Reminiscence and depression in later life

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Reminiscence and depression in later life

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Foreword

- Are you still occupied with the past?
- *Yes, so what?*
- Leave it alone, man!
- *Why?*
- Well, the past is like Pandora's box. You open it and all those painful memories come out. Reminiscence is perverse delight, I'd say.
- *What a nonsense.*
- How do you mean, nonsense?
- *I see the past as the growing train of a wedding dress, woven by autobiographic memory. Provided with motives by Lady Fortune and Moira.*
- Autobiocrap you mean.
- *Carried by the hands of the five senses, flowing out into a veil of personal narrative truth.*
- Well, well.
- *A veil one only takes off when life and death have united.*
- Djee, Djee. [applause]
- *It was you who started about Pandora.*
- That doesn't mean you have to bring up all bloody Greek mythology.
- *Dry testicle.*
- Romantic fool.
- *Lousy empirist.*
- Gravedigger.
- *Daypicker.*
- (…)
- *(…)*
- And now you're going to tell me that life is a fairy-tale, a myth or even worse: a dream….
- *Now that you mention it…*
- Oooh no, I'm out of here.

Contents

1 General introduction

Ernst Bohlmeijer

Abstract

This chapter presents a general introduction to this thesis. It is argued that the high prevalence of major and minor depression among older adults warrants a public mental health approach in which indicated prevention has to play a major role. Reminiscence is most likely an attractive indicated preventive intervention for older adults with depressive symptomatology but had not been applied in mental health care at the start of this thesis. The aim of this thesis is to develop and evaluate two new preventive reminiscence interventions for older adults with depressive symptomatology. A model for the evidence based development and implementation of preventive interventions is presented as a framework.

1.1 Introduction: two cases

Robert van Andel is 66 years old. He signs up for the preventive reminiscence course '*The story of your life'*, suffering from symptoms of stress and depression. He hopes that through this group he can come to grips with his mental problems. Robert is a friendly man, of slight build and above average intelligence, who describes himself as serious, faithful and risk-avoiding. He was born in 1939 into a family of three children. He describes his youth as 'ordinary', without any unusual occurrences. After college he got a job with a big multinational firm where his career progressed and he was well paid. He married and had three children. Everything went smoothly in his life until five years ago, when he was suddenly made redundant as a result of a company reorganization. Despite no longer being obliged to work for financial reasons, he started his own consultancy business. However, since his redundancy, he has continued to suffer psychological problems. At the start of the course, Robert was chiefly preoccupied with the questions: why am I feeling miserable and how can I go on? Why are work, achievement and earning money so important to me? He thought that reminiscence might help him to find the answer to these questions.

In Robert's stories, two memories emerge as dominant. The first goes back to his early childhood. Robert relates that as a small boy, he used to play outdoors a lot and this gave him an intense feeling of freedom. He felt this freedom came to an abrupt end when he started school. During the group discussion, it is clear that this memory affects him deeply. The topic of 'lost freedom' placed his problematic transition from work to more free time in a much clearer light.

The second distinctive memory involves his drive towards achievement. Robert was always the youngest in his class, throughout his entire schooling. He always had the feeling that he had to push himself, particularly because schoolwork did not come as easily to him as to his older brother. He was more or less conscious of a certain degree of rivalry with this brother. The fact that good grades led to attention from his father may have played a background role. Robert's need for security and control reinforced this development: he was aware of the fact that he wanted to achieve a good social position, in order to obtain security through a good income.

During the course of the meetings, Robert appears to modify his view of his performance drive. On the one hand, this drive has prevented him from indulging in his enjoyment of freedom that he remembers from early childhood. On the other hand, it is clear to him that his drive for success has provided him with things he wanted: a clear social position, interesting work and financial security.

In later sessions, Robert comes to the realization that he wants to try to enjoy his freedom in the years ahead. In the group we discuss what this might involve, and how he can achieve this (elaboration of the story). When asked for a metaphor for his life, Robert replies after some thought 'I am a traveler in the desert'. He explains ' this represents for me my yearning for freedom as opposed to the necessity of finding the right way'.

Janny[1] signs up for the reminiscence course '*Looking for meaning in Life'* because she still has 'issues from her past' and feels low. Prior to the course she had an introductory interview with the two course facilitators. In this conversation

[1] This case was first published in Bohlmeijer E., & de Reus-Vinke, H. (2006). Op zoek naar zin. De verbeelding van herinneringen als anti-depressivum. Tijdschrift voor vaktherapie, 3: 3-9.

she revealed that she was born in 1940 in East Germany. After the war, the area in which she lived was compulsorily returned to Poland. Her father was from East Germany and her mother was Polish. Janny was a late arrival in the family – she has two older sisters. Life was a struggle for the family both during and after the Second World War. After all, they were first living on Germany territory, although her mother was Polish. Her father was a prisoner of war in Russia. During that period, life was difficult for the mother and her three daughters. It was a time when many mothers in similar situations starved or drowned themselves and their children. But Janny's mother was a tough woman who wanted to fight for their survival. During the introductory interview, Janny described her youth as lacking in love. After the war, the family was reunited in East Germany. They lived together with several other families in a single house. Their lives were overshadowed by communism. It was dangerous to express your own opinions or even to talk. By now, Janny had qualified as a hairdresser. At the age of 17, she decided to flee. As she said herself: 'I could not continue to live in a state of imprisonment, in a colony of Russia'. Besides, she wanted to earn her parents' respect by showing them that she had the courage to flee. Her parents agreed to let her go, and she was successful on her second attempt to escape to West Germany. From there, she wrote a letter to her parents in which she expressed full remorse for running away. This letter exonerated her parents from blame and persecution by the regime. Janny found refuge in a home for exiles in West Germany and got a job as a hairdresser. She later moved to be with a cousin near the Dutch border and she met and married a Dutchman, with whom she had two children. Janny's second husband died a number of years ago. During the interview, Janny also indicated that for a long time she had great difficulty with her own name.

At the first few meetings, Janny spoke very quietly. She said she was ashamed of her German accent. At the first meeting, the participants are given a pen with a nib, blotting paper and ink. They write down their name and expand on this theme. This assignment brings the participants back to their schooldays. Initially, Janny had very negative feelings about her maiden name. By using the pen, she senses once more her mother's disapproval. During the meeting, Janny relates that she has negative thoughts about her mother. In the second session, which is about houses, she draws the house in which she grew up, following a creative imaging exercise. Drawing seems to evoke positive memories for the first time in ages. She remembers the 'only compliment she ever received' from an uncle, who said that she was good at drawing. This was after she had drawn a bowl of apples. As a child, Janny was left at home alone for long periods. She could do whatever she wanted. She often wrote poems. The drawing now brought back these memories. At the fourth meeting, the participants are asked to pick out five photographs from albums and to describe these in detail. Janny chooses a photo of her mother, in which she stands strong and proud. Janny tells the group that her mother always wanted to be the center of attention. However, for the first time, there is a sense of acknowledgement that she made it thanks to her mother. In the meeting about friendships, she presents a collage of her cousin, in which nature plays a big part. 'This friendship meant a lot to me. I was always made to feel welcome, later as well, and we went for a lot of walks in the countryside.' Janny is proud of her collage. In the seventh meeting, about the thread of life and turning points, she draws a black sphere with a kind of arrow pointing to a sun that radiates bright colors. The sun symbolizes the West shining its rays on East Germany. She experiences a feeling of triumph: 'I had the guts to do that', she says. It is the first time that she talks about her escape from the former GDR. She had never even spoken about it with her husbands and her children. At the last meeting, which is about identity,

the participants are asked to make a trifold about past, present and future. She now talks with enthusiasm and confidence about her model. The trifold contains a heart in different colors, a photo of herself and her grandchildren. 'The colors express sorrow and joy. Green has always meant sorrow to me, but also hope. I used red to express love for my grandchildren'. The model now hangs in her bedroom.

After completing the course, Janny tells us that she has gained self-knowledge and has learned to deal with her past. She would not have managed this without the creative assignments. 'These made the course more intensive for me, and brought up issues that would otherwise have remained undisclosed'. She latter added: the main thing I got out of the course is that I now accept my own name again and my existence as well. It no longer matters what my name is.' By recapturing her memories and feeling them again, Janny realized that that they were not as negative as she had always thought. By being able to accept her mother, she was able to achieve acceptance of her existence and her past. This freed up space for the future and she was able to plan ahead and experience enjoyment again. As the course progressed she came to view her mother in an increasingly more positive light, even to the point of expressing admiration for her. She appreciated having had the opportunity to complete the creative assignments, which increased her self-confidence. She admitted that she had previously 'camouflaged' many aspects of her life, whereas she had now become more honest.

These are two cases of ageing adults who made use of reminiscence to overcome feelings of sadness, meaninglessness and maybe helplessness. These feelings were triggered by a confrontation with recent negative life-events (Robert) and negative life-events in the past (Janny). Robert and Janny would most likely be among the large number of older adults who suffer from clinically relevant depressive symptoms in the Netherlands. Depression in later life is partly caused by the confrontation with age-related losses and negative life-events. To find meaning in loss is a major challenge for ageing adults. Robert had to deal with feelings of shame and worthlessness, after losing his job and had to find a new meaningful perspective on life without work. Janny had a severe conflict with her daughter and this prompted her to review her own life and the relationship with her own mother. She could only accept herself after expressing painful memories and experiencing reconciliation with her life-course. It is not hard to imagine that if Robert and Janny had not succeeded in finding new meaning in life and reconciliation, the depressive symptoms would have persisted and possibly even worsened. But can reminiscence indeed help ageing adults to find new meaning in life and to overcome feelings of helplessness after being confronted with loss and negative life-events? And does it have effects on depressive symptomatology? These questions are the focus of this dissertation. In this chapter the general framework for answering these questions is introduced. Definitions of late-life depression and prevention are given. The preventive reminiscence interventions in which Robert and Janny participated will be introduced. Normally an introductory chapter would also include a review of reminiscence and depression but this review is presented in chapter two because we decided to submit the review as a separate paper to a journal.

1.2 The need for prevention of late-life depression

Depression is a common and disabling disorder among the growing number of older adults. About 3% suffer from severe depression and another 10-15% have clinically relevant depressive symptoms of sub-threshold depression (Cole and Yaffe, 1996; Beekman et al., 1999). In the setting of primary care the prevalence of major depression in older adults is 5-10% (Schulberg et al., 2001). Worldwide,

depression is among the diseases with the highest burden (Murray & Lopez, 1997). Late-life depression is characterized by unfavorable prognosis, reduced quality of life and excess mortality (Beekman et al., 2002; Geerlings et al., 2001). From a public mental health perspective, treatment offers only limited possibilities to reduce the prevalence of depression (Andrews et al., 2000; 2004). In addition to treatment, prevention may be an important, viable option (Davis, 2002, Smit et al., 2006).

1.3 Depression

Depression is a disabling disorder, characterized by depressed mood (dysphoria) and loss of interest (anhedonia) during the larger part of the day, most days, lasting at least two weeks. There are several additional symptoms, such as lack of energy, insomnia, loss or gain of body weight, preoccupation with guilt, poor concentration, and recurrent thoughts about death and suicide. Each of these symptoms brings about significant suffering and has an adverse impact on functioning. In order to meet the diagnostic criteria for depressive disorder, one must have one or both core symptoms, dysphoria and anhedonia, plus at least four other symptoms (APA, 1987). Subthreshold depression or minor depression can be defined as the presence of some of the symptoms of depressive disorder, while at the same time the diagnostic criteria for depressive disorder are not fully met.

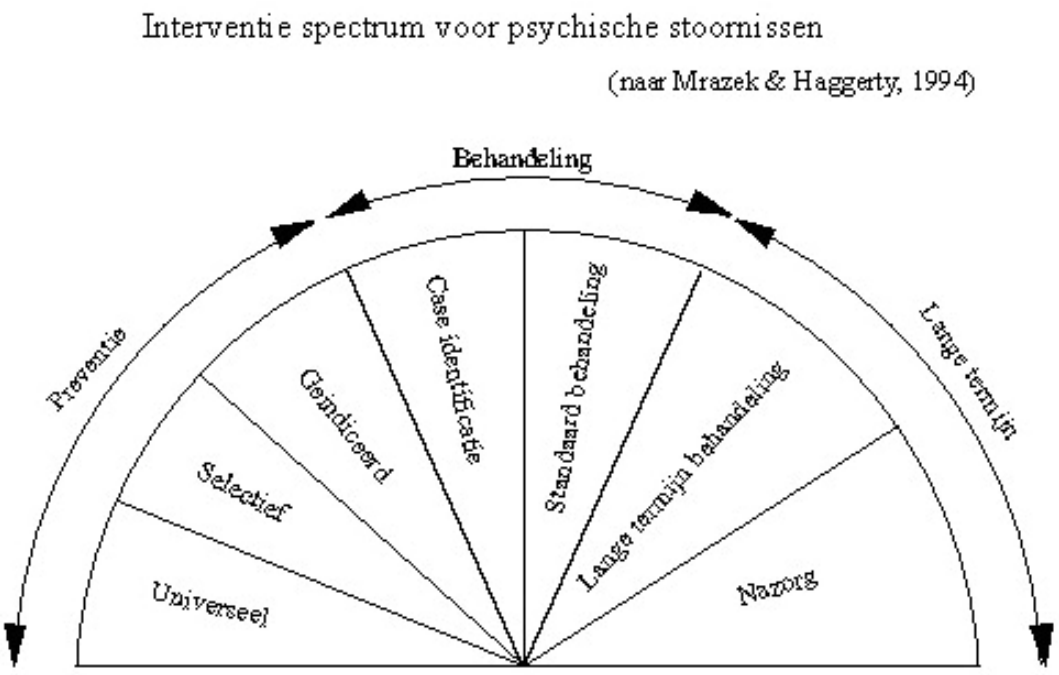
Depressive disorders and symptoms can be assessed with a variety of instruments (Raue et al., 2001). On the one hand there are structured self-reports (e.g. Centre for Epidemiologic Studies Scale, Geriatric Depression Scale). These are relatively brief and require no clinical training. They provide an indication of the severity of depressive symptoms based on subjective experience. A lack of specificity is a disadvantage.. On the other hand there are semi-structured clinical instruments (e.g. Structured Clinical Interview for DSM-IV). These instruments can provide a diagnosis but require training and are more costly. The reliability of these instruments may however be influenced by complex clinical judgment (Raue et al., 2001). In addition changes in depression are sometimes measured via ratings by clinicians. In general, studies that make use of clinician-ratings show larger effects than studies that make use of self-reports (Pinquart & Sörenson, 2001). This may due to the fact that clinicians are biased towards positive changes as a result of their intervention.

If remission or prevention of a major depressive disorder is the desired outcome of treatment or prevention, the use of semi-structured clinical instruments is warranted. Among older adults the prevalence of sub-threshold depressions is, however, much larger than the prevalence of major depressive disorders. The use of self-reports to assess changes in symptom-severity is therefore relevant as well. A change of 5 points on the CES-D can be considered clinically relevant (Beekman et al., 2002). In addition the score of 16 is often used as a cut-off for clinically relevant levels of depressive symptoms (Beekman et al., 1997). Accordingly, a meaningful aim for indicated prevention (see below) would be a reduction of depressive symptoms under the score of 16 (Beekman et al., 2002).

1.4 What kind of prevention is needed?

In 1994 a new definition of prevention was introduced (Mrazek & Haggerty, 1994). Haggerty and Mrazek distinguished three forms of prevention: universal, selective and indicated (zie figure 1).

Figure 1



Universal prevention consists of interventions directed at the whole population, regardless of any risk status. An important goal of universal prevention is to raise awareness about psychological disorders and what can be done to prevent and to treat them. *Selective* prevention is directed at people with a higher risk for depression, because they have been exposed to risk factors known to be predictive of the onset of the disorder, but who have not developed symptoms, yet. Finally, *indicated* prevention is directed at people who have some of the depressive symptoms, but do not meet the diagnostic criteria for the full-blown disorder. This group may be in a pro-dromal disease stage. Of the three forms of prevention, indicated prevention is the most promising with regard to prevention of depression. In general, indicated preventive interventions are known to be effective in the prevention of major depressions and in reducing depressive symptoms (Cuijpers et al., 2005). In addition, of all the risk factors, the presence of depressive symptoms has been shown to be the factor causing the highest risk for late-life depression (Smit et al., 2006; Schoevers et al., in press). So one could say that from a public health perspective there is a need for effective, low-threshold, preventive interventions that can be actively offered to older adults with depressive symptoms (Cuijpers et al., 1998).

1.5 Prevention in the Netherlands

In the Netherlands, indicated prevention of mental disorders and addiction is a substantial and integral part of mental health care (Bohlmeijer & Cuijpers, 2001). Most of the mental health care institutes have a specialized department for prevention. Within this field, prevention of depression is a priority. These prevention departments work closely together with primary health care and other local organizations (Bohlmeijer & Cuijpers, 2001). For older adults with depressive symptoms several interventions are available (Cuijpers & Willemse, 2005).

One of these interventions is THE COPING WITH DEPRESSION COURSE (Cuijpers, 1998). It is based on cognitive and behavioral therapy and combines psycho-education and training of skills in relaxation, positive thinking and assertiveness. Other examples of indicated preventive interventions for older adults are the WIDOW TO WIDOW PROGRAM for people who have recently become widowed, THE COPING WITH CHRONIC DISEASE COURSE for older adults with chronic diseases (Cuijpers & Willemse, 2005).

1.6 Reminiscence as an indicated preventive intervention

Another indicated preventive intervention that could be especially attractive for older adults is reminiscence (Wong, 1989). Reminiscence has been defined as the 'vocal or silent recall of events in a person's life, either alone or with another person or group of people' (Woods et al., 1992, pg 138). The first to stress the importance of reminiscence in old age was Butler (1963). In his famous paper *The life-review: an interpretation of reminiscence in the aged* he described his clinical observation of increased reminiscence – the act or process of recalling the past - in older people and postulated that this was due to the universal occurrence of an inner experience or mental process of reviewing one's life. He conceived life-review as a spontaneously or naturally occurring process that is 'characterized by the progressive return to consciousness of past experiences, and, particularly, the resurgence of unresolved conflicts' (Butler, 1963, pg 66). Since then there has been a growing interest in reminiscence by both researchers and clinicians in general (Gibson, 2004; Garland & Garland, 2002) and as a treatment intervention for older adults with depression in particular (Fry, 1983; Watt & Cappeliez, 2000, Haight et al., 1998). Cappeliez (2002) defined life-review therapy as a type of reminiscence that consists of a structured evaluation of one's past with the aim to accept negative events, to resolve past conflicts, to identify continuity between past and present and to find meaning in life. This type of reminiscence is also referred to as integrative reminiscence (Wong & Watt, 1991).

Why could reminiscence be an attractive intervention for older adults with depressive symptoms? There are three reasons. The first reason is that it is easily linked to a common and recognizable activity that is part of daily life (Webster, 1993). Participants do not have to learn a new vocabulary or framework (Watt & Cappeliez, 2000). Also, for many older adults narrative is the primary form by which human experience is made meaningful (Sherman, 1991). The second reason is that many older adults go through a process of life-review as observed by Butler (Merriam, 1993). For some older adults this may be hard to do by themselves especially when they focus on the negative experiences (Cully et al., 2001). Reminiscence may help these people to develop a more balanced view of their lives, to cope with emotions and to become reconciled with how life has been (Silver, 1986). The third reason is that older adults in particular are confronted with age-graded losses in social relations, social roles and physical impairments that challenge meaning in life, a sense of coherence and continuity and mastery (Westerhof et al., 2006, Kraaij et al., 2001). These are precisely the outcomes that have been claimed as potential results of reminiscence (Wong, 1995; Gibson, 2004; Watt & Cappeliez, 2000). Until 2003, when the project started on which the present thesis is based, reminiscence and life-review were, however, not applied as preventive interventions in the Netherlands for older adults with depressive symptoms in the community (Bohlmeijer & Cuijpers, 2001). This thesis is part of a project which aims for an evidence-based implementation of reminiscence in preventive mental health care in the Netherlands.

1.7 Two reminiscence interventions

In the past years two preventive reminiscence interventions were developed: looking for meaning in life and the story of your life. These interventions are briefly described in the chapters 5 and 7. But for the interested reader more detailed descriptions are given now.

Looking for meaning in life (Franssen & Bohlmeijer, 2003) is a preventive reminiscence course aimed at people aged over 55 with depressive symptoms. The course consists of twelve meetings in which the following topics are dealt with: one's own name, smells from the past, houses you lived in, standards and values, hands, photographs, friendship, life thread and turning points, attitude to life and meaningfulness, desires and identity. Sensory recall exercises, creative activity and group discussions take turns at each meeting. Let us take for example the meeting 'Houses you lived in'. This session is divided into four steps. The participants first make a list of the addresses where they lived during their lives. Some people appear never to have budged, whereas others will have moved numerous times. This prompts discussion and sharing of experiences. Secondly, each participant selects a house which someone liked living in, or a house with special memories. This is followed by a guided imaginative recall exercise, which brings the participants back to that one house. In the next step, the participants are asked to depict the house and a separate part of the house with colored chalk. Then they exchange experiences, emotions and memories in small groups. In the last step, each participant relates a memory associated with the house in a group circle. This is followed by a group discussion about the importance of home and houses in your life. For those who want to pursue this further, there are more assignments that they can do at home. These involve reading pieces of text written about houses, and writing down their own associations about their own house, followed by a short piece of prose or a poem. If they want to proceed further, there is an exercise which involves placing themselves in the house. What does the house have to say? What did the house observe during the time that you lived there?

The other meetings are similar in structure. In the meeting about friendships, the participants make a collage in which they depict important friendships; then in small groups they share their experiences of friendship. In the meeting about desires, the participants select a picture of a bridge. In front of, on and beyond the bridge, they write down the associations with the past, present and future. Then they fantasize about how their lives will be in five years time, if a number of dreams and wishes have come true. After this, the participants enact a reunion, in which they are that 'new person'. The meeting concludes with a group discussion about how each participant intends to realize his or her plans in the 'right' direction.

Throughout the course, a good deal of use is made of the senses, in order to evoke memories. Images, sound, smells and taste are strong stimulants for autobiographic recall. Because the senses are developed to a different degree in different people, variation in recall exercises is extremely important (Franssen, 1998). Through the sensory exercise, the participants are restored bodily to an earlier era. Exclamations such as 'I could even hear the sound of water', or 'I saw myself walking through the rooms of the house', and 'I could utterly sense the atmosphere of that time' are not unusual. The recreation of feelings and experiences in collages, drawings or poems is then a natural next step. It gives the participants the opportunity to express themselves, without first having to verbalize their thoughts. This is an essential part of the course for various reasons. Expressing images through drawings and collages creates an aesthetic illusion that makes it

less threatening to express emotions, thus facilitating the reconciliation process (Grabau en Visser, 1987). Images can act as metaphors. They say something, in a non-rational way, about an internal process. Thus they transcend the rational, familiar reality and can help the user to discover new possibilities and experiences (Magee, 1991). Creative activity heightens the participants' awareness of their own, inner reality and helps develop this further. After all, memories are not so much a representation of facts as a process of reconstruction and re-creation (Bluck & Levine, 1998). Finally, many participants (re-)discover creating images as a valuable and pleasurable activity (Pizzi, 1997). They have made a concrete product, such as a drawing, collage or poem that they can take home with them, and that they can be proud of. Gibson (2004, pg XVll) summarizes these functions of 'imaginative recall' succintly: 'art gives hope – a hope that transcends the immediate world of experience. Creative activity provides a counterbalance to all that is restrictive, pedestrian, ordinary and limiting in our lives as we age (…). Feeding the world of the imagination is as essential as nourishing the physical body. And if we attend to one and not the other, we hasten dreariness and death'.

The story of your life (Bohlmeijer, in press)[2] consists of seven sessions of 1.5 hours and one follow-up session after eight weeks. It's aimed at people of 60 years and older with mild to moderate depressive symptoms. Each session has a different topic: youth and family, work and care, love and friendship, difficult times, life as a book with chapters, metaphors, meaning in life. Participants are given questions about these topics which they have to answer at home. They bring the answers with them and read the answers aloud. The counselor has different roles. He facilitates group discussions, asks questions aimed at the evaluation and significance of the stories. If these stories express negative views about self or life in general or express meaninglessness, the counselor asks questions aimed at deconstruction and restorying (see below). The counselors were psychologists and psychiatric nurses with experience in counseling and therapy with older adults. They underwent one-day training by a psychotherapist specialized in narrative and solution-focused therapy and one half-day follow-up session.

The story of your life combines reminiscence with elements of narrative therapy. A narrative approach is especially suited for meaning-making and building up of identity (Kropf & Tandy, 1998; Polkinghorne, 1996;Goldberg & Crespo, 2003). Central to the approach is the supposition that identity is based on self-narrative (Giddens, 1991; McAdams, 1993). This self-narrative based on autobiographical memories is essentially a process of reconstruction (Bluck & Levine, 1998). It is the biographical answer to existential questions like where am I coming from? How have I become the person that I am now? What values and ideology am I committed to (McAdams, 1993). 'A person's identity is not to be found in behavior, nor – important though this is – in the reactions of others, but in the capacity to keep a narrative going' (Giddens, 1991, pg 54). Preserving or changing identity is especially important for older adults as they experience a relatively large number of losses like death of spouse or close friends, physical illnesses and reduced independence (Kropf & Tandy, 1998; Kraaij et al., 2001), although their context is also one of loss (which may make it less stressful). Reminiscence may invite people to put their experiences into a coherent and meaningful story, which gives direction for acting and thereby makes life (now and in the future) meaningful. And for people at a really advanced age narrative is 'the primary form by which human experience is made meaningful' (Sherman, 1991).

[2] The story of your life was the working title of the intervention and will be used in this dissertation. As from January 1st 2007 the official title will be: *De verhalen die we leven*.

As reminiscence can also bring forth - especially for depressed people in a counseling or therapeutic setting – dominant stories that are 'problem-saturated' (Payne, 2000), and these stories express pessimism and defeat and focus on negative elements (Garland & Garland, 2001), additional therapeutic action is needed. When this is the case a narrative therapeutic framework offers a structure for transforming these stories by delineating two processes: deconstruction and reconstruction (Payne, 2000; Kropf & Tandy, 1998). In the deconstruction phase the counselor will explore with the client the influence of problems on their lives, the influence of themselves on their problems, values and standards that preserve the problem and unique outcomes (periods in the life of clients in which the problem was absent). In the reconstruction phase alternative stories based on a client's strength are constructed and 'thickened'. As a victimic plot is central in some reminiscence stories (Polkinghorne, 1996), instead of opening up new possibilities, they express the loss of agentic power. These dysfunctional stories 'hinder a person from access to his own personal resources and the availability of others' caring and help' (Goldberg & Crespo, 2003). Summarizing, the integration of reminiscence and narrative therapy could be fruitful in two ways. First, it helps to build memories into coherent life-stories and develop context (Bluck and Levine, 1998; Baerger & McAdams, 1999) and second, when these stories express bitterness and are problem-saturated a framework is offered that invites people to see these stories as interpretations or constructions and to look for alternative stories.

1.8 A framework for development and implementation of preventive interventions

For the evidence-based development and implementation of complex, new interventions in mental health care a framework is needed (Campbell et al., 2000). To guide the project' s development and evaluation of reminiscence as an indicated prevention of late-life depression, a framework was developed (see figure 2). This framework is based on models developed by Campbell et al. (2000) and Cuijpers & Blekman (2003). An important advantage of using such a framework is that at any time one is able to clarify in which phase of research one is operating. In addition the framework helps explain to practitioners what kind of research is being done for what purpose. The framework as used in this thesis was discussed with and agreed upon by the heads of the prevention departments in the Netherlands. Four phases are distinguished: reviewing, innovation and pilot-studies, effectiveness research, implementation (see figure 2).

Figure 2 Framework for evidence based development and implementation of preventive reminiscence interventions

Phase 1 Reviewing
1. Is there a need for the new intervention within the target group? 2. What do we know about reminiscence in the general population? 3. How can the concept of reminiscence theoretically be related to prevention of depression? 4. How has reminiscence been clinically applied and with what results? 5. Under what conditions does reminiscence become effective?
Phase 2 Innovation & Evaluation
1. Has the target group been successfully reached with the intervention? 2. How has the new intervention been assessed by the target group? 3. Is the intervention apparently effective? 4. Are there any prognostic variables? 5. Has the intervention to be adapted?
Phase 3 Effectiveness research
1. Is the intervention significantly effective in comparison to a relevant control group? 2. What factors predict outcome? 3. What is the effect size? 4. What numbers are needed to be treated in order to prevent one new case? 5. Is the new intervention cost-effective?
Phase 4 Large-scale implementation
1. Do we know enough about barriers and success factors? 2. What training facilities are needed? 3. Are the same effect sizes found in natural conditions? 4. What is the level of program integrity in implementation? 5. Are there any conditions that impact on the effectiveness of the interventions?

In the first phase the existing evidence on the new intervention is reviewed. How can the concept of reminiscence theoretically be related to prevention of depression? What do we know about reminiscence in the population? How has it been clinically used and with what results? What are the most important lessons learned from fundamental and applied research? These are examples of questions that can be answered by performing a review. It also makes sense to a conduct meta-analysis in this first phase. With a meta-analysis an assessment of the general effect-size of the intervention across different target groups and treatment modalities can be made. In addition it is important to check the amount of support among professionals for applying the new intervention. Ideally the need for the new intervention among the target group is studied as well.

Transition to the second phase is only recommendable when reviews and a meta-analysis show that the intervention has been effective for the outcomes and target groups and when both professionals and members of the target group are enthusiastic about the new intervention. In the second phase the intervention is developed and tested in quasi-experimental designs. Examples of questions that

are answered in this phase are: has the intervention been assessed positively by the target group? Are there any changes on measurements of the desired outcomes? On the basis of these evaluations the manuals can be adapted.

Transition to the third phase is recommended when significant effects on desired outcomes are observed, when satisfaction among the participants with the new intervention is generally high and when the counselors are satisfied with the manuals. In the third phase the effectiveness of the intervention is preferably tested in a randomized controlled trial. Questions that have to answered in this phase are: is the intervention significantly effective in comparison to a relevant control group? What numbers are needed to be treated in order to prevent one new case? What factors predict outcome?

Transition to the fourth phase (large scale implementation) is only appropriate when significant effects on the desired outcomes are found in comparison to a relevant control group (care-as-usual, placebo-condition, waiting-list) and if the effects are considered to be worthwhile when taking costs into account. In the fourth phase the intervention is implemented on a large scale. Sometimes it may be necessary to conduct an implementation-trial to find, for example, the most effective delivery format or to get more information about barriers and success factors for implementation.

This description may suggest that systematic development and implementation of new interventions is a linear process. In practice it must be seen more as a circular process. Two examples may illustrate this. If in phase two no or only very small effects are found it is useful to return to the review phase in order to find possible explanations, and when found, to conduct a second quasi-experimental study. Another example is that the second and third phases may bring forth useful knowledge on the potential barriers and success factors for implementation in phase four.

1.9 Aim and content of thesis

This thesis is about the development and evaluation of reminiscence as a new, indicated preventive intervention for older adults. It focuses on answering the research questions of the first two phases of the framework that are described in figure 2 Chapters 2, 3 and 4 address the review phase. Chapters 5, 6, 7 and 8 address the development and evaluation phase. Chapter 2 contains a review of emerging trends in concepts and applications . In the following chapters a meta-analysis of the effects of reminiscence on late-life depression (chapter 3) and psychological well-being (chapter 4) is presented. We were especially interested in three outcomes: depressive symptoms, mastery and meaning in life. The rationale for this selection is as follows. The reduction of depressive symptoms is the main target of the interventions that were implemented in the setting of preventive mental health care. Mastery and meaning in life have been chosen because our review showed that these are two central concepts in the literature on reminiscence that could mediate effects of reminiscence on depressive symptoms. In addition, mastery and meaning in life can be considered important symptoms of positive functioning and psychological well-being (Keyes, 2005). Psychological well-being cannot be equated with the mere absence of psychopathology (Keyes, 2005; Diener et al., 1999). Chapters 5, 6, 7 and 8 deal with the results of two quasi-experimental studies of two new reminiscence interventions that were developed in the past three years: Looking for meaning in life and The story of your life. Chapter 5 focuses on the effects of Looking for meaning in life on depressive symptoms and mastery. Chapter 6 focuses on the effects of the same intervention on meaning in

life. In chapter 7 the results of a quasi-experimental study on the effects of The story of your life on depressive symptoms and mastery are presented. Chapter 8 deals with the results of the same study on meaning in life. The thesis ends with a general discussion in chapter 9.

