implementation process. The suggestions for improvement can be spread over three different categories: suggestions for the intervention itself, for the implementation process, and future research (see Table 13).

General conclusion

The present study showed that relevant stakeholders were generally very positive about the use of reminiscence boxes for elderly with dementia. They reported that the intervention was more or less effective and that the intervention fits well within the organization and within current trends in dementia care. However, the results on depression and quality of life could not yet be demonstrated. It has been shown that the *Consolidated Framework for Implementation Research* (Damschroder et al., 2009) offers an overarching framework helping to provide an insight into important factors that facilitate or hinder the implementation of health innovations. The present study yielded some useful tips for further improvement of the intervention and its implementation

The question remains in what way interventions for elderly with dementia can be effective. All in all, the use of reminiscence boxes offers a nice intervention to give elderly with dementia some special moments where they are able to reminisce about their past. Suggestions that were formulated based on the results from the present research can be used to improve the reminiscence boxes and their implementation process. Future research including the complete dataset is needed to further examine the effect of the reminiscence boxes on quality of life and depression for elderly suffering from dementia.

Literature

Abrahamson, K., Clark, D., Perkins, A., Arling, G. (2012). Does cognitive impairment influence quality of life among nursing home residents? *The Gerontologist,* 52, 632-640.

Alexopoulos, G.S., Abrams, R.C., Young, R.C., Shamoian, C.A. (1988). Cornell scale for depression in dementia. *Biological psychiatry,* 23(3), 271-284.

Amuk, T., Karadağ, F., Oğuzhanoğlu, N., & Oğuzhanoğlu, A. (2002). [Reliability and validity of the Cornell Scale for Depression in Dementia in an elderly Turkish population]. *Turk psikiyatri dergisi= Turkish journal of psychiatry*, *14*(4), 263-271.

Arakawa-Davies, K. (1997). Dance/movement therapy and reminiscence: a new approach to senile dementia in Japan. *The Arts in psychotherapy*, 24(3), 291-298.

Ashida, S. (2000). The effect of reminiscence music therapy sessions on changes in depressive symptoms in elderly persons with dementia. *Journal of Music Therapy*, 37(3), 170-182.

Baron, R.M., Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations: *Journal of personality and social psychology,* 51(6), 1173.

Beck, A.T., Ward, C., Mendelson, M., Mock, J., Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry*, 4, 561-571.

Bohlmeijer, E., Smit, F., & Cuijpers, P. (2003). Effects of reminiscence and life review on late-life depression: a meta-analysis. *International journal of geriatric psychiatry*, *18*(12), 1088-1094

Bouman, A.I.E., Ettema, T.P., Wetzels, R.B., van Beek, A.P.A., de Lange, J., Droes, R.M. (2011). Evaluation of Qualidem: a dementia-specific quality of life instrument for persons with dementia in residential settings: scalability and reliability of subscales in four Dutch field surveys. *International journal of geriatric psychiatry,* 26(7), 711-722.

Chaves, M.L.F., Izquierdo, I. (1992). Differential diagnosis between dementia and depression: a study of efficiency increment. *Acta Neurologica Scandinavica*, 85(6), 378-382.

Cooney, A., O'Shea, E., Casey, D., Murphy, K., Dempsey, L., Smyth, S., …, Jordan, F. (2013). Developing a structured education reminiscence-based programme for staff in long-stay care facilities in Ireland. *Journal of clinical nursing*, 22(13-14), 1997-1987.

Cohen-Mansfield, J., Libin, A., & Marx, M.S. (2007). Nonpharmacological treatment of agitation: a controlled trial of systematic individualized intervention. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences,* 62(8), 908-916.

Cotelli, M., Manenti, R., Zanetti, O. (2012). Reminiscence therapy in dementia: A review. *Muturitas,* 72(3), 203-205.

Damschroder, L.J., Aron, D.C., Keith, R.E., Kirsh, S.R., Alexander, J.A., Lowery, J.C. (2009). Fostering implementation of health services research findings into practice: a

consolidated framework for advancing implementation science. *Implement Sci,* 4(1), 50.

De ziekte van Alzheimer. Verkregen op 10-03-2016 op http://www.alzheimernederland.nl/informatie/wat-is-dementie/vormen-van dementie/ziekte-van alzheimer.aspx

DiNapoli, E.A., Scorgin, F., Bryan, A.N., Sebastian, S., Mundy, M.J. (2015). Effect of individualized social activities on quality of life among older adults with mild to moderate cognitive impairment in a geriatric psychiatry facility. *Aging & mental health*, 1-9.

Drevets, W. C., & Rubin, E. H. (1989). Psychotic symptoms and the longitudinal course of senile dementia of the Alzheimer type. *Biological psychiatry*, *25*(1), 39-48.

Ettema, T.P., Dröes, R.M., de Lange, J., Mellenbergh, G.J., Ribbe, M.W. (2007). QUALIDEM: development and evaluation of a dementia specific quality of life instrument. Scalability, reliability and internal structure. *International journal of geriatric psychiatry*, 22(6), 549-556.

Ettema, T., de Lange, J., Droes, R.M., Mellenbergh, D., Ribbe, M. (2005). Handleiding Qualidem. *Een meetinstrument. Kwaliteit van Leven bij mensen met dementia in verpleeg- en verzorgingshuizen*, versie 1.

Fleuren, M., Wiefferink, K., Paulussen, T. (2004). Determinants of innovation within health care organizations. *International journal for quality in health care*, 16(2), 107-123.

Folstein M.F., Folstein, S.E., McHugh, P.R. (1975). „Mini-mental state": a practical method for grading the cognitive state of patients for the clinician. *Journal of psychiatric research*, 12(3), 189-198.

Frankl, V.E. (1984). Man's Search for Meaning. *New York: Washington Square Press*.

Gonzalez, J., Mayordomo, T., Torres, M., Sales, A., Meléndez, J.C. Brodaty, H. (2015). Reminiscence and dementia: a therapeutic intervention. *International Psychogeriatrics.* Vol. 27(10), pp. 1731-1737.

Gonzáles-Salvador, T., Lyketsos, C.G., Baker, A., Hovanec, L., Roques, C., Brand, J., Steele, C. (2000). Quality of life in dementia patients in long-term care. *International Journal of Geriatric Psychiary*, 15(2), 181-189.

Hagens, C., Beaman, A., Ryan, E.B. (2003). Reminiscing, poetry writing, and remembering boxes: personhood-centered communication with cognitively impaired older adults. *Activities, Adaptation & Aging*, 27(3-4), 97-112.

Hsu, Y.C., Wang, J.J. (2009). Physical, affective, and behavioural effects of group reminiscence on depressed institutionalized elders in Taiwan. *Nursing research*, 58(4), 294-299.