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2 Reminiscence: Recent progress and emerging trends in conceptual and applied understanding

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Abstract

In recent years there has been increasing interest in psychological treatments for depression in older adults. Reminiscence is a psychological treatment that may be especially attractive to older adults as it builds on a common and recognizable process of recalling the past. A recent meta-analysis of twenty controlled outcome studies showed that reminiscence as a psychological treatment has a statistically significant and clinically substantial effect on depression in elderly people that is at least comparable to effects commonly found for psychotherapy and pharmacotherapy. This review explores the progress and emerging trends in conceptual and applied understanding of reminiscence in the last two decades. The topics of (1) types and functions of reminiscence, (2) reminiscence throughout the life-span, (3) processes of reminiscence, and (4) clinical interventions and their effectiveness are addressed. Most promising are clinical interventions in which structured and evaluative reminiscence (life-review) is combined with other therapeutic approaches. Reminiscence therapy may be especially indicated for depressed people who in response to negative life-events or life-transitions have spontaneously started to review their lives and think about the meaning in life.

2.1 Introduction

Depression is a common and disabling disorder among the growing number of older adults. About 3% suffer from severe depression and another 10-15% have a mild to moderate depression (Cole and Yaffe, 1996; Beekman et al., 1999). In the setting of primary care the prevalence of major depression in older adults is 5-10% (Schulberg et al., 2001). Worldwide, depression is among the diseases with the highest burden (Murray & Lopez, 1997). The high prevalence of depression, its impact on quality of life and the preference of older people for psychological treatments (Wetherell et al., 2003; Schaik et al., 2004) underscore the importance of early detection and the availability of accessible, effective psychological treatments, like cognitive-behavioural therapy (Engels & Vermey, 1997; Pinquart & Sörenson, 2001) and interpersonal therapy (Reynolds et al., 1999). A recent meta-analysis of 25 randomized studies on psychological treatments for depression in older adults showed that psychological treatments have moderate to large effects (standardized mean effect size d = 0.72; Cuijpers et al., 2006). Reminiscence is another psychological treatment that may be especially attractive to older adults as it links up to a common and recognizable process of recalling the past. Life-review is a more structured form of reminiscence with a focus on re-evaluation, resolving conflicts from the past, finding meaning in one's life and assessing former adaptive coping-responses (Haight & Dias, 1992; Watt & Cappeliez, 2000; Fry, 1983). The importance of memories as a central focus of psychological treatment of depression with older adults is further underscored by recent research that shows that depressed elderly indeed have trouble retrieving specific, positive memories (Serrano & Gatz, 2004; Kuyken & Brewin, 1995), express more bitterness while reminiscing (Cully et al., 2001) and have more negative memories than non-depressed older adults (Yang & Rehm, 1993). Butler (1963) was the first to underscore the importance of reminiscence and life-review in successful adaptation of older adults (Butler, 1963; 1974). Since then there has been a growing interest in reminiscence by both researchers and clinicians (Gibson, 2004; Webster & Haight, 2002; Garland & Garland, 2002). From the beginning clinical application of reminiscence has suffered from the inconsistent findings of studies testing its effectiveness (Thornton & Brotchie, 1987; Hsieh & Wang, 2003). However, in a recent meta-analysis of twenty controlled outcome studies an overall effect size of 0.65 (95% CI = 0.39 – 0.91) was found (Bohlmeijer et al., 2003). The effect was substantially and significantly larger in depressed people (d = 1.28) as compared to non- depressed people (d = 0.38). The results indicate that reminiscence as a psychological treatment has a statistically significant and clinically substantial effect on depression in elderly people that is at least comparable to those commonly found for psychotherapy and pharmacotherapy (Cuijpers et al., 2006; Pinquart & Sörenson, 2001; Engels & Vermey, 1997). These results also underscore the benefits of a larger implementation of reminiscence as a psychological treatment in mental health care.

We therefore decided to conduct a review of reminiscence research with a special focus on recent developments in both conceptual understanding and clinical applications of reminiscence. We will start with a short review of the work of Butler and the research that immediately followed his conceptualization of the process of life-review in old age. In the second half of the eighties there was a growing realization that better empirical definition of the types, functions and processes of reminiscence was necessary and that some of the basic assumptions of Butler regarding life-review (especially its supposed universality) were not true (Molinari & Reichlin, 1985; Coleman, 1986; Thornton & Brotchie, 1987; Kovach, 1990; Webster, 1994). The research on reminiscence since the early nineties can be clustered around four

topics which we will review more elaborately: (1) types and functions of reminiscence, (2) reminiscence throughout the life-span, (3) processes of reminiscence, and (4) clinical interventions and their effectiveness. This paper ends with a discussion about the conclusions that can be drawn from this review, recommendations for applications in mental health care and priorities for research.

2.2 conceptual: Butler's work

The foundations for reminiscence and life-review therapy were laid by Butler (1963) in his famous paper *The life-review: an interpretation of reminiscence in the aged*. In this paper Butler put down his clinical observation of an increase of reminiscence – the act or process of recalling the past - in older people and postulated that this was due to the universal occurrence of an inner experience or mental process of reviewing one's life. He conceived of life-review as a spontaneously or naturally occurring process that is 'characterized by the progressive return to consciousness of past experiences, and, particularly, the resurgence of unresolved conflicts' (Butler, 1963, pg 66). He hypothesized that it is caused by the 'realization of approaching dissolution and death, and the inability to maintain one's sense of personal invulnerability' (Butler, 1963, pg 67). Though he recognized that people of all ages review their past from time to time and that any crisis may prompt life review, Butler stressed that life-review is more intensive and observed more frequently in (early) old age. He discerned adaptive and constructive manifestations of life-review from psychopathological manifestations. The adaptive variant is described as a reconsideration of former life-experiences and their meanings. It will often be accompanied by mild feelings of nostalgia or regret but is generally typified by expanded understanding and acceptance of one's life, the experience of meaningfulness and declining death-anxiety. Sometimes a personality reorganization can be witnessed. Butler gives the example of a 78-year-old man 'who had significantly impairing egocentric tendencies who became increasingly responsive in his relationships to his wife, children and grandchildren' (Butler, 1963, pg 68). The pathological variant is described as a constant preoccupation with the past and obsessive ruminations. This may result in severe depressions, states of panic and intense feelings of guilt. Elderly with a higher risk for this kind of life-review are people living in growing isolation and 'persons that always tended to avoid the present and that put great emphasis on the future' and 'those who have consciously exercised the human capacity to injure others' (pg, 70). Though the environmental influences are recognized, in the opinion of Butler, the nature and outcome of the life-review process are mainly determined by the life-long unfolding of character. In general his theory of the life-review is described in psycho-analytical terms as can be seen in a sentence like 'as the past marches in review, it is surveyed, observed and reflected upon by the ego' and his observation that an explanation for the increase of life review in the aged is that 'the customary defensive operation provided by work has been removed' (Butler, 1963, pg 75).

In later papers Butler elaborated on the concept of life-review without renewing or changing his basic assumptions (Butler, 1974; Lewis & Butler, 1974; Butler, 1980). The major developmental task is described as the task 'to clarify, deepen and find use of what one has already obtained in a lifetime of learning and adapting' (Butler, 1974, pg 531). Therefore life-review is seen as an aid to successful aging. Life-review therapy is introduced and recommended as an important intervention for the promotion of mental health that should?? be widely used. Life-review may serve many therapeutic goals: making sense of the whole of one's life, restructuring identity, resolving old problems and conflicts, restoration of harmony

with friends and relatives, reliving dreams of youth, reconciliation, and the capacity to live in the present (Lewis & Butler, 1974).

2.2.1 Reminiscence-research in the years 1963 – 1985

Initiated by Butler's concept of life-review, reminiscence increasingly became the object of scientific research. The relationship between reminiscing and measures of adaptation was further explored (McMahon and Rhudick, 1964; Havighurst and Glasser, 1972; Boylin et al., 1972. Lowenthal et al., 1975; Coleman, 1974; Lewis, 1971).In addition, reminiscence was applied as an intervention and the effects on depression, self-esteem and life-satisfactions were studied (Lappe, 1987; Perrotta & Meacham, 1981). In the second half of the eighties many reviews of the reminiscence-research were conducted (Molinari & Reichlin, 1985; Thornton & Brotchie, 1987; Kovach, 1990; Haight, 1991). In these reviews a number of criticisms were put forward concerning, for example, the lack of conceptual clarity, the lack of evidence for some basic assumptions regarding life-review (that it is universal, biologically triggered by forthcoming death and that it mainly has an intra-psychic function) and the conflicting evidence of the supposed therapeutic effects of reminiscence and life-review. One could say that the first phase of reminiscence ended with the increasing realization that psycho-analytic and stage-developmental frameworks had to be complemented with other theories or frameworks to fully understand the phenomenon of reminiscence; and that reminiscence, as a therapeutic intervention, is more complex than originally thought; and that therefore global definitions of reminiscence-therapy were useless (Kovach, 1990; Webster, 1994). These conclusions suggested directions for research in, what we call, the second phase of reminiscence research which were summarized by Kovach (1990): a more precise definition of reminiscence and its different functions, the development of reliable and valid measures of reminiscence, study of reminiscence throughout the life-span, the linking of reminiscence and psychosocial theories of adaptation, stress, coping, specification of the working elements of reminiscence intervention taking into account target group, setting and aims. We will now more elaborately review the reminiscence-research of the period from1986 to the present date.

2.3 conceptual: recent developments

2.3.1 Functions of reminiscence

Until 1990 typologies of reminiscence were made but were based on descriptive literature and practice. For example, Lo Gerfo (1980) discerned three ways of reminiscence: informative, evaluative and obsessive. Coleman (1986) developed a taxonomy of different attitudes towards reminiscence: positive, negative and avoidant. In the second phase the question of operationalizing different functions of reminiscence was more systematically approached. Wong & Watt (1991) developed a more comprehensive taxonomy including and combining the different functions that were proposed until 1990. Six types of reminiscence were defined: integrative, instrumental, transmissive, escapist, obsessive and narrative. Four hundred people aged 65 years and older were interviewed both on their present life-situation and their past. On the basis of these interviews different experts rated whether they thought the subjects were successfully or unsuccessfully adapting to older age. Transcripts of the interviews in which the participants were encouraged to reminisce were coded for the amount of words associated with the different types of

reminiscence. Elderly who were considered to have more successfully adapted, demonstrated more integrative and instrumental and less obsessive reminiscence. Community dwellers made more use of integrative and instrumental reminiscence than elderly living in institutions.

In order to produce an alternative for delineating reminiscence types by coding transcripts of interviews, Webster (1993) developed the Reminiscence Functions Scale (RFS). This self-report questionnaire consists of 43 possible purposes of reminiscence. Subjects can indicate on a 6-point scale how often they make use of reminiscence for a specific purpose. Factor-analysis showed that the RFS consists of 8 factors (Webster, 1994): boredom reduction, death preparation, identity, problem-solving, conversation, intimacy maintenance, bitterness revival and teach/inform. Table 1 presents an overview of the taxonomies of Wong and Watt (1991) and Webster (1994) as well as those of Cappeliez et al. (2005) and Bluck and Alea (2002).

Table 1 taxonomy of functions of reminiscence and autobiographical memory (based on: Webster & Haight, 1995).

Wong & Watt (1991)	Webster (1994)	Bluck and Alea(2002))	Cappeliez et al. (2005)	Function
Integrative	Identity	Self	Positive	To discover meaning and continuity
Problem solving	Problem solving	Directive	Neutral	To draw on past experiences to cope with present problems
Transmissive	Teach/inform	Directive	Neutral	To provide an instructive story
Narrative	Conversation	Social	Positive	To provide a descriptive story
Escapist	Boredom reduction	Self	Negative	To dwell on good old days to escape from present
Obsessive	Bitterness revival	Self	Negative	To obsess about unresolved disturbing events in the past
	Death preparation	Self	Positive	To prepare for death
	Intimacy maintenance	Social	Negative	To maintain memories of significant others.

It is clear that although there is overlap between the different classifications (Webster & Haight, 1995), the RFS functions of Intimacy Maintenance and Death Preparation appear to be unique.

2.3.2 Reminiscence and research on autobiographical memories

Recently there has been a growing interest in the linkage of reminiscence research and the research on the function of autobiographical memory (Webster & Cappeliez, 1994; Bluck & Levine, 1998; Bluck & Alea, 2002; Webster & Gould (2006). Bluck & Alea (2002) discuss the functions of autobiographical memory. Researchers in this field in general agree that autobiographical memory serves three functions: self, directive and social. The directive function is very similar to the problem solving functions in other taxonomies. It is about using the past for guidance and planning of present and future behavior: solving problems, development of opinions, understanding the inner world of others. The self function involves the use of personal memories to preserve a sense of continuity and coherence. The social function of autobiographical memory is the development, maintenance and nurturing of social relationships. The existence of these functions was empirically confirmed in an exploratory study of a sample of 167 undergraduate students (Bluck et al., 2005). For this study the Think About Life Experiences questionnaire (TALE) was developed, consisting of 28 items assessing the level of the three functional uses of autobiographical memory. Exploratory factor-analysis revealed that some elements of meaning making are part of the directive factor. This finding is consistent with theories of Baddeley (1987) and Pillemer (2003) in that 'people may be able to use autobiographical memory most effectively to direct present and future behavior if they periodically update and refine meanings and causes for past events' (Bluck et al., 2005, pg 109).

2.3.3 Reminiscence styles in relation to psychological functioning and personality

The development of the RFS has facilitated the study of reminiscence in relation to other psychological concepts. Cully et al., (2001) studied the relationship between the frequency and functions of reminiscence, personality styles (NEO-FFI, Costa & McCrae, 1992) and psychological functioning (STAI, Spielberger et al., 1970; BDI, Beck et al., 1996) in 77 healthy older adults. Neuroticism was reported to correlate positively and significantly with Bitterness Revival, Boredom Reduction and total reminiscence. Agreeableness correlated negatively with Bitterness Revival. Anxiety (both state and trait) correlated with Bitterness Revival, Boredom Reduction, Death Preparation and total reminiscence. Depression was associated with Bitterness Revival. Analysis showed that 24% of the variance in the reminiscence factors was explained by the psychological measures (both personality styles and psychological functioning).

Cappeliez & O'Rourke (2002) studied whether frequency and functions of reminiscence were predicted by personality and existential concerns. Eighty-nine older adults were recruited from a university-based education program and filled out the NEO-FFI, the RFS and the Life Attitude Profile-Revised (LAP-R, Reker, 1992). Altogether, 28% of the variance in the total amount of reminiscence was predicted by personality traits (16%) and life-attitudes (12%). Among the life-attitudes, a lower score on goal-seeking predicted a higher level of reminiscence, a greater use of boredom reduction, death-preparation and bitterness revival. A higher score on existential vacuum predicted a higher score on death preparation. Among the personality traits, a higher score on neuroticism predicted higher scores on total reminiscence, identity and bitterness revival. More openness predicted higher total reminiscence and more use of death preparation and identity. The authors concluded that especially the functions that can be considered intra-personal

in nature (boredom reduction, death preparation, identity, bitterness revival) were predicted by personality traits and life-attitudes (Cappeliez & O'Rourke, 2002). These findings were in line with similar cross-sectional studies by Webster (1994) and Quackenbush & Barnett (1995).

In two studies the relationship between reminiscence functions and attachment styles was studied (Webster, 1998, Molinari et al., 2001). Molinari et al. found that patients attending a gero-psychiatric outpatient clinic, who were more securely attached (measured with the Relationship Questionnaire; Bartholomew & Horowitz, 1991), made more use of reminiscence in order to teach and inform. Webster (1998) found that secure attachment was associated with less Bitterness Revival and Problem-Solving than the Fearful attachment style, and secure attachment was associated with a higher score on the Teach/Inform RFS factor than the dismissive style - replicating the findings of Molinari et al. These findings suggest that securely attached individuals have less negative intrapersonal memories and engage in social reminiscing for didactic purposes more so than less securely attached persons.

In a recent study, 420 older adults with an average age of 61 years and with 12.5 years of formal education were asked to fill out the NEO-FFI, the RFS, the Satisfaction with Life Scale (SLS, Diener et al., 1985) and the General Health Questionnaire (GHQ, Goldberg, 1978) as a measure of psychological distress (Cappeliez et al., 2005). In this group 17% of the variance in life-satisfaction and 43% of the variance in psychological distress were predicted by personality traits. For reminiscence functions, the amount of explained variance was 15% and 21% respectively. When controlled for personality traits, reminiscence styles predicted 5% and 1% of life-satisfaction and psychological distress additionally. Again, boredom reduction and bitterness revival predicted lower life-satisfaction, and death preparation higher life-satisfaction. Psychological distress as measured by the GHQ was not significantly predicted by one unique reminiscence style. To summarize, research has shown that different types of reminiscence exist which have different functions. The finding that these different functions show different correlational patterns with personality traits and psychological functioning corroborates the theory/finding that it is important to distinguish these different types and functions. In the following section we will review evidence on the occurrence of reminiscence and different types throughout the lifespan

2.3.4 Life-span perspective of reminiscence

In its early stages reminiscence was studied mainly within the context of developmental stage theory (Erikson, 1963; Webster, 1999). Life-review was seen as a naturally occurring process which takes place in the last stage of the psychosocial development of human beings. The main hypotheses that could be deduced from this theory were that life-review is universal and old-age specific. These hypotheses were not confirmed in empirical studies. In one study it was found that about 46% of a sample of centenarians had not engaged in a life-review and that only 49% of the 60-year-olds had conducted a review or were currently reviewing their lives (Merriam, 1993; 1995). This was in line with an earlier study by Lowenthal et al. (1975) who had found that 44% of a sample of only middle-aged parents were actively reviewing and evaluating past experiences and life events. Based on studies rejecting the claim that life-review is old-age specific, it was suggested that reminiscence and life-review could be better understood within a life-span perspective (Webster & Cappeliez, 1993; Webster, 1999). Central in the life-span perspective is the idea that human development must be seen as a life-long adaptation

process in which both individual and environmental features play a reciprocal role (Baltes, 1987). The application of a life-span perspective to reminiscence expanded the scope of research in several ways. First, it called for the study of reminiscence and life-review at all ages. Second, it stressed the influence that specific social and cultural contexts may have on reminiscence.

Webster (1995) studied reminiscence behaviour among 710 people ranging from 17 to 91 years of age, using the Reminiscence Functions Scale. No difference in the total amount of reminiscing at different ages was found, but there was a linear increase with age of reminiscence for the sake of intimacy maintenance and a linear decrease of bitterness revival reminiscence (Webster 1995). These results were replicated in later studies (Webster & McCall, 1999; Rybash & Hrubi, 1997). Both Hyland & Ackerman (1988) and Webster (1994) found that middle-aged people reminisced less frequently than adolescents and older adults.

In one study life-review was operationalized as the identification and elaboration of life-events (de Vries et al., 1995). The aim of the study was to detect any age or gender differences in characteristics of the life-review process (positive versus negative; complexity, anticipation, intensity) in a sample of 60 young, middle-aged and old people. Apart from an increase with age of the number of life-events remembered, there were many more qualitative similarities than differences in reminiscing about life-events between the age and gender groups. For example, negative (unpleasant) life-events triggered a much more elaborate and complex reminiscing response than positive life-events in all groups except for older women who spent equal cognitive energy on both types of life-events (de Vries et al., 1995).

Pasupathi & Carstensen (2003) studied the age differences in emotional experiences during mutual reminiscence. There was a correlation between age and increases in positive emotion while talking about the past but not while being engaged in other social situations. These age differences only occurred during the retelling of positive stories. This seemed due to the effect that older adults relived the positive quality of the initial event to a greater extent than younger people in everyday social conversations (Pasupathi & Carstensen, 2003).

Wink & Schiff (2002) found that only 42% of older adults had engaged in life-review and among them the majority were women. Scores on life-review did not correlate to self-reports of life-satisfaction, but were positively related to questionnaire ratings of personality qualities like openness to experience, creativity and personal growth. Further, ratings of life-review were related to the amount of introspection and insight as observed during interviews in early, middle and late adulthood and to a global measure of past negative life-events. Finally, 120 participants (70%) were observed to have high acceptance of the past. 25% of this subgroup had engaged in life-review and 75% had not. Wink & Schiff (2002) concluded that for a majority of people successful adaptation to older adulthood could be reached without life-review but that for some people life-review was a very important way of coping with difficulties. Which pathway to successful aging was taken seemed to be determined by personality, the amount of experience of negative life-events and larger social and cultural context factors.

2.3.5 Contextual factors in reminiscence

In their review on reminiscence, Molinari & Reichlin (1984) stressed the importance of contextual factors in reminiscence. Reminiscence does not occur in a vacuum; rather, our memories are triggered, negotiated, and situated within particular contextual parameters. The role of contextual factors may take place at different levels. Wang & Brockmeier (2002) conceptualized autobiographical memory as cultural practice. They stress the local constraints, social interests and rhetorical orders 'that may have an impact on why individuals engage in memory talk, what they present as their past' (pg 59). Sayre (2002) found that 71% of the life-stories of older adults contained narratives about achievement in life. One explanation could be that the heroic epic described as 'a process of individual development through obstacles and defeats to accomplishment and success' (Sayre, 2002, pg143) is deeply rooted in American culture (Hillman, 1983; McAdams & Ochberg, 1988). Merriam (1993) found that African Americans recalled personal memories for the social purpose of teaching younger adults and children about the difficulties encountered while growing up in a black minority in a racially intolerant America. At another level reminiscence may be influenced by different settings and social contexts. Molinari et al. (1995) found that institutionalized, - in contrast to community residing - older adults, reminisced more frequently for the purpose of boredom reduction. Webster (2002) found that families differ significantly in the value they place on reminiscence. Social and group norms may determine which autobiographical memories are shared (Wallace, 1992; Parker, 1995). Generally, in narrative psychology it is stressed that telling one's life-story is a process of co-construction, and the characteristics and behavior of the audience or listener are of major influence on the content of the life-story (Marsh & Tversky, 2004; Adams et al., 2002).

2.3.6 Gender differences

In general, gender differences in reminiscence behaviour across the life-span were reported in favour of women. Women had more (vivid) memories, included more details of personal experiences and had better memory for emotional experiences (Sehulster, 1995; Siedlitz & Diener, 1998). Pillemer et al. (2003) studied gender differences in autobiographical memory styles in 157 older adults. The sample consisted of two cohorts. Members of the younger cohort were 68 – 71 years old; members of the older cohort were 76 – 79 years of age. The participants were interviewed for 3 hours about changes in their lives in the last 15 years. The interviews were then transcribed and coded for the specificity or generality of memories. The results showed that women did not talk more during the interviews but recounted a greater number of specific memories than men (Pillemer et al., 2003). Scores on the reminiscence functions scale (Webster, 1993) showed that women had significantly higher scores on the identity factor and intimacy factor. Combining the two results the authors came to the conclusion that the higher frequency of recounting specific memories by women was due to the fact that women placed greater value on (purposeful) reminiscing.

2.3.7 Development of reminiscence in children

Recent research suggests that the way in which one reminisces is learned already in early childhood. There is a rapidly growing body of knowledge on the development of reminiscence in young children and how reminiscence styles are influenced by parental conversations with their children about the past (Fivush & Reese, 2002). One dimension in which parents can differ when reminiscing with their children is elaborateness (Fivush & Fromhoff, 1988). Parents with high elaborative communication styles ask more questions containing new information when discussing past events than less elaborative parents. Children of highly elaborative parents will have a more elaborative reminiscence style (recalling more information) than other children (Reese et al., 1993). Parents also differ in the type of information they focus on when reminiscing. The focus may be on orientation (chronology, when, where, who) or on evaluation (mental state, why, how). Also in this respect children seem to copy the reminiscence style of their parents when they talk about past events independently (McCabe & Peterson, 1991). Cleveland & Reese (2005) found that the amount of structure and autonomy support given by mothers during reminiscing with their children predicted the amount of memory information of the children when they were 40 and 65 months of age. In a study with 27 asthmatic children it was found that the children of mothers who used emotional language and gave explanations about the causes of the chronic disease showed better emotional well-being and fewer behavioural problems than children of mothers who did not use emotional language and explanations (Sales & Fivush, 2005). The same authors noted however that emotional disclosure without a context of explanations seemed detrimental.

In several studies evidence was found that both fathers and mothers were more elaborative and evaluative with daughters than sons, and that parents discussed emotions (especially sadness) more with daughters than with sons (Fivush, 1998; Reese, Haden & Fivush, 1996; Adams et. al, 1995). These findings could explain why adult women told more comprehensive and emotionally evaluative stories about their past than adult men (Fisher, 2000). An important question is if there are any determinants of specific reminiscence conversations between parents and their children. In a longitudinal study of New Zealand mothers and their children it was found that elaborative and emotional reminiscing was predicted by the security of the attachment between the mothers and their children (Farrant & Reese, 2000).

2.3.8 Theoretical understanding of reminiscence across the lifespan

In addition to the disengagement theory (Baum & Baum, 1980; Butler, 1963) and the ego-integrity theory (Erikson, 1956; Taft & Nehrke, 1990), in recent years new theories are applied to reminiscence, for example the continuity theory and socio-emotional selectivity theory. These theories fit with a contextual and lifespan approach to reminiscence. According to continuity theory individuals, when confronted with life-events or transitions, 'attempt to preserve and maintain existing internal and external structures and they prefer to accomplish this objective by using strategies tied to their past experiences of themselves' (Atchley, 1989, pg 137). This sense of continuity, with the aid of reminiscence, will promote adaptation (Parker, 1999). Continuity theory would predict that people will reminisce more frequently during periods of personal transition than in more stable periods. In testing this hypothesis, Parker (1999) found that young people were significantly more likely to reminisce during transitional periods than older adults.

Another theory applied to reminiscence is the socio-emotional selectivity theory (Carstensen, 1995). This theory proposes that with growing age emotion regulation becomes more important than information gain and that the elderly arrange their social life in such a way (concentrating on close relationships) that they can have as many emotionally meaningful interactions as possible (Pasupathi & Carstensen, 2003). One important aspect of such self-regulation is known as the positivity effect (Carstensen & Mikels, 2005), in which it is assumed that an emotionally gratifying focus '…would bias attention and memory in favour of material that optimizes emotion regulation (i.e., positive material) even if there are costs to focusing only on such material' (p. 118). This hypothesis has been supported by many studies (Kennedy, Mather, & Carstensen, 2004).

Older adults will therefore actively look for social interactions in which they reminisce because of the potential for emotion regulation and well-being (Pennebaker, 1997; Bluck & Levine, 1998). This preference for talking about the past in social interactions with strangers was confirmed in several studies (Pasupathi & Carstensen, 2003).

2.3.9 Specifying processes of reminiscence

Possibly as a consequence of the inconsistent findings in effectiveness research on clinical reminiscence interventions there has been a growing interest in recent years in clarifying the relationship between the psychological processes reminiscence may bring about and possible outcomes (e.g., Bluck & Levine, 1998; Garland & Garland, 2001; Haight et al., 1995; Webster & Young, 1988; Wong, 1989; Wong, 1995). In the literature four processes are mostly mentioned: preserving self-identity and self-continuity; enhancing meaning in life and coherence; preserving a sense of mastery; and promoting acceptance and reconciliation.

Continuity of self is one of the most important functions of autobiographical memory (Bluck et al., 2005). It is based on the presence of a personal identity that is formed during adolescence (Erikson, 1956). Identity is built on ideology (McAdams, 1994). It is based on the commitment to stable values and beliefs (Erikson, 1956; Neimeyer & Metzler, 1994). Identity is also based on awareness of how a person (and his- or herelf) has changed over time (Baumeister, 1986). Recent studies on the self-system theory of subjective change have shown that across the lifespan a temporal orientation of stability of the self is stronger related to subjective well-being than a temporal orientation of change (Keyes, 2000; Westerhof & Keyes, in press). Identity can be seen as an authentic biography that gives answers to questions like where am I coming from, where am I now and where am I going (Giddens, 1991; Bluck et al., 2005). 'A person's identity is not found in behavior (…) but in the capacity to keep a particular narrative going' (Giddens, 1991, p. 54). In particular, integrative reminiscence may contribute to a person's self-identity by letting people tell and retell the story of their lives.

Meaning in life has been defined as 'the cognizance of order, coherence, and purpose in one's existence, the pursuit and attainment of worthwhile goals, and an accompanying sense of fulfillment' (Reker & Wong, 1988). It is generally considered to consist of a cognitive and a motivational component (Dittmann-Kohli & Westerhof, 2000). The cognitive component refers to beliefs about and evaluations of one's life. The motivational component refers to having a purpose in life. Instrumental reminiscence may enhance meaning in life by focusing on past worthwhile experiences, acquired values, past and future plans (Wong, 1995).

Having a sense of mastery, control, competence and self-confidence (whether an illusion or real) plays an important role in successful problem solving,

overcoming traumatic experiences and healthy aging (Pearlin & Schooler, 1978; Schulz and Heckhausen, 1996; Wong, 1995, Seligman, 1975). Cochran & Laub (1994) have found that persons who have been severely injured regained a sense of agency by moving through four phases: incompleteness, positioning, actualizing and completion (see also Polkinghorne, 1995). Instrumental reminiscence may enhance mastery by focusing on inner resources and on recalling how one coped with past difficulties and how (important) goals were achieved.

According to Erikson's (1956) stage-theory a major challenge of late life is making up the balance of one's life. Part of this process is the recognition of the downsides of life: for example dreams or plans that have not materialised, decisions that have not been made or appeared to be wrong afterwards, conflicts that have not been resolved. Sometimes there are opportunities to make amends but sometimes not. Part of this process is the ability to let go and the acceptance of death itself (Garland & Garland, 2001). Several authors have mentioned the parallel process between mourning and life-review (Viney et al., 1989, Silver, 1995). Timmer, Westerhof & Dittmann-Kohli (2005) examined the function and nature of regret in the life review. Reminiscence may enhance reconciliation and finding ego-integrity by focusing on the expression of emotions and creating a setting which makes this kind of life-review and mourning possible at all (Coleman, 1999).

2.3.10 Processes of reminiscence as a type of autobiographical memory

Bluck & Levine (1998) focused on the processes of reminiscence as a type of autobiographical memory. They stressed that research in that domain has shown that memorizing personal experiences is (at least partially) reconstructive in nature and that this process of reconstruction is highly influenced by an individual's 'self-schemas' in addition to personality, personal history and present life circumstances (Barclay, 1986; Conway, 1996). The process of reconstruction is biased by tendencies of the self to preserve its own organization and existence (Greenwald, 1980). By combining studies on autobiographical memory and reminiscence, Bluck & Levine (1998) wanted to link outcomes (especially self-change versus self-acceptance) and processes of reminiscence more closely. If self-acceptance is the main goal 'it may be adequate for individuals to reminisce and tell their life story without much probing' (pg 200). The basic structure of the life stories is left intact but people are encouraged to interpret (reframe) life experiences in a more resourceful manner and to integrate both positive and negative experiences. In general the focus will be on 'memories that are highly accessible because of the current organization of the self-schema' (pg 201). This kind of reminiscence will be rewarding for people 'who are basically satisfied with their life story'. If self-change is the aim of reminiscence a more dynamic approach is in place. 'The role of the facilitator may be to provide conditions in which the individual is able to access or reconstruct memories that are not central to the current self-schema (i.e., not part of the standard script of self.)' (pg 201). Also the way in which memories are interpreted (encoded) may be discussed so that revision of the self is possible. This kind of life-review can be more threatening and anxiety-provoking and asks for more resilience and ego-strength from the participants.

Until now we have reviewed studies on the functions of reminiscence, its occurrence across the lifespan, processes of reminiscence as they are found in naturally occurring contexts and the linkage with new insights in the working of autobiographical memory. In the following section, we will describe how reminiscence can be used in psychological interventions.

2.4 Clinical applications and effectiveness

2.4.1 Applications of reminiscence

In the last twenty years reminiscence has been applied in a large number of settings and with a large number of target groups. Examples of applications are: community-residents with a major depression (Watt & Cappeliez, 2000, Serrano & Gatz, 2004), elderly with moderate depressive symptoms (Bohlmeijer, 2005), nursing home residents (Haight, 1998; Cook, 1991), elderly with dementia (Haight et al, 2003; Lai et al., 2003; Woods et al., 2005), people with end-stage chronic lung diseases (Jonsdottir et al., 2001), people living with Aids (Erlen et al., 2001, Vaughan, 1996), young men with critical illnesses (Jones et al., 2003), people with right hemisphere cerebral vascular accidents (Davis, 2004), families (Hargrave & Anderson, 1990), rural-dwelling older adults (Jones & Beck-Little, 2002), elderly in assisted-living communities (Kelly & Ashley, 2002), older American Indians (Lyman & Edwards, 1989), people with posttraumatic stress disorders (Maercker, 2002), older patients undergoing surgery (Rybarczyk & Auerbach, 1990), female survivors of abuse and violence (Fry & Barker, 2002), and war veterans (Shaw & Westwood, 2002).

It is beyond the scope of this paper to discuss these applications one by one. In general the reminiscence interventions are aimed at the following outcomes: promotion of psychological well-being (life-satisfaction, emotional wellbeing, quality of life), the reduction of psychological distress (depression, (death-)anxiety, stress) and socialization. Within reminiscence many different methods have been used. The most often used formats are individual interviews (Haight, 1998; Davis, 2004; Fry, 1983), reminiscence groups (Birren & Cochran, 2001, Watt & Cappeliez, 2000, Bohlmeijer et al, 2005; Fry & Barker, 2002), and individual writing (Elford et al, 2005). It has become practice to distinguish structured reminiscence from unstructured (or simple) reminiscence (Haight & Diaz, 1992). Garland & Garland (2001) proposed that reminiscence could have three modes. The first mode (mostly unstructured) includes self-generated reviews as done at anniversaries, reunions, and among friends and family. Functions of reminiscence like conversation, teach/inform are most common in this mode. The second mode (mostly semi-structured) is characteristic of reminiscence groups or individual interviews in community and residential settings. Instrumental reminiscence would be very apt for this mode. The third mode (structured) is review in the context of counselling and therapy. One can think of integrative reminiscence or transforming bitterness revival as a central focus.

2.4.2 Linking life-review and other therapeutic frameworks

Following on the necessity of specifying the therapeutic processes reminiscence may bring forth there has been a growing interest in the integration of reminiscence and other psychotherapeutic modalities. Reminiscence may reveal and trigger actual (as part of self-schema) thoughts, stories, expressions, coping-styles that are not helping to adapt and are psychologically distressful. Other psychotherapeutic modalities focus on (and have developed special techniques with the aim of) changing thoughts (cognitive therapy), life stories (narrative therapy), self-expression (creative therapy) and coping behavior (problem-solving therapy) that are thought to hinder self-growth or greater adaptation to the demands of life. In order to develop an effective treatment of depression in the elderly Watt & Cappeliez (2000) developed a protocol for integrative reminiscence in which reminiscence

and cognitive therapy were integrated. 'Integrative reminiscence deals with individuals beliefs about themselves, their attitudes toward and assumptions about the world and the attributions they make about the causes of negative events in their life' (Watt & Cappeliez, 1995, pg 227. During reminiscence participants may express negative self-beliefs and self-blame. Unrealistic thoughts and underlying assumptions are then challenged and modified as part of the therapy. In a randomized controlled trial it was shown that this integrative reminiscence therapy was highly effective in reducing depressive symptoms in comparison to a no treatment control group (Watt & Cappeliez, 2000). Puentes (2004) and Kunz (2002) also described the use of cognitive therapy in reminiscence.

Bohlmeijer et al. (2006) developed a protocol in which reminiscence and narrative therapy were integrated. It is based on the observation that reminiscence can also bring forth - especially for depressed people in a counseling or therapeutic setting – dominant stories that are 'problem-saturated' (Payne, 2000). These stories express pessimism and defeat, and focus on negative elements (Garland & Garland, 2001). A victimic plot is central to these stories (Polkinghorne, 1996) and instead of opening new possibilities they express the loss of agentic power. They are dysfunctional because 'they hinder a person from access to his own personal resources and the availability of others' caring and help' (Goldberg & Crespo, 2003). When this is the case the narrative therapeutic framework offers the means to transform these stories by delineating two processes: deconstruction and reconstruction (Payne, 2000; Kropf & Tandy, 1998). In the deconstruction phase the counselor will explore with the client the influence of problems on their lives, the influence of themselves on their problems, values and norm that preserve the problem and unique outcomes (periods in the life of clients in which the problem was absent). In the reconstruction phase, alternative stories based on client's strength are constructed and 'thickened'. The integration of reminiscence and narrative therapy seems fruitful in two ways. First, it builds upon one important aspect of reminiscence that is putting memorized experience into life-stories (Bluck & Levine, 1998) and second, when these stories express bitterness and are problem-saturated, a framework is offered that invites people to see these stories as interpretations or constructions and to look for alternative stories. A recent study showed a significant larger reduction in depressive symptoms for older adults after participating in the program in comparison to a waiting-group control condition (Bohlmeijer et al; 2006).

Serrano & Gatz (2004) developed a life review therapy protocol based on studies on autobiographical memory showing that depressed people have difficulty retrieving specific memories in comparison to non-depressed people (Kuyken & Dalgleish, 1995; Williams & Scott, 1988). The life review protocol consisted of four interview sessions focusing on childhood, adolescence, adulthood and summary. For each period 14 questions were prepared focusing on specific, positive memories. They tested this protocol in a randomized controlled trial with 43 older adults with clinically significant depressive symptoms. After the intervention the participants in the experimental group showed a significant and large reduction of depressive symptoms in comparison to the control group (Serrano & Gatz, 2004).

2.4.3 Effectiveness

Hsieh & Wang (2003) conducted a systematic review of nine randomized controlled trials testing the effects of reminiscence therapy on depression in older adults. In five studies a significant effect on depression was found. The authors concluded that the effects of reminiscence therapy on depression do not relate to

differences in intervention protocol or setting but may be related to personal characteristics (level of depression). These conclusions were confirmed in a meta-analysis that included 20 controlled outcome studies (Bohlmeijer et. al., 2003). An average effect size across all studies was d=0.84. From a clinical perspective this can be considered a large effect (Wilson & Lipsey, 1997). When the primary studies that included people with high levels of depression were selected, an even higher effect size was found (d=1.28) that contrasted significantly with primary studies which included people with only low or moderate levels of depression (d=0.38). Other differences (age, group versus individual formats, setting) were not found to be significantly related to effects on depression.

Lin et al. (2003) conducted a systematic review of ten studies that tested the effects of reminiscence therapy on depression and psychological well-being that were published between 1986 and 1998. Studies that did not use a control group were included. Again it was concluded that the results of the studies are inconsistent and the authors stressed the need for a framework of reminiscence for which a preliminary model was presented. Central in the model is the proposition that desired outcomes, setting and target-group and reminiscence modality have to be carefully linked. Bohlmeijer et al. (2006) conducted a meta-analysis of 14 (quasi-) experimental studies on the effects of reminiscence on life-satisfaction and emotional wellbeing. An average effect size across all studies was d=0.75. The effects of structured, evaluative reminiscence (life-review) were found to be substantial higher (d= 0.98) than unstructured reminiscence (d=0.50). A meta-regression-analysis showed that this difference was significant (Q=6.50;df=1, p=0.009).

Woods et al. (2005) conducted a systematic review of four randomized controlled trials on the effects of reminiscence for people with dementia on well-being and mood, communication and interaction, cognition and impact on care-givers. The total sample size was 144 people with dementia. In comparison with no treatment, reminiscence had significantly positive effects on caregiver's stress/burden (at post-treatment assessment, 1 study), cognition (at follow-up, 2 studies) and mood (at follow-up, 2 studies).

One large study with a sample of 101 subjects was included (Lin et al. 2003). The participants were randomly assigned to one of three groups. The intervention group received six individual reminiscence sessions of 30 minutes during six weeks in which they were encouraged to tell their life-story. The comparison group also lasted six sessions but did not focus on life-story. The control-group did not receive an intervention at all. No significant differences were found between groups on well-being and social engagement.

Some methodological weaknesses in most of the primary studies are stressed in all the systematic reviews and meta-analyses. The most important are small sample sizes, performance bias (contamination between groups, no blinding of assessors to groups), high drop-out rates and the absence of long-term follow-up assessments (Bohlmeijer et al., 2003; Bohlmeijer et al., 2006; Woods et al., 2005; Hsieh & Wang, 2003; Lin et al., 2003).

2.5 Discussion

The aim of this paper was to review recent developments in research on reminiscence that started with the work of R. Butler in 1963. The merit of Butler was that for the first time, the positive role reminiscence may play in adaptation in late life was conceptualized. As a psychiatrist, working in a clinical setting, he observed an increase of reminiscence with age and he assumed that this was due to a naturally occurring process of life-review. As a consequence, the first clinical inter-

ventions assumed that it was merely enough to stimulate this natural process of reminiscence in order to promote mental health. Empirical research testing this hypothesis in the decades that followed only partly confirmed Butler's hypothesis. We suggest that a second phase of research on reminiscence started in the second half of the eighties with a growing realization that many assumptions by Butler about reminiscence and the process of life-review had to be rejected (especially its universality and its uniqueness to old age), that reminiscence and life-review are much more complex and multi-dimensional than originally thought and that new theoretical groundwork had to be done in order to better interpret the data that were generated by the research. Gerontology was sometimes referred to as a field that was 'data rich and theory poor' (Birren & Bengtson, 1988). One could say this was also true for the field of reminiscence in particular. Now, a new, in many aspects still tentative, picture of reminiscence is emerging that is built on the empirical research of the last twenty years and that offers more promising guidelines for clinical interventions. A summary of these findings is given in table 2.

Table 2 Overview of most important findings of reminiscence research.

1.	Reviewing one's life is just one of eight types of reminiscence.
2.	The others are: problem solving, teach/inform, conversation, boredom reduction, bitterness revival, death preparation, intimacy maintenance.
3.	Life-review is not age-specific.
4.	About half of all people never undergo a process of life-review as described by Butler.
5.	Many people adapt to late life successfully without a process of life-review.
6.	Reminiscence has both intrapersonal and interpersonal functions.
7.	The content of reminiscence is influenced by present circumstances.
8.	(Emotional) reminiscence is more often witnessed in women than in men.
9.	This is possibly due to the fact that parents use different reminiscence styles in their conversations with their daughters and sons
10.	Negative events seem to prompt more elaborate reminiscing than positive events.
11.	Some types of reminiscence (bitterness revival and boredom reduction) are correlated with psychological distress.
12.	Some types of reminiscence are correlated with personality traits.
13.	Reminiscence may enhance successful aging by strengthening identity, increasing meaning and coherence in life, preserving a sense of mastery and control, and promoting reconciliation and acceptance (mourning, letting go, working through conflicts).
14.	Reminiscence (as autobiographical memorizing) can be seen as a reconstructive process.
15.	It is important to discern between self-change versus self-acceptance or self-continuity as the aim of reminiscence.
16.	Meta-analyses have shown that on average, reminiscence is an effective method for enhancing psychological wellbeing and diminishing depression but that there is a lot of inconsistency across studies.

Developing protocols in which life-review is combined with other therapeutic approaches is one possible fruitful way towards more consistent results. This review makes clear that much progress has been made in reminiscence research in the last

twenty years. Many of the questions that were raised by Kovach (1990) have now been taken up. Types and functions of reminiscence have been defined. A reliable self-report measure is available. There is more knowledge of reminiscence throughout the life-span and how reminiscence is influenced by present life contexts. The processes by which reminiscence can have impact on psychological well-being and distress are better described. It now seems evident that life review is an adaptive response to ageing and encountered difficulties for some people but not to others (Coleman, 2005).

An important clinical question that now rises is whether it can be predicted for whom reminiscence as an intervention is beneficial and for whom it is not? And, if beneficial, what type of intervention, with what aim is indicated for what kind of person? The diversity and complexity of reminiscence is one of its main attractions for both professionals and researchers (Gibson, 2004). But its diversity is also a major challenge. Careful planning and testing of reminiscence protocols by making use of research findings and scientific theories that link psychological processes and outcomes are now crucial (Bluck & Levine, 1998; Goldfriend & Wolfe, 1996). Reminiscence as a psychological treatment of depression seems most effective when structure and evaluation are elements (life-review) and when it is combined with other therapeutic approaches (Bohlmeijer et al., 2003; Bohlmeijer et al., submitted). Some examples of these protocols were described in this review (Serrano, 2004, Watt & Cappeliez, 2000; Bohlmeijer et al., submitted).

One issue that is often mentioned in reviews in both the first and second phase of reminiscence research is the inconsistency of the findings across studies (Coleman, 2005, Hwang et al, 2003). In several studies no significant effects of reminiscence interventions on measures of psychological well-being or distress were found (Perrotta & Meacham, 1981; Cook, 1991; Lai et al., 2003). In other studies significant and even large effects are reported (Fielden, 1990; Fry, 1983; Watt & Cappeliez, 2000; Serrano & Gatz, 2004). To our knowledge, no satisfactory explanations have been given for this inconsistency to date. One explanation that has been suggested is the importance of making a distinction between structured and unstructured reminiscence (Haight & Dias, 1992; Haight et al., 1995; Hwang et al., 2003). In structured reminiscence the course of life is systematically discussed, evaluated and worked through, and the facilitator has an active role. In a recent meta-analysis it was found that structured reminiscence had indeed larger effects on life-satisfaction and emotional well-being than unstructured reminiscence (Bohlmeijer et al., submitted). This review suggests four other possible explanations for the inconsistent findings. The first is that a systematic structure of the reminiscence intervention and an active role of the facilitator will not always be enough to bring about change. When during reminiscence a participant expresses for example a very negative view of self or a negative life-story, other specific psychotherapeutic interventions might be necessary to adequately change these views. Obviously the chance for this to happen is much higher when applying reminiscence to people with substantially higher levels of psychological distress. The second explanation is that outcomes and processes of reminiscence have until recently not been clearly linked and theoretically based beyond the general recommendations by Butler (1963; Lewis and Butler, 1973). Is self-change or self-continuity the main target? And what specific processes are expected to help bring about these aims? Intervention manuals should focus on these processes and give precise directions to facilitators on how to deal with these processes. A third explanation could be that for some participants (with a tendency to be bitter about their past) reminiscence will lead to more bitterness revival and consequently more psychological distress. It is not yet clear whether this type of reminiscing can be successfully transformed

into more empowering forms of reminiscing especially when it is sustained by personality traits like neuroticism. We therefore recommend that future intervention studies include questionnaires measuring reminiscence styles and/or personality traits. A fourth explanation that follows naturally from the former is that some reminiscence methods, aiming at self-change are not suited to everyone. To profit optimally from integrative reminiscence, one might suppose that some level of inner skills (ego-strength, verbal expression, introspection and abstract thinking) is required (Coleman, 2005). It could well be that, generally speaking, men might profit more from instrumental reminiscence (with a focus on past achievements and overcoming difficulties) and less from integrative reminiscence (with more focus on meaning in life and emotional significance). Sayre (2003) proposes that reminiscence therapy should be preceded by the question whether persons are interested in reviewing their lives.

In recent years there has been a growing interest in the psychological treatment of common mental disorders such as depression in older adults (Cuijpers et al., submitted). Interpersonal therapy (Reynolds et al., 1999), and cognitive behavioral therapy (Pinquart & Sörenson, 2001) have been successfully applied to older adults and have been found effective. Especially for older adults with mild depression, which has by far the largest prevalence (Beekman, 1999), psychological treatment is preferred above medical treatment because of the negative side-effects of the latter (Wetherell et al., 2003). A recent American study showed that 30% of older adults in primary heath care indeed showed a preference for psychological treatment after they were given information (Arean et al., 2001). Life-review is another psychological treatment that may be even more attractive to some older adults for several reasons. First, it links up with a natural, common and recognizable process of recalling the past. Clients don't have to learn a new therapeutic 'language' in order to participate in life-review. Second, it is a meaning-making approach. This is especially relevant for older adults who are confronted with relatively more experiences of loss than other age-groups (Westerhof et al., 2004). If the experience of meaninglessness is indeed a major source of the depression, telling the story of one's life and remembering important inner experiences (goals, values) in one's life is a good starting point for finding new meaning in life (Butler, 1963; Kropf & Tandy, 1998; Bohlmeijer et al., 2006). Third, other therapeutic approaches and techniques can be easily incorporated/integrated in the therapy (Bohlmeijer et al, submitted; Watt & Cappeliez, 2000; Puentes, 2004). Fourth, there is a strong correlation between reminiscence and autobiographical memories and depression (Kuyken & Brewin, 1995; Williams & Scott, 1988). In addition, reminiscence has another feature that can make it worthwhile for clinicians to implement this psychological treatment in mental health care. Reminiscence can be easily adapted to different settings in mental health care. It can be applied for example as a form of regular psychotherapy (Fry, 1983; Watt & Cappeliez, 2000), as a form of prevention or early intervention for community-residents (Bohlmeijer et al., 2005), as a form of positive psychology that is part of a larger psychiatric treatment program (Ruini & Fava, 2004) and as part of care for nursing-home residents (Haight et al., 1998). The development of a framework that gives guidelines for the implementation of a specific reminiscence intervention that takes account of factors like setting, target-group and level of psychological distress could be useful. A preliminary model for such a framework was presented by Lin et al. (2003).

This study has made clear that life-review on the basis of reminiscence is an activity that takes place at different age-groups and is not confined to older adults. Yet, as a clinical intervention, it has mainly been applied to older adults. The advantage for the older adults is that, while other sources may fall away, personal

memories can be continuous source of meaning in life. But there is good reason to apply life-review interventions to other age groups as well. Throughout the life-span (especially adolescence and mid-life, Lewchanin & Zubrod, 2001) people actively review their lives with the aim of identity-forming or reconsidering goals and values (Erikson, 1963). Life-review interventions could assist them with these tasks. The main advantage for younger age-groups is that a lot of time is still ahead and major changes in life are still possible.

At last we want to formulate priorities for research with relevance for clinical practice based on this review. First, further studies (preferably randomized, controlled trials) are needed to test the efficacy and effectiveness of reminiscence. One could give priority to testing reminiscence protocols that have been well worked out and have been proven effective in one study already. Until this date replication of a reminiscence intervention protocol aimed at depressed elderly has not taken place (Bohlmeijer et al., 2003). Second, these effectiveness studies should include both mediators (mastery, meaning in life, sense of coherence) and predictors (reminiscence style, attitude towards reminiscence, personality, number of life-events). In this way applied research may shed light on this question: for which clients is reminiscence is more or less effective? Third, it would be interesting to develop and test reminiscence protocols for the treatment of anxiety disorders, especially generalized anxiety disorder. If reminiscence indeed promotes mastery, it may also be effective in reducing anxiety. To our knowledge this has not been tried so far.

As a response to life-events or transitions in life, it is a natural reaction for many people (but not for all), to start thinking about the meaning of life and reviewing their lives. For some this leads to depression and possibly anxiety. For these people life-review can be an attractive psychological treatment which helps them to cope with feelings of regret and sadness, to find meaning in life and to construct stories of their lives that offer new, empowering perspectives. Enough evidence is available to justify further implementation in mental health care.

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3 Effects of reminiscence and life-review on late-life depression: A meta-analysis

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Abstract

This chapter gives a report of the results of a meta-analysis that was conducted to assess the effectiveness of reminiscence and life review on late-life depression across different target groups and treatment modalities. Twenty controlled outcome studies were retrieved from Psychlit, Medline and Dissertation Abstracts. For each study a standardised effect size, d, was calculated and a random-effects meta-analysis was conducted. An overall effect size of 0.84 (95% CI = 0.31 – 1.37) was found, indicating a statistically and clinically significant effect of reminiscence and life review on depressive symptomatology in elderly people. This effect is comparable to the effects commonly found for pharmacotherapy and psychological treatments. The effect was larger in subjects with elevated depressive symptomatology (d = 1.23) as compared to other subjects (d = 0.37). Other characteristics of the subjects or interventions were not found to be related to increased or decreased effect sizes. It was concluded that reminiscence and life review are potentially effective treatments for depressive symptoms in the elderly and may thus offer a valuable alternative to psychotherapy or pharmacotherapy. Especially in non-institutionalised elderly people – who often have untreated depression – it may prove to be an effective, safe and acceptable form of treatment. Randomized trials with sufficient statistical power are necessary to confirm the results of this study.

3.1 Introduction

Depression is a common and disabling and disorder among the growing number of elderly. About 3% suffer from severe depression and another 10 to 15% have a mild to moderate depression (Cole and Yaffe, 1996; Beekman, 1995). Although effective treatments, such as pharmacotherapy (Katz, Simpson & Curlik, 1990; Anstey & Brodaty, 1995), cognitive-behavioural therapy (Engels & Vermey, 1997; Pinquart & Sörensen, 2001) available, only few elderly receive adequate treatment for depression (Zivian, Larsen, Knox, Gekoski & Hatchette, 1992; Gottlieb, 1992). Under-utilisation of specialised mental health services by depressed elderly are caused by low detection rates by health care providers, lack of awareness of the elderly about the severeness of their condition, insufficient knowledge about available services, reluctance to accept help in general, and aversion towards psychological treatment.
Several methods have been suggested to increase help-seeking behavior (Friedhoff, 1994, Gottlieb, 1994; Cuijpers, 1998), including systematic screening for depression among elderly primary care patients (Friedhoff, 1994), educational programs for the elderly (Friedhoff, 1994), easily accessible outreach programs for depression (Cuijpers, 1998), and public awareness programs (Magruder et. al, 1995; Jacobs, 1996).

Life review and reminiscence may be another method to improve detection and treatment rates for depressed elderly, as it is a non-stigmatising, easy to use, and easily administered treatment method. Reminiscence is a naturally occuring process of recalling the past, that is hypothesized to resolve conflicts from the past and make up the balance of once life (Butler, 1964). Since the beginning of the seventies, reminiscence has been used by therapists in two major ways. First, unstructured group interventions were conducted in which elder people were stimulated to recall memories and share them with each other (Perrotta & Meacham, 1981; Goldweiser, 1987). Secondly, life review was developed as a more structured variant of reminiscence in which re-evaluation, resolving conflicts or assessing adaptive coping-responses were offered systematically to elderly, either in individual or in group sessions (Fry, 1983; Rattenbury, 1989; Haight, 1988). In the last few decades, reminiscence and life review have been used in several target populations with differing goals, including the stimulation of cognitive functioning in demented elderly, an increase in life satisfaction and quality of life in elderly in general, and as a method for early intervention for elderly with depressive symptoms or major depression.

In this study, we examine the effects of reminiscence and life review on depression and depressive symptomatology in the elderly, using a meta-analytic approach. Earlier meta-analyses of psychological intervention in the elderly have not examined the effects of reminiscence and life review specifically. Three of the major meta-analyses in this area have included only a small selection of the available studies (Scogin & McElreath, 1994; Engels et al., 1997; Cuijpers, 1998). A fourth major meta-analysis did include the majority, though not all, studies but only concentrated on the overall mean effect size, without exploring differences between the interventions (reminiscence versus life review; group versus individual) or target population (depressed versus non-depressed; Pinquart & Sörensen, 2001). Because of these limitations of earlier meta-analyses, because the results were not consistent, and because several new studies in this area have been conducted since the last meta-analysis, we decided to conduct another meta-analysis, focussing on the effects of reminiscence and life review on depressive symptoms.

3.2 Method

3.2.1 Selection of studies

Studies were traced through several computerised literature databases (Medline, 1966 – December 2001; Psychinfo, 1960 – December 2001), using 'depression', 'reminiscence' and 'life-review' as keywords. The abstracts of possibly illegible studies were read and papers which possibly met inclusion criteria were retrieved and studied. In addition, the studies used in earlier meta-analyses (Scogin and McElreath, 1994; Pinquart & Sörensen 2001; Cuijpers, 1998; Engels et al., 1997) were collected. Furthermore, the reference lists of retrieved studies were examined and studies that possibly met inclusion criteria were collected. As we did not want to rely solely on published studies, we also searched Dissertation Abstracts.

3.2.2 Selected studies

In order to be included in the meta-analysis, a study had to examine the effects of reminiscence or life-review as one of the basic intervention methods used. Furthermore, the study had to report pretest and posttest data, use a control or comparison group, and had to use a measure of depressive symptoms. Sufficient data had to be reported for the calculation of standardized effect sizes.
Twenty studies met the inclusion criteria. Selected characteristics of these studies are presented in Table 3. The studies were screened on several methodological characteristics, including random assignment to conditions, data on drop-out, follow-up, adequate description of the intervention, the use of appropriate statistical analyses, and reliability and validity of the measures.

Table 3 Selected characteristics of studies examining the effects of reminiscence on depression

Study	*Target population*	*Conditions*	*N*	*DO*	*RA*	*GRP/IND*	*Meas.*	*%*	*Age (M)*	*Outcome measures*
Arean et al 1993	Community-residents	1.REM-LR 2.Problem solving therapy 3.WL	27 28 20	.25 .32 0	+	GRP	Pre Post 3 mn	75	66.7	HRSD; BDI; GDS
Blohm, 1997	Newly admitted nursing home residents	1.REM 2.REM current 3.Control	15 15 15	.07 .13 .13	+	GRP	Pre post 6 wk	88	85.7	GDS
Capps, 1998	Residents of retirement centers	1.REM 2.REM LR-	16 16	.06 .25	-	GRP	Pre post	78	Nr	GDS
Cook 1991	nursing home residents	1. REM 2. current events 3. No treatment	14 13 14	.29 .38 .29	+	GRP	Pre post	90	81.3	GDS
Daleo, 1999	Residents of Nursing facility	1.REM 2.Control 3.REM 4.Control	7 6 7 6	.14 0 0 0	-	GRP	Pre post	72	-	GDS
Fallot, 1979-80	Community-residents	1. REM 2. Control-current topics	18 18	- -	-	IND	Pre Post	100	65.6	MACL

Study	*Target population*	*Conditions*	*N*	*DO*	*RA*	*GRP/IND*	*Meas.*	*%*	*Age (M)*	*Outcome measures*
Fry 1983	Community-residents	1. REM-LR 2. REM 3. Control (neutral activity)	54 54 54	- - -	+	IND	Pre Post 15 wks	59	68.5	BDI
Goldweiser 1987	dementia patients in nursing homes	1. REM 2. current topics 3. No treatment	9 9 9	.11 .11 .11	+	GRP	Pre Post 5 wks	78	82.6	BDI
Haight 1988, 1992	Homebound, disabled elderly, (Meals-on-Wheels)	1. REM 2. Friendly visit 3. No treatment	16 16 19	.19 .19 .16	+	IND	Pre post 1 yr	78	76	Zung
Haight, 1998	residents of nursing homes, no DIS-depression, or cognitive dys-fucntion	1.REM 2.Friendly visit (pretest) 3.REM-Ind, no pretest 4.Friendly visit, (no pret.)	60 44 44 53	.27 .27 .27 .27	+	IND	Pre post 1 yr	69	79.6	BDI
Klausner et al 1998	hospital patients with depressive symptoms	1. GFGP 2. REM (control)	6,5 6,5	.31 0	-	GRP	Pre Post	55	66.9	HDRS; BDI; MA
Koffman, 1998	Community residents	1.REM-LR 2.Gestalt,life review 3.Control	12 12 12	- - -	+	GRP	Pre post	-	72.6	GDS
Perotta 1981	community residents attending a senior center	1. REM 2. Group current topics 3. No treatment control	7 7 7	- - -	+	IND	Pre Post	52	78	Zung
McMurdo 1993	inhabitants of residential homes	1. Exercise 2. REM (control)	20 29	.25 .10	-	GRP	Pre Post	80	81	GDS
Rattenbury 1989	residents of nursing home	1. REM 2. current topics 3. Control	8 8 8	- - -	+	GRP	Pre Post	-	85	MUMS
ReVille, 1996	Community-residents visiting senior centers	1.REM 2. Current topics 3.Control	40 40 40	.20 0 0	+	IND	Pre post	63	72.4	MAACL-R
Stevens-Ratchford, 1993	Residents retirement community, living in own appartments	1.REM 2.Control	12 12	0 0	+	GRP	Pre Post	67	79.8	BDI
Weiss, 1994	Residents of long-term care-setting	1.REM 2.CT 3.Control	20 20 8	.30 .40 0	+	GRP	Pre post 6 mn	-	-	BDI
Youssef 1990	nursing home residents	1.REM 2.Control	39 21	- -	+	GRP	Pre Post	100	71.8	BDI
Watt, 2000	Community-residents	1.REM-integrative 2.REM-instrumental 3.Control	14 13 13	0 0 0	+	GRP	Pre Post 3 mn	54	66.8	GDS HRSD

Abbreviations: Ss: sessions: DO: drop-out; RA: random assignment; GRP: group; IND: individual; Meas: measurements; REM: reminiscence; LR: life review; WL: waiting list; HRSD: Hamilton Rating Scale of Depression; BDI: Beck Depression Inventory; GDS: Geriatric Depression Scale; MA: Montgomery-Asberg; MACL= Mood Adjective CheckList; MAACL-R= Multiple Adjective Affect CheckList-Revised; MUMS= Memorial University Mood Scale.

In fifteen studies, subjects were randomly assigned to conditions. Thirteen studies used a no-treatment control group. In nine studies the control-group was offered a placebo intervention (i.e. discussion about current topics or a friendly visit); in one study the control group were people on the waiting list; in three studies reminiscence functioned as the control group. In five studies the target-population had severe depressive symptoms, indicated by high pre-testscores on a selfrating depression questionnaire (BDI >17; GDS >15). In two of these studies a diagnostic interview was used to determine whether the participant had a diagnosis of major depression. In the other fifteen studies, participants were not selected on the presence of depressive symptoms, but showed mild or moderate levels of depressive symptoms. In four studies the drop-out rate was higher than 25 percent. In fifteen studies, the intervention was qualified as reminiscence and in seven studies as life-review. To be qualified as life-review, structure and evaluation had to be mentioned explicitely in the description of the intervention. In fourteen studies, a group format was used while the other six studies used an individual format. In nine studies, the intervention consisted of six sessions or less, in nine studies 7 – 12 sessions and in two studies 12 or more sessions. In fourteen studies more than two thirds of the participants were women and in nine studies the average age was higher than 75 years. In nine studies the participants were community residents, in ten studies the participants were living in nursing of residential homes.
We defined four studies as high quality studies. In these studies, subjects were randomly assigned to conditions, drop-out rates lower than 30% were reported, the intervention used a well-described protocol and follow-up measurements were taken.

3.2.3 Methodology and calculation of effect sizes d from primary studies

In a meta-analysis it is assumed that each study estimates the real effect of an intervention. By combining several estimations, a better estimation of the real effect is obtained. In a meta-analysis the effect sizes that are found in the studies are converted into a measure that has no connection with the instrument used and can be compared to other measures (Wolf, 1986; Smith, Glass & Miller, 1980; Glass, McGaw & Smith, 1981). Standardised effect sizes, d, are commonly calculated as: $d = (M1 - M0) / Sd0$; where, M1 and M0 are the means at post and pre-test and Sd0 is the pre-test standard deviation of measures of depression. The standardized effect sizes, d, show by how many standard units (z-scores) a group has progressed after treatment at t1 as compared with their mean baseline score at t0.

We were interested in obtaining the effect size of the experimental effect minus the effect (of spontaneous recovery) in the control group. Therefore, we calculated the standardised pre – post change score of the experimental group (dE) and did the same for the control group (dC). Then we calculated their difference, i.e. $\Delta(d) = dE - dC$. These incremental effect sizes show by how many standard units the experimental group has been removed from the control group. An effect size of 0.5 thus indicates that the mean of the experimental group is half a standard deviation larger than the mean of the control group. Lipsey & Wilson (1993) have shown that an effect size of .56 to 1.2 can be assumed as large, while effect sizes of .33 to .55 are moderate, and effect sizes of 0 to .32 are small.

In 16 primary studies means and standard deviations were reported. For the other studies test statistics ($\chi 2$, T, F) or correlation coefficients, r, were converted into the d statistic using the equations provided by Wolf (1986). In the calculations of effect sizes only those instruments were used, that explicitly measure

depressive symptoms (Table 1). If more than one depression measure was used, the mean of the effect sizes was calculated, so that each study (or contrast group) only had one effect size.
Effect sizes were calculated independently by two researchers. Discrepancies were resolved by recalculating and consensus.

3.2.4 Analysis

Basically, meta-analysis amounts to pooling individual d's and obtaining a best overall estimate of the treatment effect, within its 95% confidence interval (95% CI). The analysis was conducted with the computer program Meta-Analysis, version 5.3 (Schwarzer, 1989), which follows the data-analytical strategies outlined by Hedges & Olkin (1985). We opted for the random effects model, because 95% CIs and p-values result in conservative estimates and it is not assumed that the primary studies are perfect replications of each other. We also corrected for the reliability (Cronbachs α, or test-retest reliability r), because it is known that lack of reliability (i.e. random measurement error) results in attenuated estimates of the pooled effect size.

All analyses included a homogeneity test to test the idea that other covariates might be present, and the amount of unexplained variance that was not attributable to random sample error was assessed. Furthermore, Orwin's Fail/Safe N was calculated. This number indicates how many (hypothetical) studies with an effect size of zero should be found and included in the meta-analysis in order to reduce the observed effect size to a smaller value of, say, 0.20. A large Fail/Safe N indicates that results can be safely generalised.

3.3 Results

The overall mean effect size for all twenty studies (23 contrast groups) was 0.84, with a 95% confidence interval of 0.31 – 1.37 (Table 4). This effect is statistically significant ($Z=4.94$, $p<0.001$). This is a large effect. The Q-test for the 0-hypothesis of homogeneity across effect sizes had to be rejected, indicating that there is a substantial amount of as yet unexplained variance that might be attributable to the systematic effects of covariates. 12% of the variance is caused by random sample error, which leaves room for a remaining 88% which may systematically covary with (unknown) covariates. The number of studies with a zero-effect that should be found in order to reduce the effect size to 0.20 is 74 ('Orwin's fail safe N').