Jo, H., Song, E. (2015). The Effect of Reminiscence Therapy on Depression, Quality of Life, Ego-Integrity, Social Behavior Function, and Activities of Daily Living in Elderly Patients With Mild Dementia. *Educational Gerontology*, 41(1). 1-13.

Lawrence, V., Fossey, J., Ballard, C., Moniz-Cook, E., Murray, J. (2012). Improving quality of life for people with dementia in care homes: making psychosocial interventions work. *The British Journal of Psychiatry*, 201(5), 344-351.

Lazar, A., Thompson, H., Demiris, G. (2014). A Systematic Review of the Use of Technology for Reminiscence Therapy. *Health Education & Behavior,* Vol41(1S), 51S-61S. *Reminiscene Boxes*

Lyketsos, C. G., Steinberg, M., Tschanz, J. T., Norton, M. C., Steffens, D. C., & Breitner, J. C. (2000). Mental and behavioral disturbances in dementia: findings from the Cache County Study on Memory in Aging. *American Journal of Psychiatry*.

MacKinlay, E.B. (2001). The Spiritual Dimension of Ageing. *London Jessica Kinsley Publishers.*

MacKinlay, E., Trevitt, C. (2010). Living in aged care: Using spiritual reminiscence to enhance meaning in life for those with dementia. *International Journal of Mental Health Nursing*, 19, 294-401.

McDermott, O., Crellin, N., Ridder, H.M., Orrell, M. (2013). Music therapy in dementia: a narrative synthesis systematic review. *International journal of geriatric psychiatry,* 28(8), 781-794.

Mills, M.A., Coleman, P.G. (1994). Nostalgic memories in dementia-a case study. *The international Journal of Aging and Human Development*, 38(3), 203-219.

Norris, A.D. (1986). Reminisence with Elderly People. *London, Winslow.*

Okumura, Y., Tanimukai, S., Asada, T. (2008). Effects of short-term reminiscence therapy on elderly with dementia: A comparison with everyday conversation approaches. *Psychogeriatrics*, 8(3), 124-133.

Olin, J.T., Katz, I.R., Meyers, B.S., Schneider, L.S., Lebowitz, B.D. (2002). Provisional diagnostic criteria for depression of Alzheimer disease: rationale and background. *The American Journal of Geriatric Psychiatry*, 10(2), 129-141.

Popp, J., Arlt, S. (2011). Pharmacological treatment of dementia and mild cognitive impairment due to Alzheimer's disease. *Current opinion in psychiatry,* 24(6), 556-561. 32

Raglio, A., Bellelli, G., Traficante, D., Gianotti, M., Ubezio, M.C., Villani, D., Trabucchi, M. (2008). Efficacy of music therapy in the treatment of behavioural and psychiatric symptoms of dementia. *Alzheimer Disease & Associated Disorders*, 22(2), 158-162.

Sadock, B. J., & Sadock, V. A. (2008). *Kaplan & Sadock's concise textbook of clinical psychiatry*. Lippincott Williams & Wilkins.

Sadowsky, C.H., Galvin, J.E. (2012). Guidelines for the management of cognitive and behavioural problems in dementia. *The Journal of the American Board of Family Medicine.* 25, 350-366. Doi: 10.3122/jabfm.2012.03.100183.

Schwarz, S., Froelich, L., Burns, A. (2012). Pharmacological treatment of dementia. *Current opinion in psychiatry,* 25(6). 542-550.

Serrani Azcurra, D.J.L. (2012). A reminiscence program intervention to improve the quality of life of long-term care residents with Alzheimer's disease: a randomized controlled trial. *Revista Brasileira de Psiquiatria,* 34, 422-433. Doi: 10.1016/j.rbp.2012.05.088.

Slavin, M.J., Brodaty, H., Sachdev, P.S. (2013). Challenges of diagnosing dementia in the oldest old population. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences,* glt051.

Smalbrugge, M. (2012). Doordenker. *Denkbeeld,* 24(2), 32-32.

Storandt, M., Hill, R.D. (1989). Very mild senile dementia of the Alzheimer type. II. *Psychometric test performance, Arch Neurol,* 46: 383-386.

Svansdottir, H.B., Snaedal, J. (2006). Music therapy in moderate and severe dementia of Alzheimer's type: a case-control study. *International psychogeriatrics, 18*(04), 613 621.

Tadaka, E., Kangawa, K. (2007). Effects of reminiscence group in elderly people with Alzheimer disease and vascular dementia in a community setting. *Geriatrics & Gerontology International,* 7, 167-173. Doi: 10.1111/j.1447-0594.2007.00381x.

Teri, L., Gallagher-Thompson, D. (1991). Cognitive-behavioral interventions for treatment of depression in Alzheimer's patients. *The Gerontologist*, 31(3), 413-416.

Teri, L., Logsdon, R.G., Uomoto, J., & McCurry, S.M. (1997). Behavioral treatment of depression in dementia patients: a controlled clinical trial. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 52(4), P159-P166.

Teri, L., Wagner, A. (1992). Alzheimer's disease and depression. *Journal of Consulting and Clinical Psychology,* 3, 379-391.

Van der Molen, H.T., Perreijn, S., Van den Hout, M.A. (2010). Klinische Psychologie. *Noordhof uitgevers*, Groningen/Houten

Vandereycken, W., Hoogduin, C.A.L., Emmelkamp, P.M.G. (2000). *Handboek Psychopathologie/deel2/druk3/GEB.* Bohn Stafleu Van Loghum.

Van Haitsma, K.S., Curyto, K., Abbott, K.M., Towsley, G.L., Spector, A., & Kleban, M. (2013). A randomized controlled trial for an individualized positive psychosocial intervention for the affective and behavioural symptoms of dementia in nursing home residents. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences,* gbt102.

Verbeek, H., Zwakhalen, S.M., van Rossum, E., Ambergen, T., Kempen, G.I., & Hamers, J.P. (2010). Dementia care redesigned: Effects of small-scale living facilities on residents, their family caregivers, and staff. *Journal of the American Medical Directors Association,* 11(9), 662-670.

Westerhof, G.J., Bohlmeijer, E.T. (2014). Celebrating fifty years of research and applications in reminiscence and life review: State of the art and new directions. *Journal of Aging Studies*, 29, *107-114.* DOI: 10.1016/j.jaging.2014.02.003.

Whitehouse, P. J., Orgogozo, J. M., Becker, R. E., Gauthier, S., Pontecorvo, M., Erzigkeit, H., Rogers, S., Mohs, R. C., Bodick, N., Bruno, G. and DalBianco, P. (1997) Quality of life assessment in dementia drug development. Position paper from the International Working Group on Harmonization of Dementia Drug Guidelines. Alzheimer Dis. Assoc. Disord. 11(Suppl. 3), 56±60

WHO QOL Group (1995) World Health Organization Quality of Life-100. World Health Organization Division of Mental Health, Geneva.