Table 4 Results of meta-analyses examining the effects of reminiscence and life review on depressive symptoms in the elderly

	N_{ES}	N	D	95% CI	Q	%SE
all studies	23	959	0.84	0.31 – 1.37	103.51***	12%
all studies, outlier excluded	22	933	0.67	0.41 – 0.93	75.53***	39.5%
High depressive symptoms	7	391	1.23	0.92 – 1.53	9.59	70%
No high depressive symptoms	15	542	0.37	0.12 – 0.62	25.71*	60.3%
High quality studies	5	240	0.92	0.28 – 1.56	14.25**	25.5%
Other studies	17	693	0.60	0.33 – 0.88	61.26***	46.7%
Reminiscence	13	421	0.46	0.16 – 0.76	29.71**	56.2%
life-review	9	512	0.92	0.49 – 1.35	32.34***	27,7%
Group intervention	15	448	0.68	0.38 – 0.98	25.95*	49.2%
Individual intervention	7	485	0.64	0.11 – 1.17	49.58***	20.0%
Community residents	12	556	1.11	0.12 – 2.10	87.83***	7.2%
Nursing /residential homes	8	325	0.38	0.05 – 0.71	7.419	63%
less than 72% women	9	516	0.75	0.21 – 1.28	59.193***	21%
more than 72% women	13	417	0.58	0.31 – 0.84	18.085	66%
Published studies	17	738	0.77	0.47 – 1.07	53.280***	39%
Dissertations	5	195	0.20	-0.17 – 0.58	9.262	64%

***: P < 0.001; **: P< 0.01; *: P< 0.05
Abbreviations: NES: Number of effect sizes; N: number of subjects in the studies; %SE: percentage of the variance accounted for by random sample error.

We conducted an outlier analysis. At a 10% confidence level all studies formed one cluster, except for three studies (Daleo, 1999; Watt, 2000; ReVille, 1996; effect sizes d=5.77, d=1.97 and d=-0.31). We examined why these three studies differed from the other studies. One study was found to have considerable methodological problems, in that the principle investigator was also the therapist who had carried out the intervention, which may have biased outcomes considerably (Daleo, 1999). For the other two studies, no methodological flaws were found. Therefore, we did not exclude these two studies from the other meta-analyses. In the resulting meta-analysis (19 studies, 22 contrast groups) an overall mean effect size of 0.67 was found (95% CI: 0.41 – 0.92; Z = 9.49, p<0.001). These results are also significant heterogeneous, but the amount of explained variance increased to 39.4%.
We selected the five studies in which the target-population had elevated depressive symptoms. The resulting effect size was d = 1.23 (95% CI: 0.92-1.53, Z=10.98, p<0.001). A Q-test indicated a that this was a homogeneous set of studies.

We conducted several more series of meta-analysis, for several selections of studies, including type of intervention (reminiscence versus life-review); quality of studies (high versus lower quality); group versus individual intervention; community versus residents of nursing or residential homes; studies with more than 72% women versus other studies; and published studies versus unpublished dissertations. The results are summarized in Table 4. Heterogenity remained considerable in most analyses. We did find large effect sizes for high quality studies, but the 95% confidence interval overlapped with the interval for lower quality studies. All

other 95% confidence intervals for the other comparisons also overlapped, indicating that there were no major differences for specific clusters of studies.
Insufficient data were available to calculate long-term effects of the interventions.

3.4 Discussion

The present meta-analysis has several limitations. First, only 4 studies could be defined as high quality studies. The other studies suffered from several methodological problems. Second, many studies did not measure long-term effects. Third, in seven studies no data on drop-out were reported. But, in the remaining thirteen studies drop-out rates were mostly lower than 30% in the intervention group, which is not uncommon in this target population. Fourth, the total number of effect sizes was relatively small and the clusters showing homogeneous results are even smaller. Another limitation is that this meta-analysis exclusively focuses on depressive symptomatology as an outcome. Apart from reducing depression reminiscence may also increase life-satisfaction, self-esteem and wellbeing.

Despite these limitations, the results of this meta-analysis indicate that reminiscence and life-review may very well be effective treatments of depressive symptoms in older adults. The mean effect sizes found, are comparable to the effect sizes found for well-established treatments, such as antidepressives and cognitive behaviour therapy. Promising is that the studies focussing on elderly with severe depressive symptoms, reminiscence and life-review seem even more effective. They improved more than one standard deviation than depressed elderly who didn't receive this treatment. But this result is based on a small sample of studies.

We found no evidence that life-review is significantly more effective in reducing depressive symptoms than reminiscence, as was suggested by earlier researchers (Haight, 1992; Watt, 2000). Though not statistically significant there is a trend that reminiscence and life-review are more effective for elderly living in the community.
The data showing that reminiscence and life-review could be effective treatments for depression with the elderly should be further confirmed by large, high quality randomized controlled trials, focussed on specific and well-described high risk populations. Especially, studies should focus on subjects with established on major depressive disorder, as most studies until now only measure depressive symptomatology.

As reminiscence and life review can be delivered easily, do not stigmatise and appear to connect well with cognitive processes in elderly people, they may very well increase treatment rates of depressed elderly and reach them in the early stages of depressive disorders.

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4 The effects of reminiscence on psychological well-being in older adults: a meta-analysis

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ABSTRACT

This paper presents the results of a meta-analysis to assess the effectiveness of reminiscence on psychological well-being across different target groups and treatment modalities. Fifteen controlled outcome studies were included. An overall effect size of 0.54 was found, indicating a moderate influence of reminiscence on life-satisfaction and emotional well-being in older adults. Life-review was found to have significant larger effects on psychological well-being than simple reminiscence. In addition reminiscence had significant larger effects on community dwelling adults than adults living in nursing homes or residential care. Other characteristics of participants or interventions were not found to moderate effects. It is concluded that reminiscence in general but especially life review are potentially effective methods for the enhancement of psychological well-being in older adults but replication of effectiveness studies of well defined protocols is now warranted.

4.1 Introduction

Aging can be seen as a continuous process of adaptation (Atchley, 1989; Baltes, 1987). Throughout life people are confronted with life-events and challenges they have to cope with. This process of adaptation is a dynamic, life-long process in which people and the environment mutually influence each other (Baltes, 1987). Baltes & Carstensen (1996) defined successful aging as the maximization and attainment of positive outcomes and the minimization or avoidance of negative outcomes. Different processes have been proposed to play a role in successful aging, such as the development and maintenance of primary control (Heckhausen & Schulz, 1995), socio-emotional selectivity (Carstensen, 1995), accommodation and assimilation (Brandstädter, 2002) and selective optimization with compensation (Marsiske et al., 1995). The importance of reminiscence for successful aging has also been stressed in the last decades (Butler, 1974; Coleman, 1992; Wong & Watt, 1991; Wong, 1989; Pasupathi & Carstensen, 2003). Reminiscence has been defined as 'the vocal or silent recall of events in a person's life, either alone or with another person or group of people' (Woods et al., 1992, p. 138). To explain the contribution of reminiscence to successful aging four processes are often mentioned: identity-forming and self-continuity; enhancing meaning in life and coherence; preserving a sense of mastery; and promoting acceptance and reconciliation.

Identity-forming can be seen as an important function of reminiscence (Atchley 1989; Webster, 1994; Parker, 1999). Personal identity is formed during adolescence (Erikson, 1959; McAdams, 1993). It is based on awareness of how a person has changed over time. Identity can be seen as an authentic biography that gives answers to questions like where am I coming from, where am I now and where am I going (Giddens, 1991; Bluck et al., 2005). 'A person's identity is not found in behavior (…) but in the capacity to keep a particular narrative going' (Giddens, 1991, p. 54). Reminiscence may contribute to a person's self-identity by letting people tell and retell the story of their lives on basis of questions like 'what have been important values in your life?' and 'why did you decide to study biology?'.

Meaning in life has been defined as 'the cognizance of order, coherence, and purpose in one's existence, the pursuit and attainment of worthwhile goals, and an accompanying sense of fulfillment' (Reker & Wong, 1988). It is generally considered to consist of a cognitive and a motivational component (Dittmann-Kohli & Westerhof, 1997). The cognitive component refers to beliefs about and evaluations of one's life. The motivational component refers to having a purpose in life. Reminiscence may enhance meaning in life by focusing on past worthwhile experiences, acquired values, past and future plans (Wong, 1995).

Having a sense of mastery, control, competence and self-confidence (whether an illusion or real) plays an important role in successful problem solving, overcoming traumatic experiences and healthy aging (Pearlin & Schooler, 1978; Heckhausen & Schulz, 1995; Wong, 1995). Reminiscence may enhance mastery by focusing on inner resources and on recalling how one coped with past difficulties and how (important) goals were achieved.

According to Erikson's (1959) stage-theory a major challenge of late life is making up the balance of one's life. Part of this process is the recognition of the downsides of life: for example dreams or plans that have not materialized, decisions that have not been made or appeared to be wrong afterwards, conflicts that have not been resolved. Butler (1963) observed an increase of reminiscence at old age and hypothesized that this was due to naturally occurring process of life-review. Part of this process is the ability to let go and the acceptance of death itself

(Garland & Garland, 2001). Several authors have mentioned the parallel process between mourning and life-review (Viney et al., 1989, Silver, 1995). Reminiscence may enhance reconciliation and finding ego-integrity by focusing on the expression of emotions and creating a setting which makes this kind of life-review and mourning possible at all (Coleman, 1999). It can be expected that persons with a positive identity, with higher levels of meaning in life and mastery and who have found reconciliation with their past lives will age more successfully and have higher levels of psychological well-being as a consequence (Westerhof, 2001).

Because of it's potential positive effects on psychological well-being reminiscence has been implemented in health care as a psycho-social intervention for different populations (Garland & Garland, 2000; Gibson, 2004). In order to assess the effectiveness of reminiscence interventions on psychological well-being a meta-analysis was performed. In addition we were especially interested in the question whether the effects of reminiscence are moderated by characteristics of the method being used and characteristics of the target-population.

4.1.1 Moderators

In the past years different typologies of reminiscence have been developed. Wong & Watt (1991) defined six types of reminiscence: integrative, instrumental, transmissive, narrative, escapist and obsessive. Only integrative and instrumental reminiscence were found to correlate with successful aging. Webster (1994, 1999) developed the reminiscence function scale (RFS). This questionnaire measures how often people reminisce with a particular function in mind. Eight functions are discerned: boredom reduction, death preparation, identity-forming, conversation, intimacy maintenance, bitterness revival, teach/inform, problem-solving. In a recent study using the RFS, it was found that higher levels of bitterness revival, boredom reduction, death preparation and total reminiscence correlated with higher levels of anxiety and that depression was correlated with bitterness revival (Cully et al., 2001). Cappeliez et al., (2005) found that boredom reduction and bitterness revival predicted lower life-satisfaction, and death preparation predicted higher life-satisfaction. These studies show that mere stimulation of reminiscence may not always enhance psychological well-being. It has become customary to discern life-review from reminiscence (Haight et al., 1995). Life review is more structured, systematically addresses the whole life-span, focuses on both positive and negative events (conflicts) and is evaluative (Haight & Burnside, 1993). In life-review interventions reframing of negative events and the integration of important life-events in a coherent, meaningful life-story (synthesis) is actively looked for by both participant and counselor (Webster & Haight, 1995). We therefore expect life-review interventions to be more effective than reminiscence interventions. In addition, some authors have stressed that an individual format is a linchpin of life-review (Haight et al., 1995). An advantage is that it gives the counselor more time to adapt the intervention to the individual needs of a participant. Others have stressed the usefulness of a group format and the possibilities to exchange life-experiences and learn from other group members (Watt & Cappeliez, 2000). We therefore want to explore whether an individual versus group format is a significant moderator of the effects of reminiscence. Another characteristic that might be of importance is the number of sessions. In this respect there is a large diversity among studies. Some interventions consist of only three or four sessions (Davis, 2004; Serrano, 2004), other interventions consist of up to 28 sessions (McMurdo, 1993). It has been suggested that for older adults it takes more time to change and that longer-term interventions are better suited (Knight, 1988). Duration of psycho-social in-

terventions has been found to influence program efficacy (Llopis, 2002), so exploration of duration as an effect-moderator is warranted. In addition to characteristics of interventions we want to test if the effects of reminiscence are moderated by two characteristics of participants: living conditions and age. The choice of living conditions is relevant considering the fact that hospitalisation, most notably to nursing-homes, poses a potential threat to the psychological well-being of many older adults (Cook, 1998; Haight et al, 1998). The prevalence of depression in nursing homes is high. The prevalence of major depression is estimated to be 6 – 11%, and of minor depression 30% (Ames, 1993). Older adults that have been institutionalised also have lower levels of life-satisfaction and well-being than community residents (Loomis & Thomas, 1991). At the same time there is higher prevalence of chronic diseases and cognitive decline among inhabitants of nursing homes. This may pose restrictions to possible psychological change. High age may be a moderator of effects of reminiscence as well. A negative correlation between effect sizes on depression as a result of psychological treatment and age was reported by Engels & Vermey (1997). Similarly Pinquart & Sörenson (2001) found that effects on depression were weaker for older (> 77 years) than younger adults.

In the past years one meta-analysis on the effects of reminiscence on psychological well-being was conducted (Pinquart & Sörenson, 2001). Pinquart & Sörenson (2001) conducted a meta-analysis with 122 psychosocial and psychotherapeutic intervention studies with older adults. They found a mean effect size on psychological well-being across all studies of 0.45. The mean effect size of reminiscence interventions was 0.45 as well. In this meta-analysis control-enhancing interventions were found to have the most effects on psychological well-being (1.03), followed by cognitive behavioural therapy (0.78). In addition, across all studies they found individual interventions to be significantly more effective than group interventions (0.55 versus 0.42) and interventions for nursing-home inhabitants more effective than interventions for community-dwelling adults (0.58 versus 0.40). In this meta-analysis the influence of moderators was not specifically tested for reminiscence interventions. In addition, several new studies have been conducted since 2001. For these reasons we decided to conduct a new meta-analysis to examine the effects of reminiscence and life-review on life-satisfaction and well-being.

4.2 Methods

4.2.1 Selection of studies

Studies were selected through a search of two computerised databases of the literature (Medline, 1966 – June 2005, Psychinfo, 1960 – June 2005, using 'life-satisfaction, 'well-being', 'reminiscence' and 'life-review' as keywords. The abstracts of potentially eligible studies were read and papers which potentially met inclusion criteria were retrieved and studied. In addition, the primary studies used in earlier meta-analyses (Scogin and McElreath, 1994; Pinquart & Sörensen 2001; Cuijpers, 1998; Engels & Vermey, 1997, Bohlmeijer et al, 2003) were collected. Furthermore, the reference lists of retrieved studies were examined and studies that possibly met inclusion criteria were collected.

In order to be included in the meta-analysis, a study had to examine the effects of reminiscence or life-review. Furthermore, the study had to report pre-test and post-test data, use a control or comparison group, and had to use a measure of wellbeing or life-satisfaction. Sufficient data had to be reported for the calculation of standardized effect sizes.

4.2.2 Selected studies

Thirty studies were collected. Fifteen studies met the inclusion criteria. Selected characteristics of these studies are presented in Table 5. The studies were coded by two researchers on a number of methodological characteristics, including random assignment to conditions, data on drop-out rates, follow-up times, reliability and validity of the measures and intervention-type. To be coded as life-review the paper had to refer to evaluation and structure as elements of the intervention.

Table 5 Selected characteristics of studies examining the effects of reminiscence on Life-satisfaction and wellbeing

Study	*Target population*	*Conditions*	N	*%DO*	*RA*	*GRP/IND*	*SS*	*Meas.*	*%W*	*Age (M)*	*Outcome measures*
Life review											
Arkof, 2004	Community dwelling older women	1. LR 2. No treatment	18 18	- -	-	GRP	14 ss of 2 hrs	Pre post	100	70	SPWB
Davis, 2004	Patients with right hemisphere cerebral vascular accidents	1. LR 2. Current events	7 7	- -	+	IND	3 ss of 1 hr	Pre Post	43	68	LSI-Z
Fielden, 1990	Sheltered housing residents	1. LR 2. Current events	15 16	- -	+	GRP	9 ss of 1.5 hrs	Pre post	-	74.7	PGCM
Haight 1988, 1992	Homebound, disabled elderly, (Meals-on-Wheels)	1. LR 2. Friendly visit 3. No treatment	16 16 19	19 19 16	+	IND	6 ss of 1 hr	Pre post 1 yr	78	76	LSIA ABS
Haight, 1998	residents of nursing homes	1. LR 2. Friendly visit	104 97	27 27	+	IND	6 ss of 1 hr	Pre post 1 yr	69	79.6	LSIA ABS
Serrano, 2004	Clients of social services	1. LR 2. Care as usual	20 23	14 14	+	IND	4 ss of 1.5 hrs	Pre Post	84	77	LSIA
Weiss, 1994	Residents of long-term care-setting	1. LR 2. No treatment	20 8	30 -	+	GRP	8 ss of 1.5 hrs	Pre post 6 mn	-	-	LSES
Reminiscence											
Cook, 1991	nursing home residents	1. REM 2. Current events 3. No treatment	14 13 14	29 38 29	+	GRP	16 ss of 1 hr	Pre post	90	81.3	LSIA
Cook, 1997	Female residents of nursing homes	1. REM 2. Current events 3. No treatment	12 12 12	- - -	+	GRP	16 ss of 1 hr	Pre post	100	82.4	LSIA

Study	*Target population*	*Conditions*	N	*%DO*	*RA*	*GRP/IND*	*SS*	*Meas.*	*%W*	*Age (M)*	*Outcome measures*
Hanaoka, 2004	Residents of institutions and nursing homes	1. REM 2. Current events	42 38	5 5	+	GRP	8 ss of 1 hr	Pre, Post 3 mn	86	81,8	LSIA
Harp Scates 1986	Volunteers from a rural retired senior program	1. REM 2. Activity-group	17 17	16 16	+	GRP	6 ss of 1 hr	Pre Post	-	75.1	LSIA
Lai, 2004	Nursing home residents with dementia	1. REM 2. Current events 3. No treatment	36 35 30	17 17 13	+	IND	6 ss of 30 min.	Pre Post 6 wks	86	68	WIB
McMurdo, 1993	inhabitants of residential homes	1. REM 2. Exercise	29 20	10 25	-	GRP	28 ss of 45 min.	Pre Post	80	81	LSIA
Rattenbury, 1989	residents of nursing homes	1. REM 2. Current events 3. No treatment	8 8 8	- - -	+	GRP	8 ss of 30 min.	Pre Post	-	85	MUNSH
Serrano, 2004	Clients of social services	1. LR 2. Care as usual	20 23	14 14	+	IND	4 ss of 1.5 hrs	Pre Post	84	77	LSIA
Wang, 2004	Elderly residing in community care facilities and at home	1. REM 2. No treatment	48 46	12 17	+	IND	16 ss of 0.5 – 2 hrs	Pre Post	55.3	76	HPS

Abbreviations: Ss: number of sessions: DO: percentage of drop-out; RA: random assignment; GRP: group; IND: individual; Meas: measurements; REM: reminiscence; LR: life review (structured reminiscence); %W= percentage of women; Age(M)= medium age; ABS= Affect Balance Scale; HPS= Health Perception Scale; LSIA= Life Satisfaction Index A; LSI-Z= Life Satisfaction Index Z; LSES= Life Satisfaction in the Elderly Scale; MUNSH= Memorial University of Newfoundland Scale of Happiness; PGCM=Philadelphia Geriatric Center Morale Scale; SPWB=Scales of Psychological Well-Being, WIB=Well-being/Ill-being Scale.

In thirteen studies, subjects were randomly assigned to conditions. Most studies used a no-treatment control group. In eight studies the control-group was offered a placebo intervention (i.e. discussion about current topics or a friendly visit); in one study the control group consisted of people given care as usual. In three studies the drop-out rates were higher than 25 percent. In nine studies, a group format was used for the delivery of the intervention while the other six studies used an individual format. Life-review was used as the intervention in seven studies; the other eight studies used reminiscence as the intervention. In 80% of the studies the majority of the participants were women and the average age was 75 to 85 years. In nine studies the participants were living in nursing or residential homes. The instruments used most for measuring psychological well-being in the studies, included in this meta-analysis, are the Life Satisfaction Index-A or LSI-A (Neugarten et al. 1961) and the Affect Balance Scale or ABS (Bradburn, 1969). The ABS was developed in the 1960s in accordance with the theory that emotional well-being consists of both a positive and a negative effect and that these effects are not correlated with each other. On the positive side the ABS asks for example whether a respondent has felt proud in the last weeks after being complimented; on the negative side if the respondent has felt depressed or upset as a consequence of being criticized (Bradburn, 1969; Diener, 1984). Well-being depends on the relative presence of both effects. The LSI-A was developed on basis of the theory that psychological well-being can be operational zed as a global cognitive appraisal of the quality of one's life (Neugarten et. al, 1961). The LSI-A consists of 5 themes: regarding life as meaningful, taking pleasure in daily life, feeling success in achieving major life goals, holding a positive self-image and having an optimistic attitude (Neugarten et. al., 1961).

4.2.3 Methodology and calculation of effect sizes, d, from primary studies

In a meta-analysis the effects that are found in the primary studies are converted into a standardized metric effect size which is no longer placed on the original measurement scale and can therefore be compared with measures from other scales (Wolf, 1986; Glass, McGaw & Smith, 1981). Standardised effect sizes, d, are commonly calculated as: $d = (M1 - M0) / Sd0$; where, M1 and M0 are the means at post and pre-test and Sd0 is the pre-test standard deviation of measures of psychological wellbeing. The standardized effect sizes, d, show by how many standard units (z-scores) a group has progressed after treatment at t1 as compared with their mean baseline score at t0.

We were interested in obtaining the effect size of the experimental effect minus the effect (of spontaneous recovery) in the control group. Therefore, we calculated the standardised pre – post change score of the experimental group (dE) and did the same for the control group (dC). Then we calculated their difference, i.e. $\Delta(d) = dE - dC$. These incremental standardized effect sizes show by how many standard units the experimental group has been removed from the control group. An effect size of 0.5 thus indicates that the mean of the experimental group is half a standard deviation larger than the mean of the control group. Lipsey & Wilson (1993) have shown that from a clinical perspective an effect size of .56 to 1.2 can be interpreted as a large effect, while effect sizes of .33 to .55 are moderate, and effect sizes of 0 to .32 are small.

Among the primary studies two types of control conditions were mostly used: no specific intervention but unrestricted access to care-as-usual (CAU) and placebo-interventions, e.g. friendly visits and current events groups (Placebo). In the placebo-interventions conversations take place but only on topics concerning

the here and now. These interventions control for attention. When both types of control groups were used in one study, weighted mean effect sizes were calculated for both control groups separately and then pooled in the overall meta-analysis. In addition meta-analyses were conducted for reminiscence versus CAU and of reminiscence versus placebo control separately.

In most studies means and standard deviations were reported allowing the calculation of d. For the other studies test statistics ($\chi 2$, T, F) or correlation coefficients, r, were converted into the d statistic using the equations reported by Wolf (1986).

4.2.4 Analysis

Basically, meta-analysis amounts to pooling individual ds and obtaining a best overall estimate of the treatment effect, within its 95% confidence interval (95% CI). The analysis was conducted with the computer program Meta-Analysis, version 5.3 (Schwarzer, 1989). This program is based on the statistical techniques outlined by Hedges and Olkin (1985). We made use of the random effects model. In this model it is not assumed that each primary study is a replication of the other primary studies, and the outcomes of the random effects model are conservative in that their 95% CI are often broad, thus reducing the likelihood of type-II error.

For the meta-analysis the random effects model was used, because under this model it is realistically assumed that the variance in the outcomes of the primary studies mirrors both true variance and random error. The model decomposes the observed variance into both parts. The results that are presented in tables 2 and 3 are not corrected for the reliability (Cronbachs α, or test-retest reliability r of the outcome measures as used in the primary studies), because this type of correction is rarely applied, and we wanted to obtain outcomes that are comparable with other studies.

All analyses included a homogeneity test to test the idea that individual effect sizes systematically co-vary with the characteristics of the studies. For the same reason the amount of unexplained variance that was not attributable to sample error was assessed. In addition a new, more precise, measure of the consistency between trials (I^2) was measured (Higgins et. al, 2003). A measure of the consistency of results of different studies included in a meta-analysis helps to determine the generalisability of the findings. I^2 is calculated as $100\% \times (Q-df)Q$ where Q is Cochran's heterogeneity statistic and df the degrees of freedom (Higgins et al, 2003). A score between 0 and 25 can be considered as an indication of high consistency, a score between 25 and 50 as moderate and a score higher than 50 as low (Higgins et al, 2003).

A population effect size can only be interpreted reliably if the underlying data set is sufficiently homogeneous (Schwarzer, 1989). At least 75% of the observed variance should be explained by sampling error (Hunter et al., 1982) and the chi-square test for homogeneity should not become significant (Schwarzer, 1989). If the variance that is caused by random sample error is below 75%, an outlier analysis is performed with the same computer program Meta-Analysis, version 5.3 (Schwarzer, 1989). If no outliers are found a systematic approach is used. To identify outliers, meta-analyses are conducted, each time leaving out one study, and then observing the percentage of variance which is accounted for by sample error alone. The study that yields the largest increase of amount of variance is excluded. This procedure is repeated until the minimum level of 75% is reached and the chi-square test for homogeneity is not significant.

In addition, contrasts of subgroups of studies were formed on the basis of characteristics of the intervention and participants. When the 95% confidence intervals are not overlapping, the contrast is considered as significant. Furthermore, Orwin's Fail/Safe N was calculated. This number indicates how many (hypothetical) studies with an effect size of zero should be found and included in the meta-analysis in order to reduce the observed effect size to a smaller value of, say, 0.20. A large Fail/Safe N indicates that the results are robust and can be safely generalised.

4.3 Results

The overall mean effect size for all studies (17 contrast groups) was 0.54, with a 95% confidence interval of 0.33 – 0.75 (see Table 6). This effect is significant from zero (Z=4.98, p<0.001) and represents a medium effect. The Q-test for the 0-hypothesis of homogeneity across effect sizes had to be rejected, indicating the presence of as yet unexplained variance that might be attributable to the systematic effects of covariates. 65% of the variance is caused by random sample error, which leaves room for a remaining 35% which may systematically co-vary with (unknown) covariates. The number of studies with a zero-effect that should be found in order to reduce the effect size to 0.20 is 29 ('Orwin's fail safe N').

Table 6 Results of meta-analyses examining the effects of reminiscence on life-satisfaction and wellbeing

	N_{ES}	*N*	*D*	*95% CI*	*Q*	*%SE*	I^2
all studies	17	775	0.54	0.33 – 0.75	32.20**	65.0	50
reminiscence versus no-treatment	10	367	0.57	0.35 – 0.78	10.51	100	14
reminiscence versus placebo-interventions	13	574	0.60	0.24 – 0.97	31.99**	36.4	63
all studies, outliers excluded	14	487	0.68	0.46 – 0.87	19.24	90.1	32

***: P < 0.001; **: P< 0.01; *: P< 0.05

Abbreviations: NES: Number of effect sizes; N: number of subjects in the studies; D= overall effect size; 95% CI= 95% Confidence Intervals; Q= Homogeneity Q; %SE: percentage of the variance accounted for by random sample error; I= measure of consistency between studies.

The overall mean effect size for reminiscence versus no treatment control groups was 0.57 (95%CI 0.35-0.78). The overall mean effect size for reminiscence versus placebo interventions was 0.60 (95%CI 0.24-0.97). In order to find a more homogeneous group of studies we used a systematic approach. Seventeen meta-analysis were conducted, each time leaving out one study, and each time we observed the percentage of variance which was accounted for by sample error alone. Leaving out Haight's 1998 and Hanaoka's 2004 studies yielded the largest increase of amount of variance accounted for by sample error alone (from 65% to 90%). In addition the Q-test for the 0-hypothesis of homogeneity across effect sizes could not be rejected, suggesting a homogenous sample of studies. The removal of the two studies resulted in a meta-analysis of 13 studies and 14 contrast groups. An overall mean effect size of 0.68 was found (95% CI: 0.46 – 0.87; Z = 6.39,

p<0.001). Still, 33 studies with a zero-effect would be needed to reduce the effect size to 0.20 ('Orwin's fail safe N').

We conducted several more series of meta-analyses, for selections of studies, including characteristics of interventions and characteristics of participants. The results are summarized in Table 7. Life-review was found to have significant larger effects on psychological well-being than reminiscence (d = 1.04 ; 95%CI 0.74-1.34 versus d = 0.40 ; 95% CI 0.17-0.64). Other intervention characteristics were not found to moderate effects of reminiscence. As to characteristics of participants community dwelling adults were found to profit more from reminiscence (d=1.04; 95% CI 0.72-1.37) than adults living in nursing homes or residential care institutes (d = 0.44; 95% CI 0.22-0.67). Reminiscence is equally effective for adults above 80 years and younger adults.

Insufficient data were available to calculate long-term effects of the interventions.

4.4 Discussion

Psychological well-being of older adults may be challenged by age-graded losses (e.g. approaching death, death of spouses and friends, chronic diseases, autonomy) and by disappointment with and bitterness about the past. Reminiscence has been claimed to help older adults to adapt to and cope with difficult life-circumstances and developmental tasks in late life. (Coleman, 1992; Butler, 1974; Wong & Watt, 1991; Wong, 1989). Reminiscence may help older adults by focusing on former successful coping experiences (Wong, 1995), by reinforcing a sense of continuity (Parker, 1999), by finding meaning and coherence in one's life (Birren, 1987, Watt & Cappeliez, 2000) and by promoting reconciliation (Coleman, 1999) and by resolving hitherto unresolved conflicts (Haight, 1988, Butler, 1974). Many studies have tested the effects of reminiscence interventions on psychological well-being in older adults. This meta-analysis was conducted to assess the effectiveness of reminiscence on psychological well-being across different target groups and treatment modalities. The results of this meta-analysis suggest that, on average, reminiscence interventions have moderate effects on life-satisfaction and emotional well-being of older adults. The mean effect size that was found (0.54) can be considered as moderate from a clinical perspective, based on the categories suggested by Lipsey & Wilson (1993). The effect size was somewhat larger (0.68) after excluding two studies in order to create a homogenous cluster of studies. The effect-size of 0.54 that was found in this meta-analysis is comparable to the effect size of 0.45 that was found in a meta-analysis by Pinquart & Sörenson (2001). The small difference may be explained by the fact that we were able to include the results of some recent studies.

We further studied the influence of moderator variables and found that life-review yielded significant larger effects (1.04) than simple reminiscence (0.40). This is an important finding that lends weight to the necessity of making a distinction between the two types of reminiscence (Webster & Haight, 1995; Haight et al., 1995; Webster & Young, 1988; Watt & Cappeliez, 2000). In simple reminiscence people are given general cues about their past to stimulate associations with pleasant memories and to exchange these memories (Haight & Dias, 1992). Life-review is a more structured variant. It focuses systematically on all the major life-events, decisions and turning-points in one's life, both positive and negative. Participants are actively encouraged to evaluate the significance and impact of these events and to resolve conflicts from their past. After reviewing the different life-events separately the focus is on synthesizing the positive and negative experiences into a co-

herent life-story with themes. So life-review is more intense and actively tries to influence the above-mentioned working ingredients of reminiscence. Because conflicts and negative life-events are actively discussed, it may first enhance feelings of sadness and regret before reconciliation and self-acceptance are possible which in the end may have a larger effect on psychological well-being. That life-review has larger effects on psychological well-being than plain reminiscence can also be explained on the basis of recent population studies. It was found that bitterness revival and boredom reduction correlate with higher levels of psychological distress and lower levels of life-satisfaction (McCully et al., 2001; Cappeliez et al., 2005). Integrative reminiscence (focusing on evaluation and synthesis) and instrumental reminiscence (focusing on former problem solving) were found to correlate with successful aging (Wong & Watt, 1991). These findings corroborate a comprehensive model of the functions of reminiscence that was developed by Cappeliez et al. (2005). On the basis of research on autobiographical memories and reminiscence the model stipulates that reminiscence serves three main functions: self-continuity, guidance and emotional regulation. Within these domains both positive and negative types of reminiscence can be placed. In theory reminiscence may promote some positive functions of reminiscence but life-review will focus on negative functions of reminiscence as well and try to transform them to more positive ones. If for example a participant in a life-review intervention tells autobiographical stories that express feelings of bitterness a counselor may be able to focus on underlying assumptions and challenge them or focus on memories that contradict these stories (Watt & Cappeliez, 2000; Payne, 2000). Then the participant will be encouraged to reframe his or her experiences and develop an alternative, more positive life-story accordingly. Especially for people with high levels of psychological distress life-review, caused by negative reminiscence functions life-review is more effective than plain reminiscence. For these participants it may me useful to integrate life-review with other therapeutic approaches like cognitive therapy (Watt & Cappeliez, 2000) or narrative therapy (Bohlmeijer et al. submitted).

Other intervention characteristics were not found to moderate effects on psychological well-being. Apparently, if a process of life-review is brought about, reminiscence can have substantial effects on life-satisfaction and emotional well-being on a short term. And individual and group formats seem to be equally effective. It was found that reminiscence is more effective for community dwelling people than for participants from nursing or residential homes. This was in contrast with the meta-analysis by Pinquart & Sörenson (2001) who found that psychosocial interventions were more effective for nursing home residents. But this effect was mainly caused by control-enhancing interventions. The differential effects that was found in our study may be explained by the fact that the studies with participants from nursing homes made more use of simple reminiscence interventions which are seemingly less effective. In addition, in one study (Lai, 2004) participants suffered from dementia. For older adults with dementia reminiscence may be very worthwhile but restricted effects on psychological well-being can be expected (Woods et al., 2005). Therefore we caution the reader not to draw too firm conclusions from this study. At last we found that 'younger old adults' did not profit more from reminiscence than adults at a really advanced age. This finding is in contrast with former findings by Vermey & Engels (1997) and Pinquart & Sörenson (2001). An explanation could be that in these former meta-analysis all kind of interventions were included. It may be that reminiscence is more suitable for adults at a really advanced age, as it joins up with a common, recognizable activity, than other therapeutic approaches, e.g. cognitive therapy (Schuurmans, 2006).

The present meta-analysis has several important limitations. First, the total number of effect sizes was relatively small and the homogeneous clusters are even smaller. Second, the overall quality of the included studies, some studies excepted, is not very high. Many studies used rather small groups, the intervention is not always clearly defined, some studies had to deal with a high drop-out rate, the validity of data analysis methods is not always clear (Hwang et al., 2003; Thornton and Brotchie, 1987). A meta-analysis cannot rise above the quality levels of the individual studies. Third, most studies did not measure long-term effects, so this meta-analysis gives no insight into the long term effects of reminiscence and life-review. Fourth, although the distinction between reminiscence and life-review is crucial, even the label of life-review covers a large variety of interventions and these interventions can have very different theoretical underpinnings. For example the intervention used by Haight et al., (1988) is based on the work of Butler (1963). Serrano & Gatz (2004) developed their intervention on the basis of recent research into autobiographical memories of depressed people. Watt & Cappeliez (2000) developed their protocol on the basis of cognitive theories of depression. And Arkoff et al. (2004) developed a protocol in which seven sessions focused on the past and the present and seven sessions focused on the present and the future. This protocol was inspired by Carlsen (1988) and her therapy with older adults. In addition reminiscence and life review were applied in very different settings.

Despite these limitations this meta-analysis suggests that reminiscence and more so life-review is a worthwhile intervention for enhancing psychological well-being in older adults. The effect sizes of life-review are comparable to those of control-enhancing interventions and cognitive-behavioral therapy (Pinquart & Sörenson, 2001). At the same time, due to the before mentioned limitations, further research is necessary. We want to end this paper by suggesting some directions. A first important step is that protocols for life-review interventions have to be worked out well. They have to be based on recent empirical research into the different functions of reminiscence and autobiographical memory. Protocols need to specify how positive mediating processes (e.g. meaning in life, mastery, coherence and integration) and negative mediating processes (e.g. bitterness, powerlessness) are influenced and what skills are needed by counsellors. Promising are life-review interventions that combine life-review with other therapeutic approaches (Watt & Cappeliez, 2000; Bohlmeijer et al, 2005). Secondly it may be useful to focus on one or two settings and target-groups as a first step to further establish the evidence base of life-review and to replicate studies in different countries. Until this date no replication of studies on the effects of reminiscence and life review have taken place (Bohlmeijer et al., submitted). Stronger international collaboration could be helpful in this respect. And it might be useful to have a framework of reminiscence to guide this international research collaboration as has been suggested recently by Hwang et al. (2003).

Many older adults suffer from reduced psychological well-being and reminiscence and life-review have potentially a lot to offer to them. But a greater research effort is needed to provide a sound scientific underpinning of these promising approaches.

Table 7 Results of meta-analyses of reminiscence across modalities

	N_{ES}	*N*	*D*	*95% CI*		*Q*	I^2
Intervention characteristics							
reminiscence	7	291	0.40	0.17-0.64		4.21	0
life-review	7	196	1.04	0.74-1.34		4.78	0
group	8	232	0.67	0.40-0.94		3.63	0
individual	6	261	0.60	0.35-0.86		16.09**	69
< 9 sessions	9	286	0.70	0.46-0.95		13.43	41
≥ 9 sessions	5	201	0.55	0.27-0.84		5.71	30
Characteristics of participants							
nursing home residents or residential care	8	322	0.44	0.22-0.67		6.90	0
others	6	171	1.04	0.72-1.37	3.75	0	
80 years or older	4	103	0.56	0.15-0.96		1.73	0
younger than 80 years	10	390	0.63	0.43-0.84		17.29*	48

***: P < 0.001; **: P< 0.01; *: P< 0.05

Abbreviations: NES: Number of effect sizes; N: number of subjects in the studies; D=overall effect size ; 95% CI= 95% Confidence Intervals; Q= Homogeneity Q; I= measure of consistency between studies.

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5 Creative reminiscence as an early intervention for depression: results of a pilot project

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Abstract

Reminiscence may be another method to improve the detection and treatment of depressed elderly, as it is an attractive, non-stigmatising, and easily administered intervention. In this type of intervention, elderly are asked to systematically review their lives on the basis of questions about their past. Resolving conflicts from the past and making up the balance of one's life are important goals. Life-review may be further enhanced by the creative expression of memories in stories, poems or drawings. In this way people are encouraged to create and discover metaphors, images and stories that symbolically represent the subjective and inner meaning of their lives. In this article, a new intervention which combines reminiscence and creative expression aimed at early treatment of depression, is described. The results of a first pilot project show that the intervention Searching for the meaning in life may generate medium-sized effects in reducing depressive symptoms in women, but not in men. Additionally, it appears to have medium effectiveness in improving mastery in both men and women. Several possible ways to enhance the effectiveness of the intervention are described.

5.1 Introduction

Reminiscence may be a good method to improve the detection and treatment of depressed elderly, as it is an attractive, non-stigmatising, and easy to administer intervention (Bohlmeijer et al. 2003). In this type of intervention elderly are asked to systematically review their lives on the basis of questions about their past (Watt & Cappeliez, 2000, Haight, 1988). Resolving conflicts from the past and making up the balance of one's life are important goals (Butler, 1963). Life-review may be further enhanced by creative expression of memories in stories, poems or drawings. In this way people are encouraged to create and discover metaphors, images and stories that symbolically represent the subjective and inner meaning of their lives (Randall, 2001; Mazza, 1988; Moore, 2000). In this article, a new intervention combining reminiscence and creative expression aimed at early treatment of depression, is described. First we shortly introduce reminiscence. Next, the reasons for developing the new program and its content are described. Subsequently, the results of a first pilot-study are given. To conclude, directions for the future are discussed. Butler (1963) was the first to note the positive, adaptational aspects of reminiscence. He considered reminiscence to be a naturally occurring process of recalling the past, taking stock, reviewing and sometimes even resolving conflicts from the past and making up the balance of one's life (Butler, 1963). Successful reminiscence would lead to ego-integrity and unsuccessful reminiscence would lead to despair and depression (Erikson, 1956). Since then, reminiscence has been actively used in group-work and therapy with the elderly. It has been used with different goals, including the stimulation of cognitive functioning in demented elderly (Goldwasser et al, 1987), improving life satisfaction, quality of life, meaning in life (Haight, 1992; Cook, 1991), and as a method for early intervention among elderly with depressive symptoms or major depression (Fry, 1983; Stevens-Ratchford, 1993; Watt & Cappeliez, 2000). Examples of formats for reminiscence are life-review (Haight, 1998), integrative reminiscence therapy (Watt & Cappeliez, 2000) and guided autobiography (Birren and Deutchman, 1991; Birren and Birren, 1996).

5.2 The new intervention: Searching for the meaning in life

Recently, we developed a new type of reminiscence intervention. There were two reasons for developing this intervention. Many of the above-mentioned intervention types (i.e., life-review and guided autobiography) focus on broad themes like family history, accomplishments, and turning points. This requires that people have the ability review their life, to select the most important events, to summarize them and find a meaning in them. For some people this may be too complicated. In the new intervention, more focussed themes are selected and more guidance is given during the program. The second reason is that most reminiscence interventions are oral, and mainly challenge cognitive functions. (Watt & Cappeliez, 2000). However, non-verbal and creative expression may be an important approach in reminiscence, but this approach has not been explored in any great depth. The combination of reminiscence and creative expression can be of importance for two reasons. The first reason is that for some people, non-verbal methods are more appropriate for self-expression and are a good way to cope with experiences in their lives (Pizzi, 1997). The second reason is the consideration of the importance of symbols and metaphors in therapy (Pearce, 1996; Combs & Freedman, 1990). The meaning in life is not so much contained in the life events, but in the stories we create about our lives (Kenyon & Randall, 1997). According to narrative gerontology we are continuously 'composing a life' (Bateson, 1993). It is the knowledge that 'our life-

course is unique and that we are one of a kind, as rich and filled with meaning as any example of literary art' (Randall, 2001). Stories, poems, drawings, metaphors are important means to express the experience of authenticity and meaning of our life-stories that arise during the process of reminiscence. By using our imagination and focusing on images of our lives the symbolical dimensions of life are taken into account (Randall, 2001; Mazza, 1988; Moore, 2000). Looking for the meaning in life is an intervention, based on this approach to reminiscence.

5.3 Evaluation

The program was developed by the Trimbos Institute (which is the Netherlands Institute of Mental Health and Addiction) in cooperation with 6 community mental health services (Franssen & Bohlmeijer, 2003). It consists of twelve group sessions of 2.5 hours each. Each session focuses on one theme (for example: friendships, houses where you lived, turning points). Each session has a structure in which reminiscence, dialogue and creative expression alternate[3].

To evaluate the effects and feasibility of the new intervention, a simple one-group pre-post test design was used. A week before and after the intervention the participants were asked to complete questionnaires measuring depressive symptoms, mastery and meaning of life. This last issue is dealt with in another article (Westerhof et. al, 2004). After the intervention the participants were also asked to complete a questionnaire evaluating their opinion about the program. Our main research question was: are depressive symptoms significantly reduced and is a sense of mastery increased?

Two questionnaires measuring depressive symptoms and mastery were used. The centre of epidemiological studies on depression scale (CES-D, Bouma, Ranchor, Sanderman & van Sonderen, 1995), and the Pearlin Mastery Scale (PMS; Pearlin & Schooler, 1978) which consists of 5 items about perceived control over one's own life. Analyses were conducted on both an intention-to-treat basis.

5.4 Results

Seventy-nine elderly participated in 8 different courses. The mean age of the participants was 66 years. 70% were female. Most were married (37.2%), divorced (24.4%), or widowed (26.9%). The majority lived independently (55.7%). Of the participating elderly, 20.3% had completed elementary school or lower vocational training, 32.9% middle vocational training, and 32.9% higher vocational or academic.

The central finding of this study was that the participants improved on the depression scale in a significant way ($T=3.86$, $p<0.0001$): at pretest (T0) their average score on the CES-D was 23.8 (95%CI 21.6 – 26.0), at posttest (T1) the mean score was 20.4 (95%CI 18.4 – 22.5), an average reduction of 3.4 points. Participants also showed significant improvement on the Mastery scale ($T = 5.71$, $p < 0.0001$). At T0 the mean score was 12.8 (95%CI 11.9-13.7) and this became 14.3 (95%CI 13.4-15.2) at T1. It is of note that after the intervention, the mastery scores still fall well below the mean score for elderly in the general population, which is 17.4 (Sd = 3.3) in the Netherlands (Deeg et al., 1998). This indicates that there is room for further improvement. We used age, gender, education, master and depressive symptoms at T0 as predictors and found that only depression level at baseline had prognostic value (OR = 1.09, SE = 0.05, z = 2.08, p=0.038), im-

[3] For more information about the program please contact the first author.

plying that people with greater symptom severity benefit more from this intervention.

5.5 Discussion

In this article a new reminiscence intervention aimed at elderly with moderate depressive symptoms was introduced and the results of a very first pilot-study were presented. The focus of the project was on innovation and trying out the new intervention and not on researching the effectiveness of the program. For this reason we did not include a control group, which is a major limitation. So at the moment we can only offer some tentative conclusions en discussion points.
It appears that the target-group was successfully reached. The general mastery of the respondents was much lower than the average elderly population (12.8 vs. 17.4; Deeg e.a. 1998) and the average number of depressive symptoms was considerably higher than the average population (23.8 vs. 7.5; Deeg ea. 1998).

A pre-post measurement on relevant outcomes was conducted as part of the pilot project. The results indicate that the reduction of depressive symptoms was not as large as may be expected from reminiscence and life-review programs (Bohlmeijer et. al, 2003). There are several possible explanations. (1) Many participants mentioned during the program that they couldn't see the relationship between the program and depression. As to the structure of the sessions, there was no time to discuss experiences and thoughts that were evoked by reminiscence. This experienced lack of linkage between the activities in the program and coping with depression may have subdued the effects. (2) Although evaluation and review are part of the program, their role in the intervention is not explicit. Many authors claim evaluation and review are the most effective ingredients of reminiscence (Haight et al. 1998; Watt, 2001). Adding evaluative questions about the meaning of past experiences to the program and to discuss the answers could help to boost the process of integration and increase the effectiveness of the intervention. By explicitly introducing evaluation and review in the course, larger effects may be expected.

About one third of the elderly showed large reduction of depressive symptoms (ES > 0.5). An intriguing question remains if there are any patient characteristics that can predict who will benefit most from this approach and who will not, or to a lesser extent. Only baseline level of depression had prognostic value, but nevertheless, we feel that this is a research area that warrants further research.

In the near future we will adapt the program according to the above-mentioned recommendations and further specify the theoretical basis of the intervention and the factors that mediate effects on depression. Then a randomised clinical trial with multiple measurements is in order. This may also lead to greater understanding of who precisely benefits from this intervention and who does not.

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6 In search of meaning: A pilot evaluation of a reminiscence program for older persons

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Abstract

A pilot evaluation is reported of a reminiscence program aimed at the increase of personal meaning. 57 older persons filled out a sentence completion questionnaire measuring personal meaning and a depression scale before and after the program. In comparison to a group from a representative survey which was matched on life contexts, the personal meaning profile of the intervention group was more negative and more focused on the self. Hence, a group with impoverished meaning was participating in the program. After the intervention the personal meaning profile was more positive, in particular with regard to self-evaluations and evaluations of social relations. The group which improved most on depression also improved most on personal meaning. It is concluded that further research on the program is warranted.

6.1 Introduction

Personal meaning becomes increasingly important in contemporary society, where individuals are more and more responsible for guiding their own life course, also in the later phases of life. However, the search for meaning may be particularly difficult for the elderly. Age-graded losses in social relations, social roles, and psychophysical functioning are a strong challenge to restore meaning in life. The awareness of finitude of life may also confront people with the meaningfulness of the life they have lived. Furthermore, the search for meaning in old age may be impaired by society's failure to provide meaningful roles and tasks for older persons (Riley & Riley, 1994).

Although the role of personal meaning in therapeutic interventions has been documented (e.g., Hermans & Hermans-Janssen, 1995; Wong, 1998a), no preventive interventions aimed at the increase of personal meaning have been developed for older persons, at least not in the Netherlands. The present article introduces such an intervention and describes a pilot evaluation on changes in personal meaning and depressive symptoms. We will first discuss theoretical insights in personal meaning in later life and its relation to depressive symptoms. We will than provide a short description of the intervention and describe our study and its results.

6.1.1 Personal meaning

There are two basic meanings of the term 'personal meaning' (Dittmann-Kohli & Westerhof, 2000). The first refers to significations and interpretations of one's own life. This cognitive component of personal meaning includes beliefs about and evaluations of different aspects of the own person and his or her life. It involves the search for a sense of coherence in the stream of sensations and experiences encountered in daily life, as well as a desire to maintain positive beliefs. A second meaning of the term refers to the goals and motives that one has with respect to one's own person and life. This motivational component includes the search for purpose in life as well as the need to have realistic intentions and goals. The term 'meaning of life' can thus be understood as the interpretation of what it means to live one's life on the one hand, and the goals and purposes one has in life on the other hand.

The cognitive and motivational aspects of the search for meaning generally refer to the experience of more or less meaning in life. Another important distinction is made with regard to the different sources of meaning. A number of different classifications of sources of meaning can be found in the literature (Dittmann-Kohli, 1995; Ebersole & DePaola, 1987; Präger, Savaya & Bar-Tur, 2000; O'Connor & Chamberlain, 1996; Reker, 2000; Westerhof, Dittmann-Kohli & Bode, 2003; Wong, 1998b). Generally these sources refer to self (character traits, personal growth and achievement, self-acceptance, pleasure, fulfillment, attainment of tranquility/peace), social relations (relatedness, sense of connectedness, intimacy, and quality relations, altruism, service, and having a legacy, as well as communal consciousness and social/political causes), physical integrity (physical functioning, health and illness, appearance), activities (work, productive and creative activities, as well as leisure and hedonistic activities,), and material needs (material possessions and values, financial security, obtaining and meeting basic needs). Besides these five more specific elemental sources of meaning, a holistic view of life consisting of general values and beliefs can be distinguished as an important aspect of personal meaning (enduring values or ideals, judgments of life as a whole, human-

istic concerns, religion, traditions and culture, self-transcendence, and existential themes such as finitude and aging).

Reker and Wong (1988) hypothesized that personal meaning which is characterized by a positive and coherent interpretation as well as a realistic purpose will result in positive affective states. From this perspective persons with depressive symptoms are characterized by impoverished meaning in the sense of a negative or incoherent frame of mind and a lack of purpose in life. A number of gerontological studies has documented that impairments in personal meaning are indeed related to depressive symptoms in later life (Garcia-Pintos, 1988; Reker, 1997; Van Ranst & Marcoen, 2000; Van Selm & Dittmann-Kohli, 1998; Wong, 1998b).

6.1.2 The intervention program

A new intervention program was developed to stimulate personal meaning and to decrease depressive symptoms, called 'Looking for meaning in life'. Although a number of interventions on depression exists already in the Netherlands (e.g., the 'Coping with Depression' program, Cuijpers 1998), the present project is directed to broader groups of elderly in a non-stigmatizing, easy to use, yet intensive way. The program consists of twelve sessions of 2,5 hours each (Franssen & Bohlmeijer, 2003; Bohlmeijer et al., submitted). Each session focuses on one theme: own name, first memories and early scents, childhood houses, norms and values, hands (and working career), photographs (that tell a story of important people or events in your life), friendship, life-span and turning points, aging, meaning of life and spirituality, longing (or the future), and identity (or self portrait). These themes address cognitive and motivational processes as well as the different sources of meaning in life. The first four sessions focus on youth, the second four sessions on adulthood and the last four sessions are about the present and the future. The program evolves from smaller and more concrete themes to broader themes that leave more room for evaluation and review.

In stimulating the search for meaning, one's own past provides a rich base for reformulating cognitive interpretations and motivational directions (Beike & Niedenthal, 1998). Therefore, the program is based on theories on reminiscence and life review (Haight & Webster, 1995). Meta-analyses showed moderate to strong effects in reducing depression, comparing reminiscence groups to control groups (Scogin & McElreath, 1994; Pinquart & Sörensen, 2001; Bohlmeijer et al., 2002). The present intervention resulted in a moderate decrease in depressive symptoms (Bohlmeijer et al., submitted). In this paper the results on personal meaning and its relation to depressive symptoms are described.

6.1.3 Research questions

A pilot study was carried out to study the potential effects of the program on meaning in life. The following research questions were asked:

1. How can we characterize the participants in the intervention in terms of personal meaning in comparison to a group with comparable life contexts that was part of a representative survey in the Netherlands?
2. Which changes in personal meaning are found when comparing the participants before and after the intervention?
3. How does the personal meaning of individuals who improve more in terms of depressive symptoms differ from the personal meaning of those who do improve less?

6.2 Methods

6.2.1 Intervention group

A pilot project was carried out in 2003 in eight community mental health centers. 79 participants filled out the questionnaire before the intervention (T0) and 57 participants also cooperated directly after the intervention (T1). The persons who did not complete the questionnaire at T1 did not differ significantly from those who did on age, gender, marital status, occupational status, depressive symptoms or positive meaning at T0. We will therefore only analyze the data of the fifty-seven persons who cooperated at both measurement points.
The mean age of the participants was 66.0 years, with a range from 50 to 81 years. 70.2% of the participants were female. 20.0% had less than 11 years education, 52.7% between 11 and 14 years and 27.3% more than 14 years. Most of them were married (39.3%), divorced (28.6%) or widowed (26.8%). 38.6% were retired, 24.6% were homemakers, 21.1% were disability pensioners and only 3.5% were working.

6.2.2 Comparison group:

To answer the first research question data from the Dutch Aging Survey were used (Steverink, Westerhof, Bode & Dittmann-Kohli, 2001). The purpose of the Dutch Aging Survey is to study the life contexts, personal meaning and well-being in the present and future generation of Dutch elderly (40-85 years). The participants (N=948) were identified through a random probability sampling of Dutch municipalities. The sample was stratified according to age groups (40-54; 55-69; 70-85 years), gender, and area of residence. Rate of participation was 44% (age 40-54: 48%, age 55-69: 48%, age 70-85: 37%; no significant gender differences in response rate). All subjects lived independently at home. For the purpose of this article fifty-seven respondents were matched with the fifty-seven participants of the pilot study on age, gender, educational level, marital status and employment status.

6.2.3 Instruments

The SELE-instrument was used to assess personal meaning in the Intervention and Comparison group (Westerhof, G. J., Dittman-Kohli, F., & Thissen, T., 2001; Dittman-Kohli, F. & Westerhof, G. J., 2000) The SELE-instrument is a sentence completion questionnaire consisting of 28 sentence stems which respondents are asked to complete by expressing what they considered to be true and important about themselves. Sentence stems are worded either positively, negatively, or neutrally. They prompt cognitive interpretations of self and life (e.g. "I am proud that…", "My weaknesses are…", "When I think about myself…") and motivational possibilities (e.g. "I intend to…", "I fear that…", "In the next few years…").

The CES-D (Centre of Epidemiological Studies Depression scale) was used to measure depressive symptoms in the Intervention group (Bouma, Ranchor, Sanderman & van Sonderen, 1995). A sumscore, ranging from 0 to 60, is computed across the 20 items to assess the level of depressive symptoms. The mean score at T0 was 23.4 (sd=10.9) and at T1 it was 18.8 (sd=10.6). At both measurement points this was above the cut-off point of 17 and higher for possible cases (for a more complete analysis of the depression data see Bohlmeijer et al., submitted). We calculated the difference between the CES-D score before and after the inter-

vention and split the group in tertiles. The upper tertile is considered the group with Large Improvement (i.e., those who improved by 6 points or more), the middle tertile the group with Small Improvement (i.e., those who improved 1 to 5 points) and the lower tertile the group with No Improvement (i.e., those whose CES-D score did not change or was higher after than before the intervention).

6.2.4 Analyses

A coding scheme was used to categorize the sentence completions on the SELE-instrument. Six codes were used to categorize the sources of meaning (self, social relations, physical integrity, activities, life in general, residual) and two codes were used to categorize the evaluative direction of the sentence completions (positive or negative). As the material source of meaning was hardly inexistent in this study, it was coded as residual. See Table 2 for examples of the coding. The intercoder reliability of this coding scheme was kappa=.83 for the sources of meaning and kappa=.89 for the evaluative dimension. As an overall measure of meaning in life, the number of positive sentence completions was computed for each person. In previous studies it was found that this results in a valid indicator of personal meaning which is related to depression, sense of coherence, and subjective well-being (Van Selm & Dittmann-Kohli, 1998; Westerhof, Thissen, Dittmann-Kohli & Stevens, submitted). Furthermore, for each of the five meaning sources a variable was computed how many positive sentence completions belonged to this source. Similarly, five variables were computed indicating how many negative sentence completions belonged to this source.

To answer the first research question the mean scores for the evaluations of the five sources of meaning were computed for the participants in the Intervention group at T0 and for the Comparison group (see Table 1, Columns 1-4). As the dependent variables were derived from the same instrument we used multivariate analyses of variance with the ten scores for positive and negative evaluations of each of the five sources as repeated measures. The two groups (Intervention versus Comparison) were entered as a between-subjects variable. Two within-subjects contrasts were built in the dependent variables between the five sources of meaning (Sources contrast), and between positive and negative evaluations (Evaluation contrast). To further assess the differences between the groups we carried out t-tests for each of the ten variables separately.

To answer the second and third question the mean scores for the positive and negative evaluations of the five sources of meaning were computed before and after the intervention (see Table 1, Columns 3-6). We carried out a second multivariate analysis with repeated measures to test the significance of the differences. The three tertile groups of improvement in depressive symptoms were entered as a between-subjects variable. The scores for the number of positive answers on the five sources of meaning at t0, the scores for the number of negative answers on the five sources at t0, and the same scores at t1 were entered as within-subjects dependent variables. Three within-subjects contrasts were built in the dependent variables: the contrasts between the five sources of meaning (Sources contrast), the contrast between positive and negative evaluations (Evaluation contrast), and the contrast before and after the intervention (Intervention contrast). Paired t-tests were carried out for the intervention group as a whole as well as for the three tertile groups of improvement in depressive symptoms for each of the ten dependent variables separately to further assess the differences before and after the intervention.

6.3 Results

To answer the first question we compared the participants of the Intervention study at T0 with the matched Comparison group from the Dutch Aging Survey (see Table 8, Columns 1-4). In the corresponding MANOVA it was found that the between subjects effect is significant ($F_{1,112}=14.9$; $p<.001$). This finding means that more sentence completion were coded as residual in the comparison group. Furthermore, the within-subjects contrasts of Evaluation ($F_{4,448}=41.3$; $p<.001$) and Sources ($F_{1,112}=65.9$; $p<.001$) as well their interaction ($F_{4,448}=23.8$; $p<.001$) were significant. These findings imply that the pattern of positive and negative evaluations differs across the five sources. Of particular interest was the finding that significant interactions existed between Group and Evaluation ($F_{1,112}=53.5$; $p<.001$), between Group and Sources ($F_{4,448}=19.1$; $p<.001$) as well as between Group, Evaluation, and Sources ($F_{4,448}=2.7$; $p<.05$). The Intervention group focused on different sources than the Comparison group and evaluated these sources in different ways. Further t-tests showed that there were significant differences for positive evaluations of self ($t_{112}=-2.4$; $p<.05$), negative evaluations of self ($t_{112}=-7.6$; $p<.001$), as well as for negative evaluations of social relations ($t_{112}=-2.2$; $p<.05$). These were all found more often in the Intervention group. Positive evaluations of physical integrity ($t_{112}=3.5$; $p<.001$) and general positive evaluations ($t_{112}=6.4$; $p<.001$) were found more often in the comparison group.

Table 8 Mean scores of evaluations of sources of meaning for the matched Comparison group from the Dutch Aging Survey, Intervention group at T0 and Intervention group at T1

	Comparison		Intervention at T0		Intervention at T1	
	positive	negative	positive	negative	positive	negative
Self	4,4	2,2	5,5	5,1	6,0	4,5
Social relations	2,6	3,0	2,9	3,8	2,9	2,9
Physical integrity	2,1	2,0	1,1	2,3	1,0	2,5
Activities	2,0	0,7	1,5	0,6	1,5	0,8
General	3,0	0,9	1,2	0,8	1,1	0,9
Total	14,0	8,9	12,2	12,5	12,5	11,5

The Intervention group was overall more negative than the Comparison group, but in particular with regard to the sources of self and social relations. The Comparison group was overall more positive, but in particular about their physical integrity and general life evaluations. Interestingly, the Intervention group was more positive about self. Yet, positive and negative evaluations in this domain balanced each other in the Intervention group ($x=5.5$ resp. 5.1), whereas the Comparison group mentioned psychological functioning about twice as often in a positive rather than negative way ($x=4.4$ resp. 2.2).

To answer the second and third question we carried out a MANOVA with the three Improvement groups as between-subjects variable and Sources, Evaluation and Intervention as within-subjects contrasts. The corresponding mean scores are

presented in Table 8 (Columns 4-6). The significant differences by Improvement Group are presented in Figures 1 and 2.

For research question 2, the interesting findings of the MANOVA concern the contrasts and interactions involving the Intervention effect. The main effect of Intervention was marginally significant (F1,53=3.9; p=.055). The number of sentence completions coded as the five sources was somewhat higher before than after the intervention. There was a significant interaction effect of Intervention by Evaluation ($F_{1,53}$=7.3; p<.01). The number of positive sentence completions was higher after the intervention, whereas the number of negative sentence completions was lower after the intervention. The standardized effect of the difference in positive meaning indicates a medium large effect (d=0.50).

There was no significant interaction between Intervention and Sources of meaning ($F_{1,212}$=1.0; p<.05). Hence, no differences existed in the focus on each of the five sources before and after the intervention. Last, there was a significant interaction for Intervention by Evaluation by Sources ($F_{4,212}$=20.1; p<.001). The evaluation of the different sources of meaning differed before and after the reminiscence program. Paired t-tests for the evaluation of each source before and after the intervention showed that a marginal significant difference existed for the negative evaluation of self (t_{56}=1.7; p=.093) and a significant difference for the negative evaluation of social relations (t_{56}=3.2; p=.002). Table 9 shows that the number of negative sentence completions of self and social relations were lower after the intervention.

To answer the third question on differences in personal meaning for participants who improved differently with respect to depressive symptoms, we now discuss the between-subjects effect of Improvement and its interactions with Sources, Evaluation, and Intervention. There was no significant between-subjects effect ($F_{2,53}$=0.9; p=.403), so the three tertile groups did not differ with regard to the grand mean (the number of sentence completions coded in the five sources). The three groups did not differ with respect to the total number of sentence completions before and after the intervention ($F_{2,106}$=0.5; p=.634). It was also found that there is no interaction of Improvement groups with Intervention and Sources ($F_{8,212}$=0.7; p=.731). All three groups mentioned all five sources equally often before and after the intervention. There was a significant interaction for the three groups by Intervention and Evaluation ($F_{2,106}$=12.0; p<.001). The three groups differed in their evaluations before and after the intervention. Figure 3 shows that there was a clear increase in positive meaning for the large improvement group (t_{19}=-5.4; p<.001), no change for the small improvement group (t_{17}=-1.3; p=.197) and no change for the no improvement group (t_{17}=0.4; p=.692). This corresponds to no clinical effects in the groups with no improvement (d=-0.08) and small improvement (d=0.19) and a large effect in the strong improvement group (d=1.61).

There was also a significant interaction for the three groups with Intervention, Evaluation, and Sources ($F_{8,212}$=2.6; p<.05). This is to say that the three groups evaluated the five sources of meaning in different ways before and after the intervention. Paired samples t-tests for the evaluation of sources in each of the three groups revealed that there were no significant differences for the group that did not improve in depressive symptoms. The small improvement group showed a significant difference on the negative evaluation of social relations (t_{17}=3.0; p=.009) and on the negative evaluation of activities (t_{17}=-3.0; p=.008). As shown in Figure 4, this group was more negative about social relations before the intervention than afterwards, but it was more negative about activities after the intervention.

Table 9 Examples of sentence completions before and after the intervention with codes

Sentence stem	Completion t0	Completion t1
		positive self
Compared to the past…	I have less energy (3-)	I am less chaotic (1+)
Compared to the past…	I am more restless, more afraid (1-)	I learn how to deal with everything and sometimes to improve them (1+)
In comparison to others…	I sometimes feel so small (1-)	I am rather satisfied with myself (1+)
When I think about myself…	I am not getting any happier (1-)	I am rather satisfied (1+)
	negative self	
When I think about myself…	I see someone who is unsure and afraid (1-)	I am moderately optimistic, besides many weaknesses I also do have some better and stronger sides (1+)
Compared to the past…	I feel less and less in concert with myself and others (1-)	I am much more cheerful(1+)
In comparison to others…	I do not have enough fun (1-)	I am doing very well (1+)
I think that I…	I have lost courage (1-)	still have a lot to give (1+)
	negative relations	
When I'm no longer capable of doing certain things …	I hope hoop that I will not become too dependent on others (2-)	I will have to accept that (1+)
I intend to ...	I do not have any intentions as others decide for me (2-)	try to be more optimistic (1+)
When I think about myself …	I actually feel lonely in spite of everything (2-)	I have managed to do well by the skin of my teeth; I hope it will stay like this (1+)
When I'm no longer capable of doing certain things …	I am afraid that it will take too long before I ask for help and that I will therefore languish (2-)	I hope to accept this; it will be a struggle (1+)
		negative activities
My weaknesses are …	to stand up for myself (2-)	that I am not good in drawing and painting (4-)
It annoys me …	that I am dependent (2-)	that I am too busy (4-)
I feel rather miserable when …	I am tired in the evening (3-)	I have to go out (4-)
I am afraid that I …	I will not live to the next millennium (5-)	will never learn to play piano (4-)

Note:
code are in brackets behind the sentence completions: 1=self; 2=social relations; 3=physical integrity; 4=activities; 5=general; +=positive; -=negative

The group that showed a strong improvement showed significant differences for negative evaluations of social relations (t_{19}=2.5; p=.024) as well as for negative evaluations of self (t_{19}=-3.2; p=.005) and for positive evaluations of the self (t_{19}=2.1; p=.052). This group was less negative about social relations (Figure 4). In addition, this group was less negative and more positive about self after than before the intervention.