Woods, B., Spector, A., Jones, C., Orrell, M., Davies, S. (2005). Reminiscence therapy for dementia. *Cochrane Database Syst Rev,* 2.

Appendix 1

CORNELL SCALE FOR DEPRESSION IN DEMENTIA
(ned. Vertaling: R.M. Dröes, Vakgroep Psychiatrie, Vrije Universiteit, Amsterdam, 1993)

Naam : _____ Geboren :_____
Datum : _____ Naam invuller:_____

Scoringssysteem

a = niet te beoordelen 1 = licht of wisselend aanwezig 0 = afwezig 2 = ernstig

De beoordelingen zijn gebaseerd op symptomen en kenmerken zoals waargenomen in de week voorafgaande aan het interview. Er dient geen score te worden gegeven wanneer symptomen het resultaat zijn van lichamelijke beperkingen of ziekte.

A. Stemmingsgerelateerde kenmerken

1. Angst angstige gezichtsuitdrukking, peinzend, zorgelijk	a 0 1 2
2. Verdrietig verdrietige gezichtsuitdrukking, verdrietige stem, huilerig	a 0 1 2
3. Reageert niet op plezierige gebeurtenissen	a 0 1 2
4. Prikkelbaarheid gauw kwaad, slecht gehumeurd	a 0 1 2

B. Gedragsstoornissen

5. Agitatie rusteloos, handenwringen, haarplukken	a 0 1 2
6. Vertraging trage bewegingen, langzame spraak, trage reacties	a 0 1 2
7. Meervoudige lichamelijke klachten (scoor 0 indien GI symptomen)	a 0 1 2
8. Interesseverlies t.a.v. gebruikelijke activiteiten (scoor alleen indien er een plotselinge verandering is opgetreden, d.w.z. binnen een periode van 1 maand)	a 0 1 2

C. Lichamelijke kenmerken

9. Vermindering van eetlust a 0 1 2
eet minder dan gewoonlijk

10. Gewichtsverlies a 0 1 2
(scoor 2 indien meer dan 2 kilo in 1 maand)

11. Gebrek aan energie a 0 1 2
gauw moe, niet in staat activiteiten vol te houden (scoor alleen indien er een plotselinge verandering is opgetreden, d.w.z. binnen een periode van 1 maand)

D. Cyclische functies

12. Dagelijkse stemmingsschommelingen a 0 1 2
's morgens meer symptomen

13. Moeite met inslapen a 0 1 2

later dan gewoonlijk voor deze persoon

14. Wordt 's morgens meerdere malen a 0 1 2
wakker

15. Wordt 's morgens vroeg wakker a 0 1 2
vroeger dan gewoonlijk voor deze persoon

E. Stoornissen in de gedachteninhoud

16. Suïcide gedachten a 0 1 2
vindt het leven niet de moeite waard, heeft doodswensen of doet een poging tot zelfmoord

17. Lage zelfwaardering a 0 1 2
zelfverwijten, minacht zichzelf, gevoel te falen

18. Pessimisme a 0 1 2
verwacht het ergste

19. Wanen die overeenstemmen met de stemming a 0 1 2
wanen m.b.t. armoede, ziekte, verlies

Appendix 2

QUALIDEM

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Naam bewoner: ..... Afdeling: .....

De vragenlijst bevat 40 vragen. Het is de bedoeling dat je samen met een collega de vragen beantwoordt over de afgelopen week waarin je de bewoner hebt geobserveerd. Geef op elke vraag een antwoord. Als je twijfelt tussen over de mogelijkheden, omcirkel dan het cijfer onder het antwoord dat het beste bij jouw observaties past. Een antwoord is nooit fout, maar geeft altijd aan wat volgens jou de werkelijkheid het best benadert. Denk niet te lang na over een antwoord; het eerste antwoord dat bij je opkomt, is vaak het beste. Probeer over de vragen waar jij en je collega verschillend over denken tot overeenstemming te komen.

Nooit = Nooit
Zelden = Hoogstens eenmaal per week
Soms = Enkele keren per week
Vaak = Vrijwel dagelijks

1 Is vrolijk	Nooit 0	Zelden 1	Soms 2	Vaak 3	B
2 Maakt rusteloze bewegingen	Nooit 3	Zelden 2	Soms 1	Vaak 0	D
3 Heeft contact met andere bewoners	Nooit 0	Zelden 1	Soms 2	Vaak 3	F
4 Wijst hulp van verzorgende af	Nooit 3	Zelden 2	Soms 1	Vaak 0	A
5 Heeft een tevreden uitstraling	Nooit 0	Zelden 1	Soms 2	Vaak 3	B
6 Maakt een angstige indruk	Nooit 3	Zelden 2	Soms 1	Vaak 0	C
7 Is boos	Nooit 3	Zelden 2	Soms 1	Vaak 0	A
8 Kan genieten van dingen in het dagelijks leven	Nooit 0	Zelden 1	Soms 2	Vaak 3	B
9 Wil niet eten	Nooit 3	Zelden 2	Soms 1	Vaak 0	J
10 Is goed gestemd	Nooit 0	Zelden 1	Soms 2	Vaak 3	B
11 Is verdrietig	Nooit 3	Zelden 2	Soms 1	Vaak 0	C
12 Reageert positief bij toenadering	Nooit 0	Zelden 1	Soms 2	Vaak 3	F
13 Geeft aan dat hij of zij zich verveelt	Nooit 3	Zelden 2	Soms 1	Vaak 0	H

14 Heeft conflicten met verzorgenden	Nooit 3	Zelden 2	Soms 1	Vaak 0	A
15 Geniet van de maaltijd	Nooit 0	Zelden 1	Soms 2	Vaak 3	J
16 Wordt afgewezen door andere bewoners	Nooit 3	Zelden 2	Soms 1	Vaak 0	G
17 Beschuldigt anderen	Nooit 3	Zelden 2	Soms 1	Vaak 0	A
18 Zorgt voor andere bewoners	Nooit 0	Zelden 1	Soms 2	Vaak 3	F
19 Is rusteloos	Nooit 3	Zelden 2	Soms 1	Vaak 0	D
20 Wijst contact met anderen openlijk af	Nooit 3	Zelden 2	Soms 1	Vaak 0	G
21 Heeft een glimlach om de mond	Nooit 0	Zelden 1	Soms 2	Vaak 3	B
22 Heeft een gespannen lichaamstaal	Nooit 3	Zelden 2	Soms 1	Vaak 0	D
23 Huilt	Nooit 3	Zelden 2	Soms 1	Vaak 0	C
24 Stelt hulp op prijs die hij of zij krijgt	Nooit 0	Zelden 1	Soms 2	Vaak 3	A
25 Sluit zich af van de omgeving	Nooit 3	Zelden 2	Soms 1	Vaak 0	F
26 Heeft bezigheden zonder hulp van anderen	Nooit 0	Zelden 1	Soms 2	Vaak 3	I
27 Geeft aan meer hulp te willen	Nooit 3	Zelden 2	Soms 1	Vaak 0	E
28 Geeft aan zich opgesloten te voelen	Nooit 3	Zelden 2	Soms 1	Vaak 0	H
29 Trekt vriendschappelijk op met één of meer bewo-ners	Nooit 0	Zelden 1	Soms 2	Vaak 3	F
30 Wil graag (in bed) liggen	Nooit 3	Zelden 2	Soms 1	Vaak 0	J
31 Accepteert hulp	Nooit 0	Zelden 1	Soms 2	Vaak 3	A
32 Roept	Nooit 3	Zelden 2	Soms 1	Vaak 0	G
33 Heeft kritiek op de gang van zaken	Nooit 3	Zelden 2	Soms 1	Vaak 0	A
34 Is op zijn of haar gemak in gezelschap van anderen	Nooit 0	Zelden 1	Soms 2	Vaak 3	F
35 Geeft aan niets te kunnen	Nooit 3	Zelden 2	Soms 1	Vaak 0	E