Figure 3 Positive personal meaning for groups differing in improvement in depressive symptoms

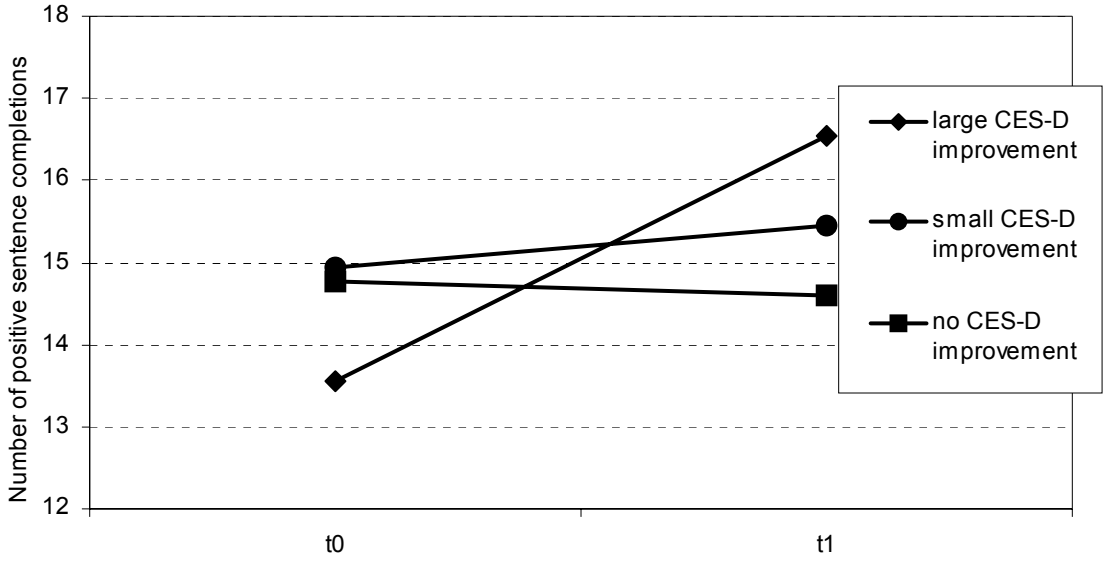
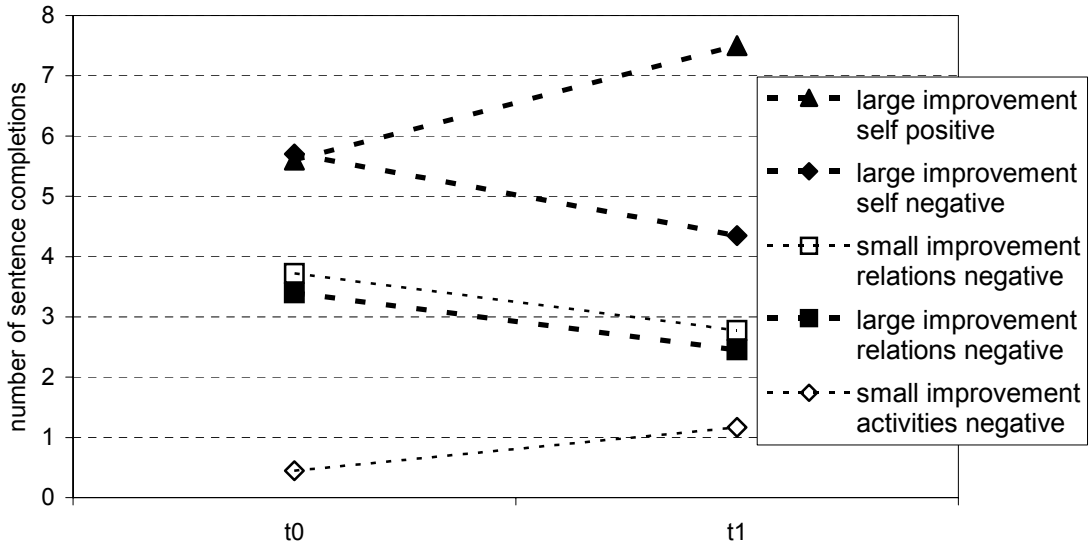


Figure 4 Significant change in evaluation of different sources of meaning in groups differing in improvement in depressive symptoms



It can be concluded that the intervention had differential effects for the participants. Those who did not improve on depressive symptoms showed no differences in personal meaning before and after the intervention. Those with a small improvement in their depressive symptoms were no more positive. A shift in focus on negative aspects of life could be found in this group from relations to activities. The group that decreased considerably in their depression scores became more positive in their personal meaning. They became less negative about self and relations as well as more positive about self. There is a strong shift in how they perceive themselves.

To give some qualitative content to the sentence completions, we provide some examples given by the same person on the same sentence stem before and

after the intervention (Table 2). The examples were randomly chosen from the groups and categories which showed significant differences at T0 and T1: Persons from the high improvement group who either had a negative evaluation of self before the intervention or a positive evaluation of self after the evaluation; persons from the small or large improvement groups who had a negative evaluation of social relations before the intervention and persons from the small improvement group who had a negative evaluation of activities after the intervention.

Participants who were positive about themselves after the intervention formulated their sentence completions in terms of the absence of negative traits, as moderately positive evaluations of themselves, or they described that they became better able to deal with difficult situations. Comparing from where they came from (negative evaluations of self, negative affect and psychophysical state) this indicates a large qualitative change in meaning attributed to the self. Participants who were negative about themselves before the program described a lack of motivation and positive affect or an abundance of negative affects. After the program they were more positive in terms of self-evaluations, affects and motivation. Problems around social relations before the program concerned loneliness and autonomy. After the program autonomy was a less strong concern: participants were not outspokenly positive, but they hoped to be able to accept problems in life more than before the program. Participants who were negative about their activities were negative about other things before the program. One might see a shift towards more concrete negative evaluations in these answers. Taken together, the examples show that there is a large qualitative change in the sentence completions, in particular around concerns about the self.

6.4 Discussion

The present study was a first evaluation of the reminiscence program 'Looking for meaning in life', designed to reduce depressive symptoms and increase meaning in life. In this study we compared the participants of the program to a group of respondents from a representative survey who were matched on age, gender, educational, marital and occupational status. Compared to the matched group from the representative survey the Intervention group focused strongly on themselves. The participants in the program also had less positive meaning profiles and their meaning problems were found in particular with regard to the sources of self and social relations. Hence, the participants in the program can be characterized as a self-preoccupied group with impoverished meaning. This is indeed the group which the program aims for.

Participants were more positive after than before the program. The standardized effect indicates a medium effect of the program. Systematic significant differences were found in particular with regard to becoming less negative about the self and social relations. However, they are still less positive and more concerned about the self than the Comparison group, indicating that there is still room for further improvement. Studying three groups who differed in change in depressive symptoms, it was found that the group who did not improve also showed no significant change in personal meaning. The group that improved slightly mainly changed meaning problems from social relations to activities. The qualitative analyses showed that their negative evaluations were more specific after the program. The group that improved most in depressive symptoms showed a large change in positive meaning, resulting from strong qualitative changes in meanings attributed to the self and social relations.

As no control group was involved it remains impossible to attribute the differences before and after the intervention to the intervention itself. Obviously, a randomized clinical trial is necessary to study the effects of the intervention. These first results are interesting, however, as they show a systematic pattern of differences in personal meaning, centered in particular around the meaning sources self and social relations. These are exactly the domains on which the Intervention group also differed from the Comparison group. As no changes occurred with regard to other sources of meaning, the results are indicative of change as a result of the intervention.

The intervention appears to have highly differential effects. Some individuals gained by participating in both increase of positive meaning and decrease of depressive symptoms. Others were not changing much. Interestingly, post-hoc analyses show that the three tertile groups in improvement in depressive symptoms do not differ with regard to age, gender, education, marital and occupational status as well as positive meaning before the program. The only significant difference is that for depressive symptoms: the group that improves most has the highest depression score before the intervention. These findings ask for a study on further determinants of success in the program. This is important in addressing people for participating in the program and in providing practitioners with useful inclusion criteria.

Using a qualitative instrument like the sentence completion questionnaire used here has the obvious advantage that participants can define their own meanings and do not have to respond to preconstructed instruments. This gives the possibility for new, unforeseen findings to come up. For some individuals we have even found large qualitative changes in meaning. They have developed a new way of attributing meaning to themselves and their lives. Whether it results from the intervention program or not, this result shows that changes in personal meaning in later life are certainly possible.

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7 The effects of integrative reminiscence on depressive symptomatology of older adults. Results of a quasi-experimental study

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Abstract

The results of a explorative, quasi-experimental study on the effects of the story of your life on depressive symptoms are presented. The story of your life combines integrative reminiscence with narrative therapy. The program consists of seven sessions of two hours and one follow-up session after eight weeks. It is directed at community-dwelling people of 55 years and older with mild to moderate depressive symptoms. Each session has a different theme: youth and family, work and care, love and friendship, difficult times, life as a book with chapters, metaphors, meaning in life. After the intervention the participants showed significantly less depressive symptoms and higher mastery, also in comparison with a waiting-list control group. Demographic factors and initial levels of depressive symptomatology and mastery were not found to moderate the effects. The effects were maintained at a three months after completion of the intervention.

7.1 Introduction

Depression is a common and disabling disorder among the growing number of older adults. About 3% suffer from severe depression and another 10-15% have a mild to moderate depression (Cole and Yaffe, 1996; Beekman et al., 1999). Late-life depression is characterized by unfavourable prognosis, reduced quality of life and excess mortality (Beekman et al., 2002; Cuijpers & Smit, 2002; Geerlings et al., 2001). In general only few older adults receive adequate treatment for depression (Zivian, Larsen, Knox, Gekoski & Hatchette, 1992; Gottlieb, 1992). Under-utilisation of specialised mental health services by depressed elderly are caused by low detection rates by health care providers, the assumption that depressive symptoms are part of the ageing process, insufficient knowledge about available services and reluctance to accept help in general. Another explanation is that available treatments do not always link up with the experience of older adults (Schuurmans, 2006). So there is a need for attractive, effective, low threshold interventions for older adults with depressive symptomatology. Reminiscence could be a prime candidate (Bohlmeijer et al., 2003).

Reminiscence has been defined 'the vocal or silent recall of events in a person's life, either alone or with another person or group of people' (Woods et al., 1992, p. 138). Empirical studies have shown that people may reminisce for very different purposes: boredom reduction, death preparation, identity-forming, problem-solving, conversation, intimacy maintenance, bitterness revival and teach/inform (Webster, 1993; 1999). Integrative reminiscence (similar to identity-forming reminiscence) and instrumental reminiscence (similar to problem-solving reminiscence) have been found to correlate with successful aging (Wong & Watt, 1991). Reminiscence for the sake of bitterness revival was found to correlate with higher levels of depression (Cully et al., 2001; Cappeliez et al., 2005). Therefore reminiscence as treatment of late-life depression should not only promote integrative reminiscence and problem-solving reminiscence but also reduce or transform bitterness-revival. In a meta-analysis of studies on the effects of reminiscence on late-life depression an effect-size of 0.84 was found (Bohlmeijer et al. 2003). Structure, evaluation of both positive and negative life-events and synthesis have been recognized as important ingredients of reminiscence (Haight & Diaz, 1992; Webster & Young, 1988). In addition, interventions in which reminiscence is combined with other therapeutic approaches (Watt & Cappeliez, 2000; Puentes, 2004) are promising. Reminiscence has been integrated with cognitive therapy (Watt & Cappeliez; 2000), stress-coping theories (Watt & Cappeliez, 2000; Puentes, 2004) and creative therapy (Bohlmeijer et al., 2005) Another possibility is the integration of reminiscence and narrative therapy.

Narrative therapy has been recognized as a meaning-making approach (Kropf & Tandy, 1998; Polkinghorne, 1996; Atwood & Ruiz, 1993). Reminiscence can also bring forth - especially for depressed people in a counseling or therapeutic setting – dominant life-stories that are 'problem-saturated' (Payne, 2000), and these stories express pessimism and defeat and focus on negative elements (Garland & Garland, 2001). When this is the case narrative therapy offers a framework for transforming these stories by delineating two processes: deconstruction and reconstruction (Payne, 2000; Kropf & Tandy, 1998). In the deconstruction phase the counselor will explore with the client the influence of problems on their lives, the influence of themselves on their problems, values and norm that preserve the problem and unique outcomes (periods in the life of clients in which the problem was absent). In the reconstruction phase alternative stories based on client's strength are constructed and 'thickened'. The integration of reminiscence and nar-

rative therapy could be fruitful in two ways. First, it stimulates building memories into coherent life-stories and developing context (Bluck and Levine, 1998; Baerger & McAdams, 1999) and second, when these stories express bitterness and are problem-saturated a framework is offered that invites people to see these stories as interpretations or constructions and to look for alternative stories.

A new reminiscence intervention – The story of your life – (Bohlmeijer, in press) was developed for older adults with clinical relevant depressive symptoms. This intervention combines reminiscence and elements of narrative therapy. In this paper the results of an explorative, quasi-experimental study are presented. The following research questions are central in this study.

1. Is there an indication that the intervention might be effective? With other words: does the intervention group have better outcomes than a waiting-list control group at post-measurement in terms of less depressive symptoms and more sense of mastery?
2. Are these effects preserved at three months after the intervention?
3. Can we identify groups of participants that especially seem to benefit from the intervention? Or the other way around, can we identify groups of participants who don't seem to benefit?

7.2 Methods

7.2.1 Procedure and recruitment

Participants were recruited through advertisements in local papers and through leaflets and posters at general practitioner offices and public places like libraries and were includes when they met the following criteria: (-) minimum age of 55 years (-) a score above 10 and under 28 on the centre for epidemiological studies on depression scale (see below).

7.2.2 Design

The pilot study was conducted as a quasi-experiment in 2 parallel non-equivalent groups, a treatment group and a waiting list group, with measurements at baseline, at 2 months (after the intervention). Only the intervention group received a follow-up at 5 months after baseline, in order to assess to what degree treatment effects were maintained over time.

7.2.3 Intervention

The intervention Story of your life was offered by 6 community mental health centres. The intervention consisted of 7 sessions, each addressing a different theme: youth and family, work and care, love and friendship, difficult times, life as a book with chapters, metaphors and meaning in life. Participants are given questions about these themes which they have to answer at home. They bring the answers with them and read the answers out aloud. The counsellor has different roles. The counsellors were health psychologists and social psychiatric nurses with experience in counselling and therapy with older adults. They received a one-day training by a psychotherapist specialized in narrative and solution-focused therapy and one half-day follow-up meeting.

7.2.4 Measures

The primary clinical end-term was CES-D depressive symptomatology; the secondary end-term Pearlin's mastery scale for assessing changes in internal locus of control. The CES-D (Centre of Epidemiological Studies Depression scale) was used to measure depressive symptoms (Bouma, Ranchor, Sanderman & van Sonderen, 1995). A sumscore, ranging from 0 to 60, is computed across the 20 items to assess the level of depressive symptoms. The Dutch translation has good reliability and validity (Bouma et al, 1995). A score of 16 on the CES-D is considered as a cut-off score for possible cases (Beekman et al., 2002). Mastery was measured with the Pearlin Mastery Scale (PMS; Pearlin & Schooler, 1978), abbreviated to 5 items. The concept of mastery refers to beliefs regarding the extent to which one is able to control or influence outcomes. Responses are rated on a 5-point Likert scale, ranging from 1 (not al all) to 5 (always). Summation of the separate items provides the total mastery score. Also sociodemographic characteristics were collected: gender, age, educational level, marital status and employment status.

7.2.5 Statistical analyses

Independent Samples T-Tests were used to analyse differences between the conditions in depressive symptoms and mastery at T1 (research question 1). T-tests analyses were conducted one-sided at $p<0.05$, expressing the expected superiority of the intervention group. Paired t-tests were used to test for significant changes in CES-D and Mastery from pre-intervention to post-intervention and follow up after three months (research question 2). For both outcomes standardised effect sizes (d) were calculated. Standardised effect sizes, d, are commonly calculated as: $d = (M1 - M0) / Sd0$; where, M1 and M0 are the means at post and pre-test and Sd0 is the pre-test standard deviation of measures of psychological wellbeing. We were also interested in obtaining the effect size of the experimental effect minus the effect (of spontaneous recovery) in the control group. Therefore, we calculated the standardised pre – post change score of the experimental group (dE) and did the same for the control group (dC). Then we calculated their difference, i.e. $\Delta(d) = dE - dC$. These incremental standardized effect sizes show by how many standard units the experimental group has been removed from the control group. An effect size of 0.5 thus indicates that the mean of the experimental group is half a standard deviation larger than the mean of the control group. Lipsey & Wilson (1993) have shown that from a clinical perspective an effect size of .56 to 1.2 can be interpreted as a large effect, while effect sizes of .33 to .55 are moderate, and effect sizes of 0 to .32 are small.

To find predictors for more or less successful outcomes of the intervention, we studied effect modification (research question 3). Groups that did or did not benefit from the intervention were identified with help of regression analyses with the individual standardised change scores (effect sizes; pre- to post-intervention) as the outcome and the interaction term of treatment dummy by the participants' characteristics as predictors, along with their constituent main effects. The predictors were constructed as follows. First the characteristics on a continuous measurement scale (age, CES-D and Mastery at baseline) were transformed into dichotomous variables using the median to divide the variable in two. Categorical variables with more than two categories were recoded into two meaningful categories. Then, we calculated the product of the intervention dummy (intervention=1 vs. waiting list control group=0) and each of the dummy variables that described the participants' characteristics (cf Clayton & Hills, 1993; Rothman & Greenland,

1998). The interaction terms together with the corresponding main effects were entered in the linear regression model. The models were tested at $p<0.05$. Independent Samples T-Tests were used to analyse differences between the conditions in depressive symptoms and mastery at T1 (research question 3). T-tests analyses were conducted one-sided at $p<0.05$, expressing the expected superiority of the intervention group.

We carried out all analyses on an intention to treat basis to counter the possible effects of differential loss-to-follow-up.. We used regression imputation to estimate missing data. In the regression imputation model, the baseline scores of the outcome measure were used as predictors.

One participant had an extreme effect size d for depressive symptoms. In a boxplot procedure,the effect size d was more than 3 box lengths from the upper edge of the box for both the pre-post d and the post-test-follow up d. We conducted all analyses with and without this participant (a member of the intervention group). The results without the extreme are presented first. The differences in results with and without the extreme participant will be discussed in a separate paragraph.

7.3 Results

7.3.1 Sample

108 participants were included in the study at T0: 65 in the intervention group and 43 in the waiting list control group. 94 (87%) of them also filled out the questionnaire at T1. The intervention group also received T2 and n=50 (78,5%) completed it. The mean age of the participants was 63.8 years, with a range from 55 to 87 years. 79.2% of the participants were female. Half of them were married (48.1%), 28.3% was divorced and 19.8% was widowed. Nearly a third (31.1)% was retired, 28.3% was homemaker, 17.9% were disability pensioners, 15.1% had payed jobs and 7.5% was unemployed. The educational level of 33.3% was high, 14.3% low, and 52.3% middle. The response at T1 did not differ significantly between the intervention and the control groups. In table 10 an overview of the characteristics of the participants is given. Chi-square analysis and t-tests showed no differences between the conditions on any of the baseline measures and sociodemographic characteristics (not even at $P<0.10$). The participants who did not complete the questionnaire at T1 also did not differ significantly from those who did on any of the baseline characteristics.

Table 10 Characteristics of participants at baseline, including the extreme case.

	Intervention group[a]	Waiting list group[b]
Female, (n, %)	48 (75.0)	36 (85.7)
Age, (M, SD)	64.0 (7.0)	63.4 (7.7)
Marital status		
Married/cohabiting	30 (46.9)	22 (52.4)
Single	1 (1.6)	1 (2.4)
Divorced	21 (32.8)	10 (23.8)
Widowed	12 (18.8)	9 (21.4)
Education (n, %)		
Low	6 (9.5)	9 (21.4)
Middle	28 (44.4)	13 (31.0)
High	29 (46.0)	20 (47.7)
Depressive symptoms CES-D (M, SD)	17.6 (9.7)	19.2 (7.0)
Mastery (M, SD)	15.4 (3.6)	14.9 (3.8)

[a] number of respondents varies from 63 to 65 because not all respondents answered all questions. b Number of respondents varies from 40 to 42.
Chi-square analysis and t-tests showed no differences between the groups on any of the baseline measures and socio-demographic characteristics (P<0.10).

7.3.2 Effectiveness at 3 months

The imputed means on CES-D and Mastery of the intervention and the waiting list control group at T1 are presented in table 11. The conditions did not have significant differences at baseline in depressive symptoms and mastery (p>0.10).

Table 11 Imputed means and standard deviations (SD) for depressive symptoms (CES-D) and mastery at T1.

	Condition	N	Mean	SD
CES-D	Intervention	64	14,0	10,3
	Waiting list	43	18,2	8,5
Mastery	Intervention	63	16,4	4,0
	Waiting list	42	15,1	3,7

The results of the paired t-tests showed a difference between conditions of 4.2 scale points on the CES-D at T1 (90% CI= 1.30 – 7.17; t=2.40; P=0.009; delta d=0.26 (small effect size) and a difference of 1.34 scale points on the mastery scale (90% CI=0.06-2.61; t=1.74, p=0.04, delta d=0.21), both in favour of the intervention group. Based on these results there might be a positive effect of the intervention, manifesting itself in less depressive symptoms and a slightly larger sense of mastery. However, because of the quasi-experimental design of the study we have to be careful in drawing conclusions about the effect of the intervention. To determine the effect of the intervention with more certainty, a Randomised Controlled Trial is needed.

7.3.3 Persistence of treatment effects over 5 months

Table 12 shows the imputed means for the intervention group on the CES-D and the Mastery scale.

Table 12 Imputed Means and standard deviations for the Intervention group for CES-D and Mastery.

	Depressive symptoms (CES-D)			Mastery (Mastery 5)		
	N	M	Sd	N	M	Sd
T0 (pre)	64	17.5	9.8	63	15.5	3.6
T1 (post)	64	14.0	9.2	63	16.4	4.0
T2 (fu 3 m)	64	13.7	8.2	63	16.2	4.1

Results of the t-tests are shown in table 13. The intervention group had a significant improvement ($p<0.05$) in depressive symptoms and sense of mastery from pre to post test and from pre measurement to follow-up after 3 months. The effect size d is medium for the CES-D and small for Mastery. Depressive complaints and mastery did not change significantly from post-measurement to follow-up after 3 months, meaning a preservation of the gain from pre-to post measurement.

Table 13 Paired t-tests for the intervention group.

	N	Difference	T	Df	p (2-sided)	d[a]
CES-D						
T0-T1	64	3.58	4.43	63	0.000	0.37
T0-T2	64	3.87	3.49	63	0.001	0.39
T1-T2	64	0.29	0.37	63	0.713	0.03
Mastery						
T1-T0	63	0.90	2.72	62	0.009	0.25
T2-T0	63	0.70	2.17	62	0.034	0.19
T2-T1	63	-0.20	-0.88	62	0.383	-0.05

[a] d=(individual difference between measurements/group SD for the the first of the two measurements); A positive d means improvement: less depressive symptoms and more sense of mastery.

7.3.4 Effect Modification

Certain groups of participants might profit more or maybe less of the intervention. Profit is here defined in terms of the effect size d for depression (CES-D) and mastery. The results of the regression analyses are shown in Table 14. In this table only the regression coefficient for the interaction terms are given, while those of the main effects are not of concern here. This coefficient beta can be interpreted as the effect size.

Table 14 Predictors of outcome at T1: coefficient beta1 and significance level.

Interaction term: characteristic*condition	CES-D effect size d[a]		Mastery effectsize d[a]	
	beta	P	beta	P
Female	0.32	0.22	0.08	0.78
Older age (>62)	0.28	0.12	0.06	0.77
High education level	0.00	0.98	-0.08	0.65
Married/cohabiting	-0.07	0.69	0.00	0.98
Relative low level of depressive symptoms at T0 (<17)	X	X	0.01	0.80
Relative high level of mastery at T0 (>15)	-0.10	0.58	X	X

[1] Coefficient beta of the interaction term. Beta of main effects not shown.

[a] d=(individual difference between T1 and T0/SD T0 group); a positive effect size means improvement from T0 to T1.

x Variable not in the equation.

It seems that women and older participants did profit somewhat more from the intervention than men and younger participants (55-62 years) in terms of a reduction in depressive symptoms. However, this result was not significant. Educational level, martial status en the level of depression and mastery at baseline did not predict a better outcome at T1. Based on these results, there is no reason to change the inclusion criteria for the intervention.

7.3.5 Analyses including the participant with the extreme values

The foregoing analyses were also conducted including the participant with extreme changes in depressive symptoms. This participant had an extreme negative change in CES-D score during the time between pre-test (T0) and post-test (T1) and an extreme positive change from post-test to follow-up after three months, which might influence the outcomes of the analyses.

In the analyses including the extreme case, the changes in depression and mastery from pre-test to post-test and from pre-test to follow-up were still significantly improved. However, the effect size of the change in depressive symptoms from T0 to T1 was now small instead of medium (d=0.31 instead of 0.37). Like the analyses without the extreme case, there were no characteristics of participants at baseline that could predict a better or worse outcome at T1.

The differences between de intervention group and the control group in CES-D score at T1 changed from 4.2 to 3.7 scale points, but this was still a significant difference ($p<0.05$). The difference between conditions in the level of mastery at T1 changed from 1.34 scale points to 1.2 scale points, resulting in a nearly significant difference ($p=0.06$) instead of a significant difference ($p=0.04$). However, the effect size remains the same (small). Although there are some small changes, overall, the conclusions of the analyses with the extreme case, are comparable to the conclusions without it.

7.4 Discussion

7.4.1 Main findings

1. Our data suggest that the intervention is more effective than doing nothing, but this is only a tentative conclusion under the condition that a quasi-experimental design was used. The effect differences however were small ($d = 0.26$ for depressive symptoms and $d = 0.21$ for mastery). How to interpret and explain these results? In a recent meta-analysis of twenty controlled outcome studies an overall effect size of reminiscence and life-review on depression of 0.84 (95% CI = 0.31 – 1.37) was found (Bohlmeijer et al, 2003). In comparison to the outcome of this meta-analysis the effects of The story of your life on depression is substantially lower. How can this difference be explained? First, the same meta-analysis found that the effects of life-review were significantly larger in subjects with a major depression or high levels of depressive symptoms as compared to subjects with mild or moderate depressive symptoms (Bohlmeijer et al, 2003). As the subject in our study were in this second group a somewhat lower effect size can be expected. In general, lower pre-intervention levels of symptomatology may leave less room for improvement (Willemse et al, 2005). Second, the intervention itself can be improved. In the intake conversation and first session more time can be spent with the participants on defining specific and clear targets they want to achieve. Each new session could be consequently started with a reflection on how their answering to the life-review questions in the last session and the following discussion in the group have contributed to achieving their aims. In this way the sessions would become more focused on causes of depression in their current life. Also some of the life-review questions that the participants have to answer at home could be adapted in accordance with this goal. Third, we think that the training and supervision of the facilitators of the life-review groups has to be intensified. A one-day training and a half-day follow-up meeting may not have been enough for a number of counsellors to master this new, therapeutic framework well enough. Fourth, a review of the recent developments in conceptual understanding of reminiscence offers some hypotheses regarding prognostic factors (Bohlmeijer et al, Submitted). In general the attitude of people towards reminiscence could be of relevance (Sayre, 2002). People with a more positive, general attitude towards reminiscence as a means of self-understanding may profit more than people who are less interested in reminiscence. Wink & Schiff (2002) suggest that only 30 - 50% of the older adults go through a process of life-review. In addition it has been found that some reminiscence styles (boredom reduction and bitterness revival) correlate strongly with both psychological distress and neurotic personality traits (Cully et al, 2001; Cappeliez & O'Rourke, 2005).

Theoretically this would make persons with these reminiscence styles prime candidates for life-review interventions, but it is yet unclear to what extent negative reminiscence styles can indeed be changed. At last it could be hypothesized that in order to profit from reminiscence abilities of more abstract and introspective thinking are a prerequisite (Coleman, 2005). Inclusion of instruments measuring the before mentioned factors in future effectiveness studies on reminiscence is strongly recommended.

2. We have some preliminary evidence that the treatment effects are maintained over time for depressive symptomatology, but may diminish somewhat with respect to the participants' sense of mastery in the time interval from 2 to 5 months after baseline.
3. Our data did not produce evidence that some groups will benefit less than others from the intervention or are placed at an elevated risk of experiencing adverse effects. This may suggest that the intervention has not to be tailored to specific groups. But one has to bear in mind that the sample size may be too small to find significant predictive factors. That men profited equally from life-review as women is somewhat surprising. In general gender differences in reminiscence behaviour across the life-span are reported in favour of women. Women have more (vivid) memories, include more details of personal experiences and have better memory for emotional experiences (Sehulster, 1995; Seidlitz & Diener, 1998). In addition it was found that women reminisced more with the aim of intimacy maintenance and identity formation (Webster, 1993). That no gender differences were found could be due to the fact that the intervention includes both questions aimed at instrumental reminiscence (part of which is recalling achievements and successful coping behaviour) and integrative reminiscence (solving emotional conflicts from the past and finding meaning in one' s life). On the basis of socialisation men would have a preference for the former and women for the latter (Webster, 2001, Haden, 1998). So the intervention stimulates both men and women to focus on reminiscences that seem most meaningful to them.

7.4.2 Limitations and strengths.

This study has several important limitations. The participants were not randomly assigned to either the intervention or control group. The counsellors were not blinded to conditions. So the results were possibly confounded. Effect maintenance was only studied in the treatment group at 5 months after baseline. The sample size was rather small and especially the number of male participants, so the interpretations regarding gender differences have to be interpreted with care. No diagnoses of depressive disorders were measured, so we don't know if cases of depression were actually prevented by the intervention. However the CES-D has good psychometric properties and reduction of depressive symptoms is especially relevant for older adults among whom the prevalence of sub-threshold depression is large and the prevalence of major depressive disorders relatively small (Beekman et al., 2002). Protocol adherence may have been poor but was not evaluated.

The strength of the study is that for the first time a study evaluating an intervention combining reminiscence and narrative therapy was conducted. In addition, the target group was successfully reached. At baseline, the mean score on the Centre of Epidemiological Studies Depression scale (CES-D) was 18.2, which is substantially higher than 7.5 which is the score on the CES-D of the average Dutch elderly population (Deeg et al., 1998). The average score is also above 16 which is

recognized as a cut-off score for having clinically relevant depressive symptoms (Beekman et al., 2002). The presence of depressive symptoms is the most important risk-factor for developing a major depression (Schroevers et al., 2006; Smit et al., 2006)

7.4.3 Implication

Despite the limitations, the treatment effects are promising but not very substantial yet, and must be improved by adapting the intervention according to the abovementioned suggestions. After the adaptations are made, research should be conducted preferably as a randomised controlled trial with better measurements of pertinent depression and quality of life outcomes, over longer follow-up times and with more relevant prognostic variables.

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8 The effects of integrative reminiscence on meaning in life: Results of a quasi- experimental study

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Submitted

Abstract

Finding meaning in life is always cited as an important aim of reminiscence. A new intervention combining reminiscence and narrative therapy is described here. The results of an explorative, quasi-experimental study on the effects of this intervention on meaning in life are presented. A significant improvement in the overall meaning in life in the participants of the intervention was found, but these effects were not significant in comparison to a waiting-list control group. The group that improved most in their depression scores also improved in their meaning in life. Furthermore, there is a specific effect of the intervention in that it results in a decline of negative evaluation of the self and an increase in positive evaluation of social relations. These findings are stronger for women than for men and stronger for people who improved with regard to depressive symptoms. Last, the program results in more positive evaluation of the past as well as in less negative evaluation of the future. Again, this is found most strongly for women and for those who improved most with regard to depression.

8.1 Introduction

The prevalence of clinically relevant depressive symptoms of older adults in the general population is estimated at 10% – 15% (Beekman et al., 1999). This high prevalence of depressive symptoms in older adults is partly caused by the confrontation with negative life events such as loss experiences, severe illnesses, or functional disability (Smit et al., 2006; Kraaij et al., 2001; Orrell & Davies, 1994). One of the mediating factors between negative life events and depression could be a decrease of meaning in life or increase of meaninglessness (Wong, 1989; Westerhof et al., 2006; Selm & Dittmann-Kohli, 1998; Zika & Chamberlain, 1992). Meaning in life has been defined as 'the cognisance of order, coherence, and purpose in one's existence, the pursuit and attainment of worthwhile goals, and an accompanying sense of fulfilment' (Reker & Wong, 1998, pg 221). A number of different classifications of sources of meaning can be found in the literature (Ebersole & DePaola, 1987; Reker, 2000; Westerhof, Dittmann-Kohli & Bode, 2003). In general, these sources refer to self (character traits, personal growth, fulfilment), social relations, physical integrity, activities and material needs. In addition to these five specific sources, a holistic view of life can be distinguished as an important aspect of personal meaning (enduring values or ideals, humanistic concerns, religion, traditions and culture). Meaninglessness can be defined as 'a constellation of negative cognitions in the personal meaning system' (van Selm & Dittmann-Kohli, 1998, pg 84). Meaningfulness and meaninglessness can be seen as two ends of a continuum. Several studies have indeed found a relationship between the absence of meaning in life and depression and psychological distress (Reker et al., 1987; Zika & Chamberlain, 1992; Selm & Dittmann-Kohli, 1998; Westerhof et al., 2006).

The presence of depressive symptoms in older adults is by far the most important risk factor for developing a major depression (Smit et al., 2006). This makes a public mental health approach necessary (Andrews, 2004; Davis, 2002). In public mental health the focus is not only on treatment but also on prevention and early detection (Mrazek & Haggerty, 1994). One form of prevention is indicated prevention. Indicated prevention is aimed at people who have elevated levels of depressive symptoms but have not yet developed a clinical depression (Mrazek & Haggerty, 1994). Following the above, one of the important goals of psychological interventions for older adults with depressive symptoms would be the maintenance or restoration of meaning in life in the face of confrontation with negative life events (Wong, 1989). Two therapeutic approaches that have been especially recognized for their meaning-making possibilities are first, reminiscence and life-review (Wong, 1989; Butler, 1963; Birren, 1987; Coleman, 2005; Watt & Cappeliez, 2000) and second, narrative therapy (Kropf & Tandy, 1998; Polkinghorne, 1996; Atwood & Ruiz, 1993; Goldberg & Crespo, 2003; Neymeier & Stewart, 1996).

Life-review was originally defined as an increase of reminiscence – the act or process of recalling the past - in older people that was due to the universal occurrence of an inner experience or mental process of reviewing one's life (Butler, 1963). The aims of life review are resolving conflicts of the past, achieving reconciliation and finding meaning in life (Cappeliez, 2002; Coleman et al, 2002). The continuity theory of aging explains why reminiscence can assist older adults in maintaining meaning in life despite being confronted with negative life-events. According to the continuity theory, when individuals are confronted with life-events or transitions, they 'attempt to preserve and maintain existing internal and external structures and they prefer to accomplish this objective by using strategies tied to their past experiences of themselves' (Atchley, 1989, pg 137). This sense of continuity, with the aid of reminiscence, will promote adaptation and help maintain

meaning in life (Parker, 1999). In several studies life-review was applied as a psychological intervention for depressed older adults (Fry, 1983; Watt & Cappeliez, 2000). In a recent meta-analysis of these studies, the effect-size was found to be 1.23; CI = 0.92 – 1.53 (Bohlmeijer et al., 2003).

Autobiographical memories that are evoked by reminiscence can be seen as building blocks for life-stories (Bluck, 2001) which are the central focus of the second approach - narrative psychology. In narrative psychology the accounts which people give of themselves and their lives are studied. The central assumption is that people are their stories and that life stories are the most important base of identity (McAdams, 1993; Bruner, 1994; Kenyon & Randall, 2001). 'A person's identity is not to be found in behaviour, nor – important though this is – in the reactions of others, but in the capacity to keep a narrative going' (Giddens, 1991, pg 54). This self-narrative based on autobiographical memories is essentially a process of reconstruction (Bluck & Levine, 1998; Atwood & Ruiz, 1993). For people at a really advanced age narrative is 'the primary form by which human experience is made meaningful' (Sherman, 1991). The confrontation with negative life events can lead to fragmentation of life-stories or make them 'problem-saturated' (Payne, 2000). These stories express pessimism and defeat and focus on negative elements (Garland & Garland, 2001). A victimic plot is central in these stories (Polkinghorne, 1996) and instead of opening new meaningful possibilities they express the loss of agentic power. They are dysfunctional because 'they hinder a person from access to his own personal resources and the availability of others' caring and help' (Goldberg & Crespo, 2003).

When this is the case narrative therapy offers a framework for transforming these stories by delineating two processes: deconstruction and reconstruction (Payne, 2000; Kropf & Tandy, 1998; Osis & Stout, 2001). In the deconstruction phase the counsellor will explore with the client the influence of problems on their lives, the influence of themselves on their problems, values and norms that preserve the problem and unique outcomes (periods in the life of clients in which the problem was absent). In the reconstruction phase alternative stories based on the client's strength are constructed and 'thickened'. To our knowledge the effectiveness of narrative therapy on depression has not been tested yet. But in a study by Baerger & McAdams (1999) it was found that life story coherence had a statistically significant relationship with depression and psychological well-being.

With the aim of increasing the meaning of life in older adults with depressive symptoms a new intervention The story of your life was developed, combining life-review and narrative therapy. In this paper the results of a quasi-experimental study are presented. Three sets of hypotheses were tested.

1a. Our first hypothesis is that a larger increase of meaning in life in the participants of the intervention is expected as compared to the waiting-list control group.

1b. The intervention is directed at people who are moderately depressed. Former studies found that this specific cohort is more (negatively) preoccupied with self and social relations than the general population (Westerhof et al., 2005). An increase of positive evaluations is therefore mainly expected with respect to the meaning sources self and social relations.

1c. Central aims of life-review are reconciliation with one's course of life and giving significance to life-experiences. Challenging, reframing and restorying of negative evaluations of the past and 'victimic' life-stories are central elements of the intervention. Therefore we expect an increase of positive evaluations with respect to the past. Because life-review may lead to a

greater consciousness of inner strengths (mastery) and values, we also expect the participants to be more optimistic and positive in their evaluation of the future.

2. Studies on gender differences in reminiscence have reported differences in the quality and function of reminiscence for women and men. Women reminisce more for the sake of identity forming, remember more details and are more focused on emotions (Davis, 1999; Ross & Holmberg, 1990). Therefore we expect larger improvements in the meaning of life, in sources of meaning and in time orientations for women than for men.
3. Studies have reported significant correlations between meaning in life and depression (Reker et al., 1987; Zika & Chamberlain, 1992; Selm & Dittmann-Kohli, 1998; Westerhof et al., 2006). Therefore we expect that participants who show a larger reduction of depressive symptomatology after the intervention will also show greater improvement in meaning in life.

8.2 Method

8.2.1 Intervention

The story of your life consists of seven sessions of 1.5 hours and one follow-up session after eight weeks. It's aimed at people of 60 years and older with mild to moderate depressive symptoms. Each session has a different theme: youth and family, work and care, love and friendship, difficult times, life as a book with chapters, metaphors, meaning in life. Participants are given questions about these themes which they have to answer at home. They bring the answers with them and read the answers out aloud. The counsellor has different roles. He facilitates group discussions, asks questions aimed at the evaluation and significance of the stories. If these stories express negative views about self or life in general or express meaninglessness, the counsellor asks questions aimed at deconstruction and restorying. The counsellors were psychologists or psychiatric nurses with experience in counselling and therapy with older adults. They underwent a one-day training by a psychotherapist specialized in narrative and solution-focused therapy and one half-day follow-up meeting.

8.2.2 Participants

A pilot project was carried out in 2004 and 2005 in six community mental health centres. To evaluate the effects of the program a quasi-experimental design was used, comparing the intervention-group with a waiting list control group. A week before (T0) and after the intervention (T1), the participants were asked to fill out a questionnaire. Persons on the waiting list were asked to complete the same questionnaire at T0 and two months later (the duration of the course).

106 participants were included in the study at T0 and 93 (88%) of them also filled out the questionnaire at T1. The response at T1 did not differ significantly between the intervention and the control groups. The persons who did not complete the questionnaire at T1 also did not differ significantly from those who did on age, gender, marital status, occupational status or depressive symptoms at T0. We therefore included only the respondents who filled out the questionnaire at both times in our analyses.

57 persons completed the questionnaire in the intervention group and 36 in the control group at both T0 and T1. The groups did not differ with regard to age, gender, marital status, occupational status or depressive symptoms at T0. The

mean age of the participants was 63.9 years, with a range from 55 to 87 years. 61.4% of the participants were female. Half of them were married (50.5%), a quarter divorced (26.9%) and 18.3% were widowed. 30.1% of the participants were retired, 26.9% were homemakers, 16.1% were disability pensioners, and 12.9% were working. 14.0% had no clear occupational status.

8.2.3 Instruments

A shortened version of the SELE-instrument was used to assess personal meaning in the Intervention and Control group (SELE comes from the German Selbst (Self) and Leben (Life); Dittmann-Kohli & Westerhof, 1997). The shortened version of the SELE-instrument is a sentence completion questionnaire consisting of seven sentence stems which respondents are asked to complete by expressing what they consider to be true and important about themselves. Some sentence stems probe for actual selves and lives (1,2,4,6,7) and some for future expectations (3,5):

1. When I think about myself ...
2. Compared to the past ...
3. In the next few years ...
4. I think, that I ...
5. Later, when I am older ...
6. I have noticed that I ...
7. In comparison to others ...

The CES-D (Centre of Epidemiological Studies Depression scale) was used to measure d*epressive symptoms* in the Intervention group (Bouma, Ranchor, Sanderman & van Sonderen, 1995). A sum score, ranging from 0 to 60, is computed across the 20 items to assess the level of depressive symptoms. A score of 16 or higher on the CES-D is used to identify possible cases (for a more complete analysis of the depression data see Bohlmeijer et al., submitted). The CES-D score at T0 was 17.6 (sd=9.7) for the intervention group and 19.3 (sd=7.0) for the waiting list control group. At T1 the mean CES-D score was 14.2 (sd=10.6) for the intervention group and 17.9 (sd=9.1) for the control group.

We calculated the difference between the CES-D score before and after the intervention and split the intervention group into tertiles. The upper tertile is considered the group with Large Improvement (i.e., those who improved by 5 points or more, N=19), the middle tertile is the group with Small Improvement (i.e., those who improved by 1 to 4 points, N=13) and the lower tertile the group with No Improvement (i.e., those whose CES-D score did not change or was higher after than before the intervention, N=19). Six persons did not fill out the CES-D at T0 or T1.

8.2.4 Analyses

A coding scheme was used to categorize the sentence completions on the SELE-instrument. Six codes were used to categorize the sources of meaning (self, social relations, physical integrity, activities, life in general, residual), three codes were used to categorize the evaluative direction of the sentence completions (positive, neutral, or negative) and three codes were used to categorize the temporal orientation of the sentence completions (past, present, or future). See the Results Section for some examples of the coding. The intercoder reliability of this coding

scheme was good: kappa=.79 for the sources of meaning, kappa=.80 for the evaluative dimension, and kappa=.85 for the temporal orientation.

As an overall measure of meaning in life, the number of positive sentence completions was computed for each person. In previous studies using the SELE-instrument, it was found that this results in a valid indicator of personal meaning which is related to depression, sense of coherence, and subjective well-being (Van Selm & Dittmann-Kohli, 1998; Westerhof et al., 2006). Furthermore, for each of the five meaning sources an index was computed of how many positive sentence completions belonged to this source. Similarly, five indices were computed indicating how many negative sentence completions belonged to this source. Two indices were computed as to how many positive sentence completions were coded as belonging to the past or the future. Similarly, two indices were computed as to how many negative sentence completions were coded as past or future. With the exception of the overall measure of meaning in life, the indices were dichotomised as 0=a positive (negative) evaluation of a meaning source or time orientation is not found in the seven sentence completions and 1 = it is found at least once in the seven sentence completions.

To test the first set of hypotheses about the effectiveness of the intervention, we first compared the intervention and control group at T0 with regard to all indices for meaning in life (t-test for the overall measure and Fisher's exact test for the dichotomous variables). Next, we assessed whether significant differences existed between T0 and T1 for both groups separately (using paired t-tests for the overall measure and McNemar's test for the dichotomous variables). For the overall measure of positive meaning, we also carried out a MANOVA for repeated measures, using the intervention versus control group as an independent variable and the indices of T0 and T1 as dependent variables. To test the second set of hypotheses (about gender differences), we compared men and women in the intervention group at T0 and then assessed the differences between T0 and T1 for men and women separately, using the same tests as for hypothesis 1. The differential effects for the three tertile groups of improvement in depressive symptoms in the intervention group were assessed in a similar way to test the third set of hypotheses.

8.3 Results

The first set of hypotheses referred to the effectiveness of the intervention in improving meaning in life. Hypothesis 1a stated that the overall measure of meaning in life will be improved by the intervention. The intervention group had a mean score of 4.0 (sd=1.6) positive sentence completions at T0, the intervention group a mean of 3.8 (sd=1.6). There was no significant difference at T0 ($t(91)=0.4; p=0.705$). After the intervention, the intervention group had a mean of 4.6 (sd=1.6), which differed significantly from the mean before the intervention ($t(56)=-2.4; p<.05$). With a mean of 4.1 (sd=2.1) at T1, the control group did not improve significantly ($t(35)=-0.8; p=.427$). However, the MANOVA for repeated measures showed that there was no significant interaction ($F(1,91)=1.2; p=.279$). It is therefore concluded that hypothesis 1a is not supported.

Hypothesis 1b concerned the change in evaluations of meaning sources. It was expected that the intervention would result in more positive evaluations, in particular with respect to the meaning sources self and social relations. The corresponding results are presented in Table 15. There were no significant differences between the intervention group and the control group at T0. The self as a meaning source is found most often, in both positive and negative evaluations, followed by

life in general. The more specific sources physical integrity, social relations and activities are less often mentioned. All meaning sources are mentioned more often in a positive than in a negative way.

In the intervention group it was found that significantly more participants mentioned the self in a negative way before rather than after the intervention. The difference between T0 and T1 is 26.3%, whereas it is only 13.9% in the control group. Furthermore, significantly more persons were positive about their social relations. The difference is 19.3%, whereas it was only 2.8% in the control group. In the control group, no significant differences were found. It is concluded that hypothesis 1b could not be rejected.

In further analyses, we found indications for strong qualitative change in addition to the quantitative change. Two examples of changes from negative evaluations of the self before the intervention to positive evaluations afterwards are: "When I think about myself… I am rather chaotic and inconsistent" changed to "When I think about myself…I have gained more self-confidence" and "I have noticed that I… am lazy sometimes" became "I have noticed that I… am rather satisfied". Two examples of change towards positive evaluations of social relations after the intervention are: "Compared to the past… I am more aware of the finitude of my life" became "… I am more directed to the world around me" and "In comparison to others… I feel that I am not noticed in a group" changed to "… I am very social and I consider myself a humanistic person".

Hypothesis 1c concerned the more positive evaluations of the past and the future in the intervention group after the program. The future is mentioned more often than the past, but this is due to the fact that two sentence stems asked for future anticipations. The future is mentioned more often in a positive than in a negative way, whereas the past is evaluated by more respondents in a negative than in a positive way. Significantly more participants in the program had negative evaluations of the future than persons in the control group at T0. Significantly more participants in the program had positive evaluations of the past at T1 than at T0 (24.6% versus 13.9% in the control group). Significantly fewer persons in the intervention groups had negative evaluations of the past after than before the intervention: a decrease of 17.5%, whereas there was an increase of 8.3% in the control group. The past was evaluated by more respondents in a positive rather than a negative way after the intervention. Furthermore, significantly more persons in the intervention group were less negative about the future after than before the program (24.6 versus 2.8% in the control group). There were no significant differences in the control group between T0 and T1. It can therefore be concluded that hypothesis 1c is supported.

Again, there was evidence of strong qualitative change in the categories which also showed quantitative change. Negative evaluations of the past changed to positive evaluations in the following examples: The answer at T0 "I think that I… had to cope with many things in a different way" became at T1 "I think that I… am a good person". "When I think about myself… I believe I had a hard life" changed to "When I think about myself… I believe that I endured a lot (also comparing myself to others in the program), but that I managed well together with my partner". Examples of positive evaluations after the intervention are: "When I think about myself… I would have done some things in a totally different way, like co-habiting before marrying" changed to "When I think about myself… I have lived through many positive experiences, like children and grandchildren" and "I have noticed that I… am confronted with difficult things from the past" became "I have noticed that I… have (had) a unique life like nobody else, which completely belongs to me". Changes from negative evaluations of the future before the interventions are for

example: "I think that I… am rather fearful for the future of our children (war, power, egoism)" changed to "I think that I… can handle my past life better" and "Later, when I am older… it is perhaps too late to do the things I refrained from" became "Later, when I am older… I will have a comfortable life".

8.3.1 Gender

The second set of hypotheses stated that improvements in the meaning of life, in sources of meaning and in time orientations will be larger for women than for men. Women participating in the program had significantly more positive sentence completions at t0 (mean=4.2; sd=1.6) than men (mean=3.2; sd=1.7; t(52)=-2.0; p<.05). Both women (mean=4.8; sd=1.6; t(40)=-1.8; p=0.078) and men (mean=4.2; sd=2.4; t(12)=-1.8; p=.097) did not improve significantly, although there was a small trend for improvement in meaning in life for both groups. In the repeated measures MANOVA, we found no interaction between gender and changes in meaning in life (F(1,52)=0.3; p=.566). Women did not improve more than men, so hypothesis 2a is rejected.

Table 15 Comparison of evaluations of sources of meaning and time orientations between men and women in the intervention group

		men (N=13)		women (N=41)		
		T0	T1	T0	T1	
Self	Positive	84.6	76.9	95.1	95.1	
	Negative	61.5	53.8	68.3	34.1	*
Social relations	Positive	15.4	38.5	24.4	48.8	*
	Negative	0.0	7.7	19.5	17.1	
Physical integrity	Positive	38.5	38.5	26.8	14.6	
	Negative[a]	46.2	7.7	7,3	12.2	
Activities	Positive	30.8	38.5	22.0	17.1	
	Negative	15.4	7.7	7.3	2.4	
General	Positive	15.4	46.2	48.8	43.9	
	Negative[a]	53.8	30.8	14.6	4.9	
Past	Positive	30.8	46.2	22.0	46.3	*
	Negative	23.1	7.7	39.0	17.1	*
Future	Positive	76.9	84.6	87.8	92.7	
	Negative	53.8	23.1	31.7	9.8	*

[a] Fisher's exact test between both groups at T0 with p<.05

* McNemar test between T0 and T1 with p<.05

Women and men participating in the program did not differ significantly at T0 in the evaluation of most sources of meaning (see Table 16). More men were negative about their physical integrity and their life in general than women. Fewer women were negative about themselves after the program than before. The change in negative evaluations of the self is much larger for women (34.1%) than for men (7.7%) and only significant in the first group. Significantly more women were positive about their social relations, but in both groups about one quarter more partici-

pants mentioned positive social relations after the intervention. As the number of men is small (N=13), the difference was not significant in this group. Hence, there is only meagre support for the hypothesis that women are more positive about the self as a meaning source after the program than men.

Women and men do not differ in their evaluations of the past and the future at T0. Significantly more women evaluate the past in a positive way and fewer women in a negative way than before the intervention. Fewer women were negative about their future after the intervention. The effect is somewhat larger for women than for men with regard to the past. However, the change with regard to negative future expectations is even larger among men (30.7%) than among women (21.9%), though not significant for men. It can be concluded that there is support for the hypothesis that women become more positive about the past than men.

8.3.2 Improvement in depression

The third set of hypotheses concerned the effects of the intervention for groups differing in their improvement in depression scores. The three groups (no, slight, and large improvement) did not differ significantly at t0 with regard to their overall meaning in life ($F(2,48)=2.4$; $p=0.100$). The only group that showed improvement in meaning in life was the group that also showed the largest improvement with regard to depression (mean at T0=3.3; sd=1.6; mean at T1=4.7; sd=1.9; $t(18)=-2.6$; $p<.05$). In the repeated measures MANOVA, the interaction between the three groups and the change in meaning in life approaches significance ($F(2,48)=2.7$; $p=0.074$). It can be concluded that lower depression scores and higher meaning in life tend to go together in the intervention group.

The three groups did not differ with regard to the evaluation of the sources of meaning at T0 (see Table 17). There were no significant differences between T0 and T1 for the group that showed no improvement in depression scores. There was only one significant difference in the group that showed slight improvement. Prior to the intervention, 84.6% mentioned the self in a negative way; after the intervention only 15.4% did so. A similar effect was found for the large improvement group: 78.9% before and 36.8% after. Furthermore, there was a significant difference with regard to positive evaluations of social relations: this was mentioned by 10.5% respondents before and 47.4% after the program. It can be concluded that the strongest effects in sources of meaning are found in the group that showed most improvement in depression scores.

Table 16 Comparison of evaluations of sources of meaning and time orientations in the intervention and control groups

		intervention (N=57)			control (N=36)	
		T0	T1		T0	T1
Self	Positive	93.0	91.2		97.2	91.7
	Negative	66.7	40.4	*	66.7	52.8
Social relations	Positive	24.6	43.9	*	33.3	36.1
	Negative	15.8	14.0		19.4	8.3
Physical integrity	Positive	28.1	21.1		27.8	11.1
	Negative	15.8	10.5		16.7	13.9
Activities	Positive	22.8	21.1		25.0	30.6
	Negative	8.8	3.5		0.0	16.7
General	Positive	42.1	42.1		25.0	25.0
	Negative	24.6	14.0		22.2	25.0
Past	Positive	22.8	47.4	*	19.4	33.3
	Negative	35.1	17.5	*	25.0	33.3
Future	Positive	86.0	89.5		88.9	83.3
	Negative[a]	40.4	15.8	*	16.7	13.9

[a] Fisher's exact test between both groups at T0 with $p<.05$

* McNemar test between T0 and T1 with $p<.05$

Table 17 Comparison of evaluations of sources of meaning and time orientations between persons with no, small, and large improvement in depression in the intervention group

		Improvement in depression						
		None (N=19)		Small (N=13)		Large (N=19)		
		T0	T1	T0	T1	T0	T1	
Self	Positive	94.7	89.5	100.0	92.3	84.2	89.5	
	Negative	52.6	63.2	84.6	15.4	* 78.9	36.8	*
Social relations	Positive	15.8	42.1	38.5	38.5	10.5	47.4	*
	Negative	10.5	21.1	30.8	15.4	5.3	10.5	
Physical integrity	Positive	47.4	26.3	23.1	38.5	21.1	10.5	
	Negative	21.1	10.5	0.0	7.7	21.1	15.8	
Activities	Positive	15.8	21.1	38.5	30.8	21.1	10.5	
	Negative	10.5	5.3	23.1	7.7	0.0	0.0	
General	Positive	36.8	36.8	38.5	46.2	42.1	47.4	
	Negative	26.3	21.1	7.7	7.7	36.8	10.5	
Past	Positive	21.1	52.6	23.1	46.2	26.3	42.1	
	Negative	26.3	15.8	46.2	7.7	36.8	21.1	
Future	Positive	84.2	94.7	92.3	84.6	78.9	89.5	
	Negative	47.4	26.3	38.5	15.4	42.1	10.5	*

No significant differences between the three groups at T0

* McNemar test between T0 and T1 with $p<.05$

The evaluations of the past and the future did not differ at T0 between the three groups. Again, there were no significant changes between T0 and T1 for the group with no improvement in depression. There were also no significant differences for the group with slight improvement. The group with strong improvement showed a significant improvement with regard to negative future anticipations. Before the intervention 42.1% mentioned this and after the intervention 10.5%. Again, the strongest effect is found for the group that showed the strongest improvement in depression.

To summarise, it was found that there are no significant improvements in the overall meaning in life, although the group that improved most in their depression scores also improved in their meaning in life. Furthermore, there is a specific effect of the intervention in that it results in a decline of negative evaluations of the self and an increase in positive evaluations of social relations. These findings are stronger for women than for men and stronger for persons that also declined more in depressive symptoms. Last, the program results in more positive and less negative evaluations of the past as well as in less negative evaluations of the future. Again, this is found most strongly for women and persons improving most with regard to depression.

8.4 Discussion

In the near future, depression will be among the illnesses with the highest burden of disease (Murray & Lopez, 1997). Treatment offers only limited possibilities for reducing the prevalence of depression (Andrews, 2004). In addition to treatment, prevention may be an important, viable option (Smit et al., 2006). Most promising is indicated prevention, aimed at people with clinically relevant depressive symptoms but who do not yet suffer from a major depression (Schroevers et al., 2006, 2006; Cuijpers et al., 2005). Accordingly, there is a need for effective, low-threshold interventions that can be actively offered to people in the community. For older adults, restoration of meaning in life may be an important goal of these interventions because age-graded losses in social relations, social roles and physical functions challenge meaning in life (Westerhof et al., 2005). Life-review is an intervention that has proved effective in reducing depressive symptoms (Bohlmeijer et al., 2003). But with a few exceptions (Westerhof et al., 2005) the effects of life-review on meaning in life have not been studied yet. In this paper the effects of a new life-review intervention on meaning in life were reported.

Baseline scores on the CES-D and SELE of the participants in the study make it clear that the right target group was successfully reached. At T0 the participants had an average score on the CES-D of 18.3 which is in the range of clinically relevant depressive symptoms for which the cut-off score is 16 (Beekman et al., 2002). Compared to the scores on the SELE by a group of respondents from a Dutch representative survey among independently living persons between 55 and 85 years of age (Steverink, Westerhof, Bode & Dittmann-Kohli, 2001), the participants in this study have a less positive meaning profile. The mean in the representative survey was 4.6 (sd=1.5; N=579), the mean of the intervention group was 4.0 (sd=1.6), resulting in a significant difference ($t_{634}=2.9$; $p=.004$)

Though the intervention group improved significantly on the overall measure of meaning in life, this improvement was not significantly larger in comparison to the control group. There are four possible explanations for this result. The first explanation is that only 37% of the participants benefited largely from the intervention in terms of lower depression scores and improvement in meaning in life. For about 37% of the participants, the intervention had no positive effects on depres-

sive symptoms or on meaning in life. This seems in line with studies on reminiscence that reported that only about 30% -50% of older adults engage in a process of life-review (Wink & Schiff, 2002; Merriam, 1993; Webster & McCall, 1999). In recent reviews it was concluded that for some people life-review is a very helpful way of coping with difficulties in life but for others not at all (Coleman, 2005; Bohlmeijer et al., Submitted). Attitude towards reminiscence in general, capacity for reflection and introspection have been cited as important predictors for the effectiveness of life-review but these have not been tested as yet (Sayre, 2002; Coleman 2005). In this study such criteria were not measured and not used for participation.

A second explanation could be that more training in narrative therapy is needed for the counsellors to be able to transform problem-saturated stories and negative evaluations of self and autobiographical memories in general into more positive ones. For this, narrative therapy offers a good framework. Though the counsellors were trained in skills based on narrative therapy, for all of them this was a new approach and it might be necessary to invest in more training and supervision in order to apply these skills effectively. By comparison, in the Watt & Cappeliez study (2000) in which large effects were found on depressive symptomatology, the counsellor underwent four weeks of training and two hours of supervision every week during the intervention.

A third explanation could be that there is room for improvement in the intervention. One such improvement would be to focus more specifically during the intake and first session on evaluations of self and life in general that undermine meaning in life. The process of life-review in the next sessions can then be brought into relation to these problems more directly. Westerhof et al. (2006) developed a model for meaninglessness. This model could be taken as a theoretical basis for the intervention. It would help the counsellors, for example, not to just focus on global evaluations of life but also on evaluations of specific sources of meaning in life.

A fourth explanation could be that it takes time to deconstruct dominant stories and integrate new stories in daily life. This would imply that positive effects will become more visible in the long run.

As to specific sources of meaning in life, the hypotheses of this study were supported. In the intervention group much fewer negative evaluations about self and more positive evaluations of social relations were reported after the program. This last finding is especially important because one may expect that a positive evaluation of social relations will make the participants more active in maintaining these social relations, thus reducing the risk of loneliness and depression in the future. That participants were more positive and less negative about their past was to be expected, given the fact that an important focus of life-review interventions is to find meaning in the past and become reconciled with how life has run its course. This is an important finding because as people get older they clearly have more time to look back on and less time ahead of them. If one can learn to use reminiscence in a positive way it can become an enduring source of meaning in life. This is particularly important for older persons, as in many areas of life the opportunity for repairing their life regrets has passed for them (Timmer, Westerhof & Dittmann-Kohli, 2005).

That participants in life-review have also become less negative about their future may be less evident at first glance. A confrontation with negative life-events will make many people feel helpless and like victims (Cochran & Laub, 1994). Their natural narrative is disrupted (Giddens, 1991). They have to find a new identity and new plots in their narrative that are not just built on being a victim (Polkinghorne, 1996). Life-review and narrative therapy enable people to do this because it helps

them focus on periods in their lives when these problems were not present (Osis & Stout, 2002; Kropf & Tandy, 1998). This process will open up new possibilities and plans for the future that are built on renewed feelings of mastery and personal values. In the statements of the participants before and after the intervention that were presented with the results, this reframing of the past and future is evident.

The hypotheses on gender differences were only partly confirmed. Women and men improved equally on meaning in life. Studies of reminiscence in the population have found that women reminisce more for the sake of identity forming, remember more details and are more focused on emotions, and that men reminisce more about personal achievements (Davis, 1999; Ross & Holmberg, 1990). These findings suggest that women would be more suited to integrative reminiscence (with the focus on evaluation and emotional experiences) and men to instrumental reminiscence (with the focus on past achievements and coping behaviour). One can conclude that both forms of reminiscence are apparently evoked by the intervention. One of the characteristics of the intervention is that it consists of small groups with a maximum of four people. This allows the counsellors to focus intensively on the life-stories and memories of each participant in every session. The questions that have to be answered by the participants at home are also broadly formulated, allowing each individual to relate stories and memories that are important to him or her.

With regard to specific sources of meaning, women were much less negative about themselves after the intervention in comparison to men. With regard to time-orientation women became relatively less negative about their past, but men became less negative towards the future. We have to speculate about the explanation for these results. They may be explained by the same gender differences in reminiscence styles. Integrative reminiscence could be seen as more inner-oriented, focusing on themes like self-growth and emotional conflicts. Instrumental reminiscence could be seen as a more action-oriented form of reminiscence focusing on coping with difficulties and set-backs in life and creating new possibilities for achievement in society. It could also be explained by the reasons of the participants for joining the intervention. Though we did not study this systematically, during intervision meetings, the counsellors typically reported stories of men in their sixties who had either been fired recently or who had retired and were worried about their immediate future. Reminiscence helped them to adapt to their new life-situation and find significant goals for the future.

Participants that showed the largest improvement in depression also showed the greatest improvement in meaning in life. This finding corroborates the results of previous studies that showed correlations between meaning in life and depression (Reker et al., 1987; Zika & Chamberlain, 1992; Selm & Dittman-Kohli, 1998; Westerhof et al., 2006). In a subsequent study we would recommend that there be at least 3 but preferably 4 measurement moments. This design will allow analysis to test the hypothesis that an increase in meaning in life will mediate effects on depressive symptomatology.

As an explorative study into the effects on meaning in life of a new intervention this research has several major limitations. The participants were not randomly assigned to either the intervention or control group. No follow-up measures were taken, so we don't know if the changes in meaning in life endured, diminished or even improved in the period after the intervention. Because only two measurements of depression and meaning in life were conducted (before and after the intervention) we were not able to test if changes in meaning in life actually mediated the effects on depression. Lastly, the number of male participants, in particular,

was small, so the interpretations regarding gender differences have to be conducted with care.

On the basis of the findings of this study the intervention will be adapted to make it more effective. Although changes in meaning of life in men and women participating in reminiscence were found, these effects were rather small and not significant in comparison to a waiting list control group. One of the important findings of this study is that only one third of the participants improved much on depression and meaning in life. A randomised controlled trial with a larger sample and with follow-up measurement is warranted. The study should include predictors (reminiscence style, attitude towards reminiscence, personality, number of life-events). This new study will hopefully shed light on this question: for which clients is reminiscence in combination with narrative therapy more or less effective? Only after answering this question can the intervention be efficiently implemented in mental health care.

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9 General Discussion

Ernst Bohlmeijer

Abstract

In this chapter the implications of the main findings of this thesis are discussed within the framework for developing and evaluating interventions that was presented in chapter 1. The conclusion about phase 1 of the framework (review) is that internationals studies have shown substantial effects on depressive symptomatology and that good guidelines for developing reminiscence interventions can be produced on the basis of theoretical developments and empirical studies. As to the second phase (innovation & evaluation) it is concluded that the effects of the two new reminiscence interventions on depressive symptomatology are somewhat lower than may be expected on the basis of our meta-analysis. When the results of phase 2 were compared to the review phase, four recommendations could be given. (1) specification of processes that are linked up to reduction of depression. (2) more intensive training of counselors on the additional therapeutic approaches. (3) the inclusion of questionnaires measuring relevant prognostic factors. (4) more elaborate information for the participants about how reminiscence and depression are related. The chapter ends with some reflections on the future of reminiscence as indicated prevention and treatment of depression in later life.