36 Voelt zich thuis op de afdeling	Nooit 0	Zelden 1	Soms 2	Vaak 3	H
37 Laat blijken zichzelf niets waard te vinden	Nooit 3	Zelden 2	Soms 1	Vaak 0	E
38 Helpt graag mee met karweitjes op de afdeling	Nooit 0	Zelden 1	Soms 2	Vaak 3	I
39 Wil van de afdeling af	Nooit 3	Zelden 2	Soms 1	Vaak 0	H
40 Stemming is positief te beïnvloeden	Nooit 0	Zelden 1	Soms 2	Vaak 3	B

Scoreberekening: achter elke vraag staat met een hoofdletter aangegeven tot welke subschaal de vraag behoort. Tel de scores per subschaal op.

Subschaal (aantal vragen)	*Scorebereik*		*Score*
A: Zorgrelatie (7)	0 – 21	A	
B: Positief Affect (6)	0 – 18	B	
C: Negatief Affect (3)	0 – 9	C	
D: Rusteloos Gespannen Gedrag (3)	0 – 9	D	
E: Positief Zelfbeeld (3)	0 – 9	E	
F: Sociale Relaties (6)	0 – 18	F	
G: Sociaal Isolement (3)	0 – 9	G	
H: Zich Thuis Voelen (4)	0 – 12	H	
I: Iets Om Handen Hebben (2)	0 – 6	I	
J: Overige vragen bedoeld voor verder onderzoek			

Appendix 3

Informatiebrief

Geachte meneer of mevrouw,

Bedankt voor de deelname aan dit onderzoek. Mijn naam is Theresia Benkhoff en ik ben masterstudente aan de Universiteit Twente. In september ben ik begonnen met mijn stage bij Zorgorganisatie Livio en ik ben betrokken bij het onderzoek over de reminiscentiekoffers.
Tijdens mijn stage wil ik onderzoeken welke aspecten belangrijk zijn voor de implementatie van de reminiscentiekoffers binnen Livio. Bovendien wil ik achterhalen hoe verschillende stakeholders de effectiviteit van de interventie inschatten. Daarvoor ga ik onder ander interviews houden met verschillende betrokkenen. Het interview duurt ongeveer 30 minuten. U doet vrijwillig mee. Dat betekent dat u het interview altijd zonder opgave van redenen mag stoppen. Het interview wordt opgenomen zodat er geen informatie verloren gaat.
Na het aftypen van het interview worden de opnames veilig bewaard en zijn alleen toegankelijk voor de onderzoekers. De resultaten worden anoniem gepubliceerd zodat de gegevens en citaten niet herleidbaar zijn tot personen.

Als u na afloop van het onderzoek meer wilt weten over de resultaten kunt u hier uw e-mail adres aangeven om informatie te ontvangen: _____
Nogmaals bedankt voor uw deelname!

Theresia Benkhoff
(t.benkhoff@student.utwente.nl)

Toestemmingsverklaring

Hierbij verklaar ik de boven gegeven informatie te hebben begrepen en ik stem ermee in geïnterviewd te worden voor dit onderzoek.

Naam deelnemer: _____

Datum, Handtekening: _____

Appendix 4

Interviewschema Masterthese

Algemene informatie:

- Functie/Afdeling: _____
- Hoe lang doet u dit werk? _____
- Hoeveel sessies met de herinneringskoffers heeft u al gedaan? _____
- Hoeveel mensen namen deel? _____

Interview

Het eerste stuk van dit interview gaat over het implementatieprocess van de herinneringskoffers. Ik wil graag meer te weten komen over hoe het gaat met de implementatie van de koffers; welke barrières worden ervaren; welke voor- en nadelen er zijn,...

1. Wat denkt u over de kwaliteit van de interventie?
2. Hoe past het gebruik van de koffers in uw weekprogramma?
    a. Is het moeilijk de sessies in het weekprogramma te implementeren?
        i. Zo ja/nee, waarom?
        ii. Wat zou het gebruik gemakkelijker maken om de koffers te gebruiken?
3. Lijkt het u zinvol de herinneringskoffers in toekomst verder aan te bieden?
4. Moet de interventie nog aangepast worden?
    a. Zo ja, wat moet nog aangepast worden?
        i. De interventie?
        ii. De organisatie?
        iii. De inpassing in de week?
    b. Zou dat kunnen? Hoe?
5. U heeft al sessies met de koffers gedaan. Er zijn verschillende soorten vragen die tijdens de sessie kunnen worden gesteld (**Uitgeprint meenemen!!!)**
    a. Welke vragen werken het best tijdens de interventie? Op welke soort vragen komt de meeste respons? (Open vragen, gesloten vragen, feitelijke vragen (jaartallen), gevoelsvragen, meningvragen, verbredende vragen (gespreksonderwerp verder uitdiepen))
6. U heeft al een aantal sessies met de koffers gedaan, hoe ging dat?
    a. Heeft u meer steun nodig?

    b. Was u voldoende voorbereid?
7. Zijn er dingen die bevorderend werken voor de implementatie?
    a. ... dingen die belemmerend werken?
8. In hoeverre kan de interventie zoals gepland uitgevoerd worden?
9. Wat zou nog veranderd moeten worden aan het implementatieproces?

Het tweede deel van het interview gaat over de effecten van de interventie zoals u deze ervaart. Het gaat erom of de interventie de gewenste effecten heeft; of naast de verwachte effecten nog andere effecten optreden, etc.

1. Wat denkt u dat de interventie betekend voor de bewoners met dementie? Wat hebben ze eraan?
2. Wat zijn de positieve uitkomsten voor de bewoners?
    a. Zijn er ook negatieve uitkomsten?
3. Heeft de interventie de gewenste/verwachte uitkomsten? (Verlagen van depressie/verhogen van kwaliteit van leven)

    Depressie: slaapproblemen, veranderingen in eetlust, vermoeidheid, gevoelens van waardeloosheid,...

    Qualiteit van leven: zorgrelatie (conflicten met verzorgenden?), **positief affect** (vroolijk? Tevreden? Goed gestemd?), **negatief affect** (angstige indruk? Verdrietig?), **rusteloos gedrag** (rustloze bewegingen, gespannen lichaamstaal?), **positief zelfbeeld** (geeft aan meer hulp te willen), **sociale relaties** (contact met andere bewoners?), **sociaal isolement** (wordt afgewezen door andere bewoners?), **zich thuis voelen**?
    a. Zo ja, kunt u daar een voorbeeld van geven? Hoezo?
    b. Zo nee, waarom niet? Kunt u dat nog eens toelichten?
4. Vind u dat de interventie naast de verwachte effecten nog andere effecten heeft?
    a. **Als ze geen idee hebben:** Denk bijvoorbeeld aan <u>verbeterde conversatie</u> tussen bewoners en verzorgenden? <u>Verbeterde stemming</u> of <u>cognitieve vaardigheden?</u>
5. Wat denkt u over de duur van deze effecten? Verdwijnen ze na de sessie of blijven ze nog langer bestaan?
6. Vindt u dat de effecten sterker worden naarmate mensen meerdere sessies hebben meegedaan?
7. Wat denken uw collegas over het gebruik van de herinneringskoffers?
    a. Uw leidinggevenden?
        i. Wat vinden ze goed?

ii. Wat vinden ze minder goed/lastig?

Interviewschema **NIET**-Gebruikers Masterthese

Algemene informatie:

- Functie/Afdeling: _____
- Hoe lang doet u dit werk? _____

Interview

Het eerste stuk van dit interview gaat over het implementatieproces van de herinneringskoffers. Ik wil graag ervaren wat uw inschatting is van het implementatieproces, welke barrières worden ervaren, welke voor- en nadelen er zijn,...

1. Wat denkt u over de kwaliteit van de interventie?
2. Hoe, denkt u, past het gebruik van de koffers in een weekprogramma van de verzorgenden?
    a. Denkt u dat het voor hun moeilijk is de sessies in een weekprogramma te implementeren?
        i. Zo ja/nee, waarom?
        ii. Wat zou het gebruik voor hun (nog) makkelijker maken?
3. Lijkt het u zinvol deze interventie in toekomst verder aan te bieden?
4. Denkt u dat de interventie nog aangepast moet worden?
    a. Zo ja, wat moet aangepast worden?
        i. De interventie?
        ii. De organisatie?
        iii. De inpassing in de week?
    b. Zou dat kunnen? Hoe?
5. Zijn er dingen die bevorderend werken voor de implementatie?
    a. ... dingen die belemmerend werken?
6. Wat zou nog veranderd moeten worden aan het implementatieproces?

Het tweede deel van het interview gaat over uw inschatting van de effecten van de interventie.

(ook als ze tijdens een sessie niet aanwezig waren, vragen of ze kunnen proberen de effecten in te schatten)

1. Wat denkt u dat de interventie betekent voor de de bewoners met dementie? Wat hebben ze eraan?
2. Wat zijn volgens uw inschatting de positieve uitkomsten voor de bewoners met dementie?
    a. Zijn er ook negatieve uitkomsten?
3. Wat denkt u over de duur van deze effecten? Blijven ze voor een langere tijd bestaan?
4. Wat denken uw collegas over het gebruik van de herinneringskoffers?

a. Uw leidinggevenden?
    i. Wat vinden ze goed?
    ii. Wat vinden ze minder goed/lastig?

Appendix 5

Results: Table with categories, subcategories, and examples

The intervention Category	**Subcategory**	**Citations**
Positive impressions	Social contacts	"Ik vind het een hele mooie manier om in contact te komen met mensen met een vorm van dementie" "Door de voorwerpen in de koffers geeft het een gesprek een inhoud." "We drinken er wat bij...dus ja voor de mensen is het een prettig uurtje. Het is altijd een prettige sveer."
	Content boxes	"Ik vond dat de koffers leuk uitgezocht waren." "(...) de voorwerpen die erin zitten spreken voor zich." "Er zat ook een ding in waarvan ik echt niet wist wat het was maar de bewoner wel. Dus die kon mij heel mooi uitleggen wat het nu was." "Het is ook weer een stukje herkenbaarheid en dit is wel van belang. Dat vind ik wel prima." "De kwaliteit vond ik op zich goed. Mooie dingen bij elkaar gezocht. Ja, daar was ik wel tevreden over." "De onderwerpen waren hartstikke leuk, ook dat voor de mannen omdat we een paar mannen op de groep hadden."
	Easy to use	"Ik denk dat het een heel mooi begin is en de spullen of voorwerpen passen in een plastic bak met deksel en daarbij moet nog een koffer. Maar het is makkelijk om in een ruimte ergens neer te zetten. Dat is prettig." "(*de interventie*) dat was goed te doen. Ja hoor, zeker!" "Terughalen in de tijd...en ja daar zijn we dagelijks wel bezig dus daar past deze interventie heel goed in."
	Adaptability of the boxes	"Ik miste ook wel een aantal dingen in de koffers. Dus dat hebben we zelf aangevuld en dat willen we dan ook wel meegeven als tip naar jullie toe voor de herinneringskoffers."
Negative impressions	Scales	"En de lijsten die ik moest invullen vond ik niet echt relevant voor de groep mensen. (...) ik denk ja, misschien belangrijk voor je onderzoek maar voor mij had ik zoeiets van ja wat voegd dit toe?"
	Content of boxes	"Je had drie onderwerpen en je merkte dat zeg maar de 5e keer of de 6e keer was je daar eigenlijk wel een beetje doorheen. En dan kon je het wel weer herhalen maar goed er zaten ook wel wat mensen in de groep die zeiden 'god daar hebben we het laatst ook al over gehad, moeten we het daar alweer over hebben?" "Ja ik denk dat het toch als je 8 sessies gaat doen, dat je toch...ja dat was qua organisatie moeilijk zeiden ze, maar dat je toch elke keer een ander thema kan gebruiken (...)" "Dus ja dat je meerdere thema's kan gebruiken." "Je hebt natuurlijk bewoners van verschillende leeftijdscategorieen. Er is ook een aantal vrij jonge bewoners met Korsakov problematiek en die komen rond 50 of 55. (...)Dus zorg er ook voor dat je ook materialen hebt die verschillende leeftijdsgroepen gaan aanspreken." "Maar dan misten we op gegeven moment dat we zeiden van ja of je had een onderwerp erbij moeten hebben of misschien meer materiaal." "Dus dat zijn dan van die kleine dingen. Bijvoorbeeld zo een koffer gaat over wol. (...) Maar dan heb iets van wol of breinaalden. Wat het voor hen nog levender maakt."
	Suitability for men	"Ja we hebben ook niet veel mannen maar voor mannen zijn we ook niet veel dingen tegen gekomen in de koffers."

Positive effects	Improved communication	(vrouw die verdrietig was omdat ze een kindje had verloren) "En ik schrok daar heel erg van maar ik heb geluisterd en gevraagd en eigenlijk zei ze uiteindelijk 'Ik ben wel verdrietig, maar het is toch ook heel fijn om even te kunnen praten daarover.". "En je merkte ook... wat ik ook zei als je vaker dezelfde onderwerpen pakte... maar toch vertelden ze.. ja tuurlijk er kwam heel veel hetzelfde weer naarboven. Maar toch zat er nog net soms weer een ander dingetje bij. Dus ja er wordt toch wel wat geprikkeld." "Ja ik denk dat ze allemaal op dat moment dat je ermee bezig bent elkaar ook wel stimuleren. Omdat die eene iets verteld... dan schiet de andere weer wat binnen en die vult weer aan en zo krijg je hele leuke gesprekken." "(...) maar daar (tijdens die sessie) toch van 'hier is je drinken nog'. Of 'god ze moet zo hoesten. Hal even een beetje water'. Dat ze zich wel om elkaar bekommeren. Dat is wel heel mooi om te zien." "Als je komt met de koffer dan zitten mensen te slapen of ze zijn onrustig en als je de interventie begint en mensen uitnodigd om iets te vertellen of je begint zelf iets te vertellen dan komt de interactie." "Het is bevorderend vind ik voor mensen die normaal niet zoveel aan het woord komen in de groep, dat die ook een keer zich kunnen uitspreken en een zegje kunnen doen." "Je merkt aan de mensen zelf dat ze zich er veilig voelen. Dat moet ook een voorwaarde zijn. Hier kunnen zijn en mogen zeggen wat je wil...niets zeggen mag ook."
	Helping with memories	"En het brengt heel veel herinneringen bij de mensen los. Ook voor mensen die normaal heel stil zijn. (...) Dat ze dan toch weer veel herinneringen boven komen en dat ze dan veel gaan vertellen." "Ik denk dat ze een stukje herinneringen zullen hebben bij de voorwerpen. Heel vaak hebben mensen chaos in hun hoofd of mensen komen zelf niet tot initiatief tot een gesprek."
	Improved quality of life	"Kwaliteit van leven denk ik wel. Zeker op dat moment en bij mensen met dementie moet je de verwachtingen niet te hoog hebben." "Ja ik denk emotionele waarde bij sommige mensen. Dat ze toch herinneringen – en in dit geval prettige herinneringen – hebben. En in dat stukje maak je toch wel even dat ze zich prettig voelen."
	Improved depression	"En dan (*als meerdere interventies in een week worden aangeboden*) denk ik dat de uitkomst ook groot zou zijn. En wellicht ook op depressie invloed zou kunnen hebben." "Nou die mevrouw die dan heeft gezegd 'oh dit is leuk eindelijk iets waarover wij mee kunnen praten', die is niet echt depressief maar die kan af en toe een opmerking maken van 'het hoeft me allemaal niet meer want ik heb toch niks'. En dan is het wel leuk om juist van zo'n bewoner die dat heel af en toe wel aangeeft... dat die juist zo opfleurt en zegt 'oh wat leuk, dit is iets waarover ik mee kan praten!'."
	Healing effects	"En ja een pijnlijke herinnering kan je ook lucht geven. Daar kunnen we ook over praten maar probeer het dan toch met een positieve insteek af te sluiten. Iemand mag ook dat zo verhalen een keer ergens kwijt. En dat doe je in een kleine setting wel." "Ja en misschien ook een stukje helend...en ze zijn niet alleen."

	Nice weekly activity	"Op dat moment zijn ze even weg van de plek waar ze normaal zitten op de dagbehandeling. Dan hebben z eeven wat anders, meer aandacht...ook meer luisteren naar m'elkaar." "En dat is niet het doel om ze 24 uur compleet te vermaken maar dat ze wel op een aantal momenten op een dag gewoon activiteiten kunnen doen. En dat je ze helpt met hun herinneringen zeg maar." "Dat kortdurente effect...ja dat heeft hun dan toch even dat gebracht. Een prettige herinnering. Dat is tenminste onze intentie." "Voor hun is het een moment uit deze setting zijn. Ergens anders, andere mensen ontmoeten. Dat denk ik dat voor hun de grootste meerwaarde heeft." "Dan ben ik al blij dat ik haar een momentje kan bieden. Dat is dan het momentje van de week waarvan ik kan zeggen dat dat mijn bijdrage is geweest of onze bijdrage. Dat ze even minder zwart naar de wereld kijkt."
	Improved professional skills	"Als je deze manier van communiceren met dementerenden beheerst zul je dat ook gaan doen in de rest van de 24 uur. (...) De verhalen die mensen vertellen kun je gebruiken als je iemand bijvoorbeld wast of iemand gerust wilt stellen." "(De zorg moet versoberen en je moet met alternatieven gaan komen.) En dit past al in een plaatje als alternatief."
No effects/ adverse effects	Only short term effects	"Maar het is wel... ik vindt het wel een momentopname!" "Op het moment dat je met de activiteit bezig bent is het heel positief!" "Maar ik zeg het is een momentopname, als het dan afgelopen is vervallen heel veel mensen weer in hun gedrag.. in hun oude gedrag." "Blijven hangen... het blijvt alleen hangen doordat ik ze s'morgens weer help om te herinneren. Maar dat is dan toevallig bij de mensen waar ik kom. (...) Bij de andere mensen... ja als je hier bent zijn ze het alweer kwijt." "Nee... omdat mensen wel elk hun eigen weg gaan. De damens zitten daar, en daar, en daar (*op verschillende afdelingen*). Dus de groep valt uiteen en that's it!" "Doormiddel van begeleiding en met de voorwerpen zijn mensen weer in staat om hun hogere hersenfuncties weer te activeren. Tijdelijk."
	Painful memories	"Ik heb nog wel een dingetje want er is een mevrouw die na de sessie s'avonds is gaan dwalen. Maar nu weet ik niet of het door de sessie komt. Ze was ook al ver in de dementie. (...) Dus ik weet niet wat voor een impact dan zo'n sessie heeft gehad...dat vraag ik me dan af. In de sessie was ze heel vroolijk en deed ze heel goed mee, maar ik weet niet hoe lang dat dan nog doorwerkte bij de mensen." "Wat ik weleens heb meegemaakt is dat iemand heel verdrietig werd door een voorwerp. Bijvoorbeeld had ik een boekje bij me over de babytijd en iemand had een kindje verloren. En dat kwam naar boven." "Ja je weet niet welke herinneringen soms pijnlijk zijn. (...) En ja dan kom je erachter dat het voor die mevrouw bij elke keer een pijnlijke confrontatie is geweest."
	Effects absent	"Maar nee... in de periode kan ik niet zeggen van oh er was iemand die altijd agressief was en nu niet meer agressief is. Dat ... nee dat hebben we niet gemerkt." "Nee. Vooral omdat ik een mevrouw heb die toch aan de negatieve kant is. Ne, dan zie ik daar geen verandering in. En die mevrouw is al meerdere keer bij levensverhalen geweest (...). Dus ik heb mevrouw daar al heel lang in

		gevolgd. Ne. Daar zie ik jammer genoeg niet het effect wat ik dan hoop."
	Effects depend on type/phase of dementia	"Ik denk dat we in een eerder stadium daar meer uithalen dan nu. Dat we nu echt in kleine dingen voldoening moeten zoeken. Je moet niet verwachten dat je van iemand een heel groot verhaal krijgt. Ne je moet het echt zoeken in de kleine dingen. De herkenning. De glimlach. Het 'oh ja!' van het snoepje. De dropsteek van daar… Zulk sort kleine dingen. Daar moet je je loon in zoeken om het te blijven doen."
		"Je ziet ook gaande weg dat mensen achteruit gaan. Een dame doet nu nog mee in het traject maar zij is na een kwartier er al klaar mee. Dan stapt ze op en wil weg. Ze brengt nu niet meer dat uurtje op om daar te zitten...nee. Dus je ziet gewoon ook de achteruitgang in de mensen. Ja dat is een schrijnend process en dat houden we niet tegen."
Suggestions for improvement	More/other objects that can be used	"Maar aan de hand van hobbies of hobbiebladen... de eene was misschien gek op timmeren (...). Scheren is dan al zoeits van .. ja dat gebeurd elke dag wel. Maar willen ze iets vertellen, bijvoorbeeld over hun beroep of hobby... dat je daar iets van maakt. Het is maar een suggestie."
		"Daar zaten ook hele oude snoepjes in en die mensen die willen daar toch wel van snoepen. Dus dat zou misschien... dat je daar elke keer verse dingen in doet ofzo."
		"Er waren bijvoorbeeld blikken van snoep maar er zat geen snoep in! Het snoepje was dan de echte herkenning voor de mensen. Zo van 'oh ja! Het smaakte zo!'".
	Offering more interventions in a week	"Ik denk date r meer van dit sort interventies in de week moeten zijn."
		"Je moet het natuurlijk blijven herhalen en je hebt een kort tijdbestek dat mensen het kunnen herinneren."
	Filling in scales on another day in the week	"Eigenlijk zou je dan misschien op een dag als die koffer niet is gebruikt ook zo'n lijst moeten invullen."
Effectiveness of questions	Own approach	"Je merkt altijd dat er een paar mensen zijn die reageren niet zo vlot als een ander. En om die erbij te betrekken... dan deed ik het ook wel gestuurd en dan kon het ook nog een open vraag zijn maar dat ik dan eerst een naam noemde."
		"We hebben een mevrouw op de groepdie kan zich niet uiten maar die begrijpt alles prima. Dus daar deed ik wel altijd gesloten vragen want dan knikte ze wel 'ja' of schudde 'nee'."
		"Dat is per keer en bewoner verschillend. De eene keer is de eene iets vermoeid en de andere keer de andere iets onder de leden... Ik kan niet zeggen dit werkt standaard wel.Het is elke keer afwegen, kijken,..."

Different types of questions		
Category	**Subcategory**	**Citations**
Questions about opinions	positive	"Mening.. we hebben op dit moment best wel een mondig groepje en er zitten een paar bij die zeggen met alles hun mening. Dus dat was ook geen probleem."
Open questions	positive	"Ja ik begon altijd met een open vraag."
	negative	"Met de open vragen... daar sloegen de mensen vaak heel dicht. Als ik daarmee begon... of dan reageerden ze boos of zijn ze kinderachtig of stom."
		"Ja de open vragen kun je wel weer doen, maar pas als je bezig bent. Dat ze zich op hun gemak voelen."
Closed questions	positive	"Dus meestal begon ik eerst met een gesloten vraag en dan vertelde ik daar zelf wat achteraan over het voorwerp."
	negative	"En ja gesloten vragen vind ik niet prettig... minst prettig. Maar misschien 'kent u het voorwerp?' dan kan het wel. Maar het gesprek loopt inderdaad snel dood."
		"Ik begon altijd met een open vraag want als ik meteen begin met een gesloten vraag voor ja of nee dan wordt het voor hun al zo makkelijk, he?"
		"gesloten eigenlijk heel weinig, alleen aan die mevrouw die zich dan verder moeilijk tot niet kon uiten."
Questions about feelings	positive	"Maar ja gevoelsvragen... er waren niet veel dat ze moesten huilen ofzo, maar wel dat er een glimlach op het gezicht kwam bij herinneringen."
		"En ja gevoelsvragen die komen ook vanzelf van 'wie heeft dit weleens gebruikt?' en dan krijg je wel weer een persoonlijke herinnering van iemand."
Deepening questions	unclear	"Vragen die het onderwerp verder uitdoepen, ja... dan moest ik bij sommige mensen oppassen dat ze niet teveel gingen uitweiden en van het onderwerp afdwalen."
Questions about facts	positive	"Ja en soms bij mannen vind ik bij de feitelijke vragen echt overast dat het echt zo werkt. Met jaartallen of feiten."

Inner setting		
Category	**Subcategory**	**Citations**
Goals for the future	Modern dementia care	"Dat hoort ook bij het stukje 'moderne dementiezorg' en dat is gewon waar we naartoe moeten."
	Using the reminiscence boxes in the future	"(*Wilt u de koffers blijven aanbieden?*) Ja ik denk dat het een heel mooi hulpmiddel is om inderdaat met zulke groepen gesprekken op gang te krijgen. Maar ook herinneringen op te halen waardoor juist weer gesprekken komen"
		"(*Wilt u de koffers blijven aanbieden?*) Zeker! Absoluut."
Barriers	rooms	"Vooral met de ruimtes...om een ruimte te zoeken hier in de Broekheurnestede was wel lastig."
		"En dan had ik een ruimte vastgelegd en dan kwamen weer andere mensen die dat ook hadden geclaimd, dus dat was de eerste paar keer heel vervelend, want dan werd ik ook gestoord."
		"Ja er staat een tafel en stoelen, de stoelen zijn een beetje harder, dat is een beetje onpraktisch. Maar goed, we moeten doen met de ruimte wat we hebben."
	Colleagues not familiar with the intervention	"Ik denk dat het personeel hier in de Broekheurnestede ook ingelicht moet worden hoe belangrijk dat is om de sessies te doen en waarom dat is."
		"Ik had veel tegenwerking want dan zeggen ze wel 'Ja dan ga je maar ergens anders zitten.'"
		"Maar ook heel veel jongere collega's weten van heel veel dingen van vroeger weinig af en dan is het al zoeiets van 'ik zet iets op tafel maar ik heb er geen verhaal bij. (...) Dus dat stuk verhaal denk ik dat het voor sommigen moeilijk in te vullen is."

	Time and money	"Je mag de acitiveit wel doen, maar ik moest heel veel lijsten invullen maar daar mag ik geen extra tijd voor nemen voor mijzelf. Dat moest allemaal gepropt worden in de werktijd." "Het is wel een organisatie!" "Tijd. Dat mensen tijd krijgen... Ik denk daar liepen de dingen toch wel op dit moment vast. Dat mensen het gevoel hebben dat ze weinig tijd op een dag hebben en dat ze vooral een vragenlijst moeten invullen. Ja, tijd is wel een belangrijke factor." "Het invullen van de formulieren (...). Daar hadden we wel zoeiets van nou daar ben je nog best even mee bezig (...)." "Leidinggevenden...die vinden het wel goed als het maar niet te veel tijd gaat kosten en veel extra geld. Dat zeiden ze."
	No barriers	"Nee omdat het erg laagdrempelig is en ook heel simpel verwacht ik niet dat er iets groots staat." "Dat past er denk ik prima in. Voornamelijk heb je best wel losse momentjes waar je qualiteit van zorg, dus ook gewoon een stukje activiteit kan doen en waardoor je de spullen erbij kan pakken."
	Lack of staff	"(...) je hebt omdat je alleen op de groep staat niet meteen de tijd om ze (*de lijsten*) in te vullen dus wat deden we vaak? Ja dan neem je ze maar mee naar huis." "Als er iemand naar de WC moest dan werd het gestopt. (...) En de anderen kunnen niet verder omdat er niemand is die even het oppakt om verder een praatje te maken."
Suggestions for further improvement	Emphasize importance of the intervention	"Belangrijk is dat er meer bekendheid aan gegeven wordt hoe belangrijk dat is."
	Offering coaching/ clinical training	"Niet van 'hier heb je een koffer, daar zit een instructiefoldertje bij en success ermee!' ... maar dat je door een klinische les mensen meeneemt en mensen erover na laat denken." "Een grote soort opleiding rond om PG en als dit zeg maar een vast onderdeel zou worden in dit traject...dat zou volgens mij bevorderend werken."
	Doing the sessions together with somebody else	"We proberen altijd met vrijwilligers te werken end at zou ook al een hulp zijn. Dat je niet alleen op de groep zit maar dat er nog iemand is." "Het zou fijn zijn geweest als je met z'n tweeen was geweest. (...) Twee handen extra is zo veel dan!"
Requirements	Training of staff	"Goede uitleg (*hebben ze nodig*)." "Dan is het natuurlijk ook belangrijk dat je goed personeel hebt die goed geschoolt zijn, die snapt wat de doelgroep wil, die de juiste vragen kunnen stellen en ook de vragen uit kunnen horen van wat heeft de klant nodig?"
	Exaggerate the importance of the intervention	"Dat je mensen meeneemt… het positief labelt zeg maar. En dat je ook wel duidelijk maakt 'waar doen we het allemaal voor' en 'hoe belangrijk is het'".
	Provide useful material to work with	"Maar dan moet je ook material voor beschikbaar stellen en de reminiscentiekoffers is een van de materialmen die je gewoon daarvoor kunt gebruiken."
Opinion of colleagues/ managers	Positive opinion	"En mijn collega's die werken er wel in mee. Die zeggen 'heb je nog wat nodig?' Tenminste mijn directe collega's. (...) Dus die vinden het wel leuk!" "We waren dan nu toevallig met z'n drieen op die woensdag middag en we waren allemaal wel enthusiast (...). eigenlijk ons hele team (...) we zijn daar wel enthusiast over." "Met de zorgmedewerkers heb ik het het meest daarover. Die zijn heel positief daarover! Want het gaat ze ook helpen." "Prachtig. Maar ze zien het zichzelf niet doen." "Wat ik heel leuk vind van de leidinggevenden van de Chromhoff bijvoorbeeld de coach. Ik had een doos met voorwerpen en hij kwam binnen en hij zei 'mag ik even kijken?'. En hij begon allerlei dingen eruit te halen 'oh dat week ik nog van mijn kindertijd' (...)."

Outer setting		
Category	**Subcategory**	**citations**
Legislation	Constraints	"De zorg moet versoberen en je moet met alternatieven gaan komen. En dit past al in een plaatje als alternatief." "Ze zitten heel erg in een modus van bezuinigingen en dat is niet iets wat Livio wil maar wat de centrale overheid gezegd heeft!"

Individuals involved		
Category	**Subcategory**	**Citations**
Own initiative	Searching for useful material	"Een keer heb ik zelf ook een ding verandert. Eigen initiatief!" "Maar dat je als medewerker ook in staat bent om daar ook wel weer spulletjes bij toe te voegen..."
	Being interested	"Je moet zelf wel interesse hebben. Als je zelf zegt het boeit me niet ... ja dan gaat het niet werken. Je moet zelf ook de drive hebben om achter dingen aan te gaan of uit te zullen zoeken...anders wordt het niet wat vrees ik!"
Self-Efficacy	Received enough explanations	"Ja ik heb wel voldoende uitleg gehad (...)."
	Enough support	"Ik had nog een brief gekregen waar ook nog wat dingetjes stonden hoe je met bepaalde situaties om moet gaan." "De uitleg is duidelijk. Kort genoeg, maar wel volgens mij duidelijk."

Process of implementation		
Category	**Subcategory**	**Citations**
Executing	Carrying out the implementation according to plan	"Ik heb materiaal gekregen dan en dat doe ik in de tas. De voorwerpen doe ik in de koffer. En dan gaan we eerst de mensen verzamelen en meenemen naar de ruimte. Eerst even koffie... even op het gemak, even gezellig praten. En dan zet ik de koffer op tafel en dan zeg ik 'ik heb vandaag een koffer meegenomen met een heleboel mooie oude dingen. En dan kijken of jullie dat leuk vinden om daar eens wat over te vertellen." "Ja ik begon altijd met een open vraag. Ook als ik een voorwerp pakte. Ik begon altijd met een open vraag want als ik meteen begin met een gesloten vraag voor jaa of nee dan wordt het voor hun al zo makkelijk, he?"
Reflecting and evaluating	Feedback about the progress and quality of implementation	"Ik heb met Jojanneke elke keer gemaild hoe het ging en dan heb ik nog wat tips gekregen hoe ik dat dan misschien zou kunnen doen."