9.1 Preface

In the introduction to this thesis it was asserted that the large prevalence of common mental disorders such as depression warrants a public mental health approach. A public mental health approach should be based on epidemiological knowledge of the incidence, prevalence, recurrence and recovery of depression in the general population (Smit, Bohlmeijer & Cuijpers, 2003). Both the large incidence of depression in older adults (Beekman et al., 1999) and the limited potential of treatment (Andrews et al., 2000; 2004) raise the question whether prevention can make an additional and substantial contribution. The conceptual basis for modern prevention was developed by Mrazek & Haggerty (1994). In their model three forms of prevention were described: universal, selective and indicated. Of these three forms of depression prevention ,indicated prevention is the most promising. The presence of depressive symptoms is by far the most important risk factor for late life depression (Smit et al., 2004) and significant effects on the incidence of depression have already been shown in randomized controlled trials, though not for older adults (Cuijpers, van Straten & Smit., 2005). In the Netherlands prevention of mental disorders and addiction is a small but substantial part of mental health care institutes, a sector in which about 600 professionals are working. This infrastructure for implementation of prevention is unique in the world (Bohlmeijer & Cuijpers, 2001). Within the current development towards more evidence-based mental health care, ultimately prevention will be assessed on the basis of its cost-effectiveness (Smit et al., 2006). A systematic, theory-based approach will yield the best results. Therefore we used and adapted a framework for developing evidence based preventive interventions that was originally developed by Campbell et al. (2000). In this framework four phases are discerned: review, innovation and evaluation, effectiveness and implementation (see figure 5). This thesis is the result of a project with the aim of developing and implementing reminiscence as indicative preventive interventions for older adults. In this last chapter the results of both the review and innovation phase regarding two reminiscence interventions are discussed. The results of the evaluation studies will be interpreted within the context of the results of the review and meta-analysis. In addition we will address the consequences of our findings for future research and implementation and the limitations of the present thesis. We will end this chapter by placing this thesis in the broader context of prevention of depression in the Netherlands.

Figure 5 Framework for evidence based development and implementation of preventive reminiscence interventions

Phase 1 Reviewing
1. Is there a need for the new intervention within the target group? 2. What do we know about reminiscence in the general population? 3. How can the concept of reminiscence theoretically be related to prevention of depression? 4. How has reminiscence been clinically applied and with what results? 5. Under what conditions does reminiscence become effective?
FPhase 2 Innovation & Evaluation
1. Has the target group been successfully reached with the intervention? 2. How has the new intervention been assessed by the target group? 3. Is the intervention apparently effective? 4. Are there any prognostic variables? 5. Has the intervention to be adapted?
Phase 3 Effectiveness research
1. Is the intervention significantly effective in comparison to a relevant control group? 2. What factors predict outcome? 3. What is the effect size? 4. What numbers are needed to be treated in order to prevent one new case? 5. Is the new intervention cost-effective?
Phase 4 Large-scale implementation
1. Do we know enough about barriers and success factors? 2. What training facilities are needed? 3. Are the same effect sizes found in natural conditions? 4. What is the level of program integrity in implementation? 5. Are there any conditions that impact on the effectiveness of the interventions?

9.2 Implications of the main findings of this study

9.2.1 Results of the review phase

In this paragraph we will systematically answer the questions that are central in the first phase of the model.

Is there a need for the new interventions within the target group?

This question was not explored systematically. The reminiscence interventions that we developed are directed at older adults with clinically relevant depressive symptoms. This concerns a large number of people (600.000). Sub-threshold depressions have a large impact on quality of life that is similar to major depressive disorders (Beekman et al., 1999). Epidemiological studies show that older adults with a sub-threshold depression have an increased risk for major depressive disorders (Schroevers et al., 2006). But this is a theoretical underpinning. In general only few older adults receive adequate treatment for depression or indicated prevention for sub-threshold depression (Zivian, Larsen, Knox, Gekoski & Hatchette, 1992; Gottlieb, 1992). Under-utilization of specialized mental health services by depressed elderly are due to low detection rates by health care providers, the assumption that depressive symptoms are part of the ageing process, lack of awareness of the elderly about the severity of their condition, insufficient knowledge about available services and reluctance to accept help in general. Prevention is often directed at people who don't have a need for help as yet. Raising awareness of psychological distress and the possibilities for coping with this distress is an important goal of prevention. Participants' attention to the interventions was drawn by a local publicity campaign: advertisements in local papers and through leaflets and posters at general practitioner surgeries and public places like libraries. In most participating regions about 10 – 15 older adults responded. In some regions (e.g. Eindhoven) this amounted to sixty applications for *Looking for meaning in life* and thirty applications for *The story of your life* (Utrecht). Publicity campaigns for other indicated prevention interventions generate a similar response. In general we can conclude that there is a very large gap between the objective need (based on epidemiological studies) and subjective need (based on the numbers of people that actually make use of the existing preventive services).

What do we know about reminiscence in the general population?

Recent studies have shown that people reminisce for very different purposes: boredom reduction, death preparation, identity-forming, problem-solving, conversation, intimacy maintenance, bitterness revival and to teach/inform. In one study (Webster, 1995) no differences in the total amount of reminiscing at different ages was found but in two other studies it was found that middle-aged people reminisced less frequently than adolescents and older adults (Hyland & Ackerman, 1988; Webster, 1995). Three studies found a linear increase with age of reminiscence for the sake of intimacy maintenance and a linear decrease of bitterness revival reminiscence (Webster 1995; Webster & McCall, 1999; Rybash & Hrubi, 1997). In addition, the assumption that all older adults use reminiscence for the purpose of reviewing one's life must be rejected. This seems only the case for one third to half of ageing adults (Wink & Schiff, 2002; Merriam, 1993). Integrative reminiscence (similar to identity-forming reminiscence) and instrumental reminiscence (similar to problem-solving reminiscence) were found to correlate with suc-

cessful aging (Wong & Watt, 1991). Reminiscence for the sake of boredom reduction was found to correlate with higher levels of anxiety and depression (Cully et al., 2001; Cappeliez et al., 2005). Reminiscence for the sake of bitterness revival was found to correlate with higher levels of depression (Cully et al., 2001; Cappeliez et al., 2005). These correlations seem to be largely mediated by personality factors like neuroticism (Cappeliez et al., 2005).

How can the concept of reminiscence theoretically be related to prevention of depression?

Cognitive theories on the causes of depression have focused on negative attribution styles (Abramson et al., 1988), dysfunctional cognitions and schemas (Beck, 1967; 1976) and cognitive appraisals (Folkman & Lazarus, 1986). The linkage of processes that may be influenced by reminiscence and outcomes was elaborately worked out by Watt & Cappeliez (2000) and Cappeliez (2002). Table 18 gives an overview of processes and outcomes in integrative reminiscence.

Table 18 Processes and outcomes in integrative reminiscence intervention (Cappeliez 2002)

Processes	Outcomes
Constructive reappraisal of causes of losses, failures, problems in relationships, with distantiation and contextualisation.	Reduction of global, internal, and stable causal attributions for negative life events.
Cognitive reprocessing of successes and failures from various life periods and in various domains of functioning.	Development of more constructive thoughts and beliefs about the self, the world and the future.
Review of development of personal values, commitments and objectives through the entire life.	Enhancement of self-esteem through identification of renewed and/or additional sources of personal worth.
Recall of difficult experiences which were overcome.	Reduction of hopelessness by increase in control.
Reappraisal of negative events in terms of personal meaning.	Elaboration and increase of life meaning and purpose

Accordingly, reminiscence may reveal negative views of self, of one's present and past life and of one's mastery and responsibilities that cause depression. At the same time a systematic review of one's life may reveal events and stories that enable the development of alternative views.

How has reminiscence been clinically applied and with what results?

In the last twenty years reminiscence has been applied in a large number of settings and with a large number of target groups. Examples of applications are: community-residents with a major depression , elderly with moderate depressive

symptoms, nursing home residents, elderly with dementia, rural-dwelling older adults, elderly in assisted-living communities. Many different formats have been used. The most often used formats are individual interviews, reminiscence groups and individual writing. It has become standard practice to distinguish life-review (with structure, evaluation and synthesis as characteristics) from simple reminiscence (Haight & Dias, 1992). We conducted a meta-analysis to assess the effects of reminiscence on depression across different modalities and target-groups. An overall effect size of 0.84 (95% CI = 0.31 – 1.37) was found, indicating a statistically and clinically significant effect of reminiscence and life review on depressive symptomatology in elderly people. This effect is comparable to the effects commonly found for pharmacotherapy and psychological treatments. The effect was larger in subjects with elevated depressive symptomatology (d= 1.23) as compared to other subjects (d = 0.37). The relevance of distinguishing life-review from reminiscence was corroborated by our second meta-analysis on the effects of reminiscence on psychological well-being. A significantly larger effect was found in studies in which life-review was the intervention (d=1.04) as compared to studies that used simple reminiscence (d=0.40)

Under what conditions does reminiscence become effective?

On the basis of our review of recent trends in concepts and applications, we were able to formulate conditions under which reminiscence as an indicated preventive intervention for late-life depression seems most effective. Reminiscence interventions have to be structured with a focus on evaluation of both positive and negative events and on synthesis (1). Intervention protocols have to be specific about the processes that they try to influence and that can be linked with theories of depression (2) Reminiscence has to be combined with other therapeutic approaches (3). Counselors have to be trained in applying these approaches within the framework of reminiscence (4).

9.2.2 Conclusion about the review phase

Overall we conclude that, at average, international studies showed substantial effects on depressive symptomatology and that recent theoretical developments and empirical studies produced good guidelines for developing reminiscence interventions. Transition to the second phase was therefore justified. Having said this, a marginal comment is also appropriate. Of all the studies included in the meta-analysis we assessed only four studies as being of high quality. In addition the meta-analysis of the five studies with subjects with high levels of depressive symptomatology consisted of 391 subjects which is not a large number. It is surprising how few well designed effectiveness studies have been conducted in the last twenty years. We can only speculate about the cause. Possibly the inconsistent findings of studies and unclear concept in the first decades raised doubts among researchers about reminiscence as an effective intervention. It may well be that, as a consequence of the new developments and positive results of recent studies, the interest in reminiscence as a clinical intervention will grow again. In any case the evidence base for reminiscence as treatment of depression is still rather small and stresses the importance of conducting some more randomized controlled trials.

9.2.3 Results of the innovation and evaluation phase

Two new reminiscence interventions aiming at older adults with clinically relevant depressive symptoms were developed and evaluated: Looking for meaning in life and The story of your life. The effects of Looking for meaning in life on depressive symptoms, mastery and meaning in life were described in chapters 5 and 6. The effects of The story of your life on depressive symptoms, mastery and meaning in life were described in chapters 7 and 8. In this paragraph we will answer the questions of the second phase of our framework (fig. 9.1).

Does the intervention successfully reach the target group?

The participants of both interventions had scores on the CES-D that were higher than the cut-off score of 16. The participants of Looking for meaning in life had a mean score of 23.8 points on the CES-D. In addition the mastery of these participants was much lower than the average elderly population (12.8 vs. 17.4; Deeg e.a. 1998). Compared to a group of respondents from a representative survey who were matched on age, gender, educational, marital and occupational status the participants in the program also had less positive meaning profiles and their meaning problems were found in particular with regard to the sources of self and social relations. Hence, the participants in the program could be characterized as a self-preoccupied group with impoverished meaning.

Scores on the CES-D and SELE made it clear that the target group was successfully reached by The story of your life as well. At T0 the participants had an average score on the CES-D of 18.3 which is in the range of clinically relevant depressive symptoms for which the cut-off score is 16 (Beekman et al., 2002). Compared to the scores on the SELE by a group of respondents from a Dutch representative survey among independently living persons between 55 and 85 years of age (Steverink, Westerhof, Bode & Dittmann-Kohli, 2001), the participants in this study have a less positive meaning profile.

Both reminiscence interventions were aimed at older adults with depressive symptoms. The same recruitment strategy was followed. Advertisements were published in local papers. Leaflets were left at waiting rooms for general practitioners, public libraries etc. There was a difference in content of information, however. For Looking for meaning in life the focus was on coping with depressive symptoms. The subtitle refers directly to the aim of indicated prevention: 'a life-story course for older adults with depressive symptoms'. For The story of your life a different strategy was followed. In the leaflet and advertisement coping with depressive symptoms was not the central focus. The subtitle was ' for older adults who want to get a better grip on their lives'. This difference in recruitment strategy resulted in a different sample of participants. The participants of Looking for meaning in life were more vulnerable: they had a higher level of depressive symptomatology (23.8 versus 17.5), lower levels of mastery (12.8 versus 15.5). The profile of the participants of Looking for meaning in life is much more like the profile of participants of the COPING WITH DEPRESSION COURSE. Most of the participants in that course have a high level of depressive symptomatology and about 50% even have a major depression, which makes the intervention at least partly a form of early treatment (Mrazek & Haggerty, 1994). A recruitment strategy that makes coping with depressive symptoms the central focus attracts older adults with a moderate (but clinically relevant) level of depressive symptoms. This profile fits more clearly with the aims of indicated prevention.

How is the new intervention assessed by the target group?

In both studies an evaluation questionnaire was sent to the participants after the intervention. The results of these questionnaires were not reported in the former chapters. We will summarize the results now.

At average the participants of Looking for meaning in life missed only one of the twelve sessions. Before the start of the intervention they were asked for their expectations regarding the course. The most mentioned expectations were: increase of meaning in life (67%), reduction of depression (55%). After the interventions about half the participants agreed that the course had met these expectations but for about half of these participants this was not or only partly the case. Out of a range from 1(very bad) to 10 (excellent) the participants assessed the course with 8 points. About eighty percent of the participants were (highly) satisfied with the number of sessions, the duration of the sessions and the home-work assignments. But 52% of the participants would have liked more time in the sessions for conversations.

At average the participants of Looking for meaning in life missed one of the 7 sessions. 48% of the participants agreed that the intervention had met their expectations totally or largely. For 52% this was only partly the case. Out of a range from 1(very bad) to 10 (excellent) the participants assessed the course with 7.6 points. About ninety percent of the participants were (highly) satisfied with the number of sessions and the home-work assignments. 50% of the participants would have liked sessions of longer duration.

Is the intervention apparently effective?

The effects of Looking for meaning in life were studied in a one-group pre-post test design. After the intervention the participants had significantly less depressive symptoms and a significant increase in mastery and meaning in life. Lipsey & Wilson (1993) have shown that an effect size of .56 to 1.2 can be considered as large, while effect sizes of .33 to .55 are moderate, and effect sizes of 0 to .32 are small. Using this framework, the effect-sizes for depression (0.39), mastery (0.59) and meaning in life (.50) were in the medium range. The effects of The story of your life were studied in a quasi-experimental design with a waiting-list control group. After the intervention the participants had significantly less depressive symptoms and significantly improved mastery in comparison with the control group. The effect-sizes were small for both depression (0.26) and mastery (0.21). For women the effect-size for depression was in the medium range. Personal meaning improved significantly for participants in the intervention but not in comparison to the control group. Furthermore, there was a specific effect of the intervention in that it resulted in a decline of negative evaluation of the self and an increase in positive evaluation of social relations. These findings were stronger for women than for men and stronger for people whose depressive symptoms also declined more. Last, the program resulted in more positive and less negative evaluation of the past as well as in less negative evaluation of the future. Again, this was found most strongly for women and for those who improved most with regard to depression.

The effects-sizes of Looking for meaning in life and The story of your life for depression were lower (0.39) and (0.26) than may be expected on the basis of our meta-analysis (0.84). What could explain this difference? In the case of Looking for meaning in life the counselors reported that many participants did not see a relationship between the program and coping with depression. In addition they missed the possibility for group discussions about their memories. In Looking for

meaning in life reminiscence is combined with elements of creative therapy. There is a focus on imagination and creative expression of memories. Although exchange of memories and creative products takes place, verbal evaluation is not stimulated. For about one-third of the participants (more so for women) this non-verbal approach had large effects and may have been essential (Bohlmeijer & Vinke, 2006; Pizzi, 1987), but many participants would have liked more room for discussion and dialogue, and creative expression did not make sense to them. As for the story of your life the situation is somewhat different. To explain the results it may be useful to compare the study with a project in which large effects were found (Watt, 1998; Watt & Cappeliez, 2000). In Table 19 the characteristics of both studies are given.

Table 19 Comparison of Watt & Cappeliez study and The story of your life.

Characteristics of studies	Watt & Cappeliez, 2000; 2002	Bohlmeijer et al., 2006
Target group	• Elderly living in the community with depressive symptomatology	• Elderly living in the community with depressive symptomatology
Inclusion criteria	• 60 years of age and older • Not currently receiving medication • At least a score of 14 on GDS	• 55 years of age and older • Not currently receiving medication • At least a score of 10 on CES-D
Exclusion criteria	• Elevated risk of suicide • Alcohol or drug abuse • Psychiatric disorder other than depression • Significant cognitive impairment • Current participation in another psychotherapeutic intervention	• Elevated risk of suicide • Alcohol or drug abuse • Psychiatric disorder other than depression • Significant cognitive impairment • Current participation in another psychotherapeutic intervention
Control group	• Active socialization	• Waiting-list
Design	• RCT	• Quasi-experimental
Intervention	• Integrative reminiscence with cognitive therapy • 6 weekly sessions of 90 minutes	• Integrative reminiscence with narrative therapy • 7 weekly sessions of 90 minutes
Recruitment	• Mental health agencies and community advertising	• Mental health agencies and community advertising
Setting for intervention	• University	• Mental health care institutes
Counselor	• 1 master degree psychologist	• Social psychiatric nurses, psychologists
Training of counselors	• 4 weeks, 2 hrs per week supervision, during intervention	• 1 day training; 1 half-day supervision

The comparison clarifies that, apart from differences in design, there are many similarities between the two studies but that they differ on three important elements. In the Watt & Cappeliez study the minimum levels of depressive symptomatology were much higher than in our study, resulting in a higher level of depressive symptoms at pre-treatment. The treatment was administered by one psychologist at master's level who was intensively supervised by a registered clinical psychologist (2 hours a week) and who underwent four weeks training. The counselors in our study were a mixture of social psychiatric nurses and psychologists who attended a one-day training course and one supervision meeting of three hours. The Watt & Cappeliez study used cognitive therapy in combination with reminiscence. In our study reminiscence was applied in combination with narrative therapy. These differences could explain at least part of the differences in effect sizes between the studies. Higher initial levels of depressive symptoms leave more room for improvement and more intensive training and supervision of one counselor may improve the effectiveness of his of her interventions in the group. Another explanation could be that in general, cognitive therapy is more effective than narrative therapy but at this moment no data are available to corroborate this hypothesis because the effectiveness of narrative therapy has not yet been studied in randomized controlled trials (Cuijpers et al., submitted).

In addition to depressive symptomatology we were interested in mastery and meaning in life as outcomes of the intervention. Both participants in Looking for meaning in life and participants in The story of your life improved significantly on mastery, the effect size being in the medium range for Looking for meaning in life and in the small range for The story of your life. We think this is an important finding because low mastery is one of the risk factors for late life depression (Smit et al., 2004) and high mastery is a protective factor against depression in the presence of risk factors (Zarit et al., 1999). The importance of mastery for mental health was recently confirmed by studies of two colleagues. It was found that adults with a parental history of depression or anxiety or who have been exposed to childhood abuse and who have low levels of mastery generated about three times more health-related costs than the same adults with high levels of mastery (Smit et al., submitted). In a sample of recently widowed individuals depressive symptomatology was strongly predicted by lower levels of mastery (Onrust et al., in press). So we expect a growing need for mastery-improving interventions in the near future. This thesis suggests that, what has been theoretically underpinned (e.g. Wong, 1995, Wong, 1998; Watt & Cappeliez, 2002), reminiscence may indeed help people acquire more mastery. The effects on mastery were larger for participants in Looking for meaning in life than for participants in The story of your life. An explanation could be that Looking for meaning in life is much more focused on details and the sessions are much more structured. In The story of your life participants receive global questions about their lives that may prompt a whole range of positive and negative memories. In the sessions the counselors try to help to integrate these memories into self-affirming, coherent life-stories but this must be done in a relatively short time and is more dependent on the interaction between participant and counselor.

We were also interested in meaning in life as an outcome of the reminiscence interventions. Improved meaning in life is always mentioned as an outcome of reminiscence (e.g. Butler, 1963; Haight & Webster, 1995; Garland & Garland, 2002) but has never been tested in outcome studies as yet. We were not only interested in overall meaning in life but also in changes of the participants of the evaluation of different sources of meaning. The instrument that we chose (the

SELE) was especially designed for this purpose (Dittman-Kohli & Westerhof, 1997). As described in chapter 6, overall meaning in life (defined as the total number of positive answers participants give in response to the sentence completion test) improved significantly for participants in Looking for meaning in life, the effect size (0.5) being in the medium range. In chapter 8 we described how participants in The story of your life improved as well but not significantly more than participants in the control group. In both studies it was found that participants in the intervention group not only had much less negative evaluations about self, as may be expected from reminiscence interventions, but also more positive evaluations of social relations were reported. This last finding is especially relevant because one may expect that a positive evaluation of social relations will make the participants more active in maintaining these social relations which will reduce the risk for loneliness and depression in the future. In the study on The story of your life it was found that participants were not only more positive and less negative towards their past (as, once again may be expected from reminiscence) but also less negative about their future. This stresses an important aspect of reminiscence, especially for younger age groups. Butler (1963) was mainly interested in people in their last years of life. To him life-review was a process of reconciliation with how life has been. The future is very limited as death is nearby and aging is dominated by envisioning death and parting from life. So, from this perspective, important outcomes of reminiscence for people at a really advanced age would be reducing death-anxiety, reconciliation and ego-integrity. People between 60 and 80 years have a different perspective. They still have a lot of time ahead in which social participation and personal development can be important goals. For these people positive beliefs about the future and having motivating plans should be outcomes of life-review as well. The studies in this thesis suggest that reminiscence is indeed having this effect on (some of) the participants in this age-group.

Are there any prognostic variables?

For both interventions it was found that initial levels of mastery, age, gender or education did not predict differences in depression as an outcome. For Looking for meaning in life it was found that higher initial levels of depressive symptomatology predicted higher change scores on depressive symptomatology which makes sense on the basis of the observation that higher levels of depressive symptoms leave more room for improvement. As basic demographic characteristics do not predict effects of both interventions, one could pose the question if any other factors may play a role. This is not just a theoretical question because improving the inclusion or indication criteria for reminiscence intervention may prove a good way to enhance its effectiveness. It is of note that the 30% to 40% of the participants that profited from both reminiscence interventions corresponds remarkably to one of the findings of our review that in several studies only 30% to 40% of older adults in the general population are actively engaged in life-review (Wink & Schiff, 2002; Merriam, 1993; Webster & McCall, 1999). It could be hypothesized that present engagement in life-review as well as attitude towards reminiscence in general are significant predictors of the effects of reminiscence interventions. For Looking for meaning in life it would be relevant to include attitude towards creative expression and as possible prognostic factors in further research. In addition several studies incorporated in our review found that reminiscence styles correlate with personality factors and psychological distress. In theory, this would make older adults with reminiscence style of bitterness revival or boredom reduction prime candidates for reminiscence interventions (Cully et al., 2001). But until this date it

has not been studied whether these reminiscence styles can be changed into more 'healthy' ones. accordingly, reminiscence styles at pre-intervention should be taken into account as possible prognostic factors.

Has the intervention to be adapted?

On the basis of the assessments by the participants and the moderate effects on depression, mastery and meaning in life it can be concluded that adaptations to both interventions are useful.

For Looking for meaning in life we would suggest incorporating opportunities for dialogue and evaluation. This could be done by changing the 4th, 8th and 12th sessions into talking session. For participants who profit from the creative, non-verbal methods the main structure of the intervention remains intact. For other participants the intervention may become more effective as they can evaluate their memories and be helped to discuss the ways these memories can be instrumental in better coping with their current problems.

For The story of your life we suggest several adaptations. In the first sessions more emphasis can be placed on clarifying and specifying the aims of the participants for participation. This could give reminiscing more direction. Each new session could start with a short review of the last session with the question how that reminiscence has helped the participant in relation to his or her working aim. One of the goals of the intervention is to change dominant stories which express being a victim towards alternative stories expressing agency and empowerment. It could well be that a number of questions that the participants have to answer at home could be rephrased or changed in a way that does facilitate this process of 're-storying' more intensely. In addition a model for meaninglessness in relation to depression (Westerhof et al., 2006) could be used to specify what stories and thoughts the counselors have to be extra alert for and how they can deal with these thoughts from a narrative therapeutic framework. In addition more training and supervision for counselors is necessary.

9.2.4 Conclusions from the innovation phase

How are the results of the second phase to be assessed? In chapter one it was asserted that a relevant criteria for assessing change scores on the CES-D is whether the change is crossing the cut-off of 16 and whether the change is at least 5 points (Beekman et al., 2002). With regard to Looking for meaning in life the change for all participants was 3.4 points and did not cross the cut-off of 16. So at this stage, the intervention does not meet the requirements for a clinically relevant intervention. With regard to The story of your life the change for all participants was 3.5 points but did cross the cut-off of 16. At this stage the intervention meets one of the two requirements for a clinically relevant indicated preventive interventions.

When we combine the results of phases one and two, four explanations for the (partly) disappointing results can be given.

1. Our review suggests that it is crucial that in the reminiscence intervention protocol processes are linked to outcomes and that these relevant process are precisely and elaborately described. A good example was given in table 18. In the protocols of both interventions there is certainly room for improvement on this point.
2. Our review suggests that the effects are at least partly dependent on an effective application of the additional therapeutic approach. In our interventions these were creative therapy and narrative therapy. For most of the counselors these were new approaches. It could well be that a more intensive training and supervision is necessary to teach the relevant skills effectively.
3. Our review suggests that older adults differ in their attitude towards reminiscence and life-review. For some ageing people, finding meaning in loss and life-events is essential for coping with depression but for many others this is not so clear. In addition studies have shown older adults who reminisce for the purpose of bitterness revival have a higher risk of becoming depressed (Cully et al., 2001). This would make them theoretically good candidates for reminiscence interventions, but at this stage it has not been studied whether this style of reminiscence can indeed be changed to more constructive styles of reminiscence. This is all the more relevant as personality is an important factor (Cappeliez et al., 2005).
4. For many participants the relationship of reminiscence and coping with depression was not obvious. For some of these participants this changed during the program but for others this relationship was still not obvious at the last session. If one does not understand how participating in the intervention is helping one to cope with the central problem, one may not expect a change. On one hand it could be that this is mainly true for participants with a negative attitude towards reminiscence. In that case improving the information on this subject in the training materials would not be effective. On the other hand, if this lack of clarity is not dependent on attitude towards reminiscence, it would be effective to improve the information.

Although the interventions did not meet the requirements that can be put to indicated preventive interventions yet, we conclude that the results are such that it is worth conducting randomized controlled trials. Decisively, theory-based adaptations to the interventions can be made without fundamental changes to the protocols. The consideration that in both interventions about one third of the participants did profit greatly from the intervention and that these effects were maintained three months after the intervention is also of importance.

9.3 Recommendations for further research

In the next phase randomized controlled trials have to be conducted. We formulate the following recommendations for these effectiveness studies.

1. Protocols have to contain more detailed information on the processes that are decisive in changing depression.
2. Training and supervision of counselors has to be more intensive.
3. The studies should include questionnaires measuring possible prognostic factors: reminiscence styles, personality, attitude towards reminiscence, at-

titude towards creative expression and imagination, number of recent life-events.

4. Measurements have to be conducted at pre-intervention, post-intervention, at 3 months follow-up and 1 year follow-up. This design would give good insight into the effect maintenance and would permit analysis of mediating effects of mastery and meaning in life.
5. If before the intervention an applicant is diagnosed with a depressive disorder, that applicant is referred for psychological treatment. But we recommend using a structured instrument for measuring diagnosis of depression six month after the intervention. If significantly less depressive disorders in the experimental group are found in comparison to the control group this lends further weight to effectiveness of these interventions.
6. The use of questionnaires measuring positive mental health (psychological well-being, quality of life) is also recommended.
7. The use of qualitative research methods could give more context-specific information on what elements of the interventions are effective for participants and why.

9.4 Limitations of the present thesis

It is important to stress that at this stage we know little of the effectiveness of the two new interventions. To test the effectiveness of an intervention randomized controlled trials are the most reliable design and these still have to be conducted. Another drawback is that only a limited number of outcome measures were used. The main focus was on depressive symptomatology and less on psychological well-being which cannot be simply considered as two ends of the same continuum (Diener et al., 1999; Keyes, 2005). Quality of life and health related costs are also important outcomes that were not assessed until now. Additionally some research questions that were phrased as part of our framework in chapter one were not expanded on. The needs of older adults for reminiscence interventions were not assessed empirically. General questionnaires were used to assess how the participants evaluated the new interventions but it would have been better to additionally perform in-depth interviews with participants who did benefit from the intervention in order to get a better idea of the causes. This is now done as part of the randomized controlled trial on the effects of Looking for meaning in life but this kind of research better fits with the explorative phase of research. Follow-up measures were only taken with respect to the Story of your life and were restricted until 3 months after the intervention. So at this time we have no idea at all if the effects are maintained for a longer period after the interventions.

9.5 The future

We want to end this thesis with some reflections on the future (implementation) of reminiscence in mental health care in the Netherlands. These reflections are (partly) premature because we have to await the results of the randomized controlled trials that have to be conducted. But let us be optimistic for a moment and assume that the effects of the adapted interventions on depression meet the standards for evidence based indicative preventive interventions.

9.5.1 Reminiscence as indicated prevention.

At this stage The coping with depression course is the most appropriate intervention for older adults with high levels of depressive symptomatology. In this course participants' psycho-education is combined with training in skills such as relaxation, positive thinking and assertiveness. In Looking for meaning in life and The story of your life, depression and how to cope with it are not discussed. In general, however, reminiscence interventions offer a good alternative when one of the following issues is a central focus in the story of the client:

- the expression of meaninglessness (e.g. the absence of motivating goals)
- the wish to find meaning in losses and life-events in the past and present
- the loss of coherence in one's life-story
- the wish to find reconciliation /reconcile oneself with one's life-course

Looking for meaning in life would also be a good alternative for older adults who have 'trouble' verbalizing their thoughts and feelings. Another interesting application is that both Looking for meaning in life and The story of your life may indicated for older adults who participated in the The coping with depression course. For many participants the level of depressive symptoms may be reduced but still well be above the cut-off score of 16. For them reminiscence can be a worthwhile follow-up intervention to further building up meaning in life, reducing depressive symptoms and anchoring what has been learned in the COPING WITH DEPRESSION COURSE.

9.5.2 Reminiscence as treatment

One possibility that was not explored within the context of this thesis is the application of reminiscence as treatment of depression. In several studies (e.g. Fry, 1983; Watt & Cappeliez, 2000, Serrano, 2004) reminiscence was applied as a treatment for older adults with major depressive disorders. Our meta-analysis showed that these treatments were highly effective. A major advantage of reminiscence is that is links in with a daily, recognizable - and for many older adults - meaningful activity. In a recent study on the effects of cognitive behavioral therapy (CBT) for late-life anxiety it was concluded that CBT was not a highly attractive intervention for this target group as 'CBT tends to focus on the present and on specific techniques to learn how to handle anxiety' (Schuurmans, 2005, pg 146). The integration of CBT within reminiscence may be a more attractive alternative. The study of Watt & Cappeliez (2000) offers a very good example and we would recommend replication of this study as a first step.

9.5.3 Reminiscence and age

With regard to the attractiveness of reminiscence for older adults a marginal comment has to be made. With respect to implementation of different formats of reminiscence age might be of importance. The two interventions that we evaluated but also for example the intervention developed by Watt & Cappeliez (2000) were directed at people with a minimum age of sixty years. These studies showed however that most of the participants were also younger than seventy-five. So these kinds of group formats which require preparation and are very intensive might be very suitable for people between sixty and seventy-five years of age. The prevalence of depression is also high among adults of seventy-five and older, most notably among inhabitants of nursing- and residential homes. It might well be that for

reminiscence as indicated prevention or treatment of depression, an individual format is more appropriate. A good example of such a protocol was given by Serrano & Gatz (2004).

9.5.4 Further applications of reminiscence

Professionals working in mental health care don't always have the patience of researchers. Looking for meaning in life has already been adopted by 60% of the mental health care institutes in the Netherlands without additional investments aiming at implementation. The course is now being adapted for older adults with a long history of psychiatric treatment. The story of your life has already been adapted for older Morrocan and Turkish people. In theory it would be more appropriate to await the results of randomized controlled trials but in practice this is not always possible for two reasons. The first reason is that innovative studies are often financed by funds on condition that the newly developed intervention will be made available for health care institutes. The second reason is that it is not always sure that one will get the funds for conducting a randomized controlled trial. And, conversely, a high level of implementation is often a compelling argument for making funds available. The story of your life has also been adapted as a self-help manual for adult children to interview their parents. This manual was used in a new intervention for adults who are informal carers for their parents. The results of a pilot-project were promising (de Roode & Bohlmeijer, 2006)

In the past years there has been a lot of interest in reminiscence and life-story methods in general (Bohlmeijer, Westerhof & Mies, 2006). One can only speculate about the reasons. Reminiscence and story-telling are recognized as a meaning-making approaches (Wong, 1998; Randall, 2002) and there may be a substantial need for meaning in life in our times (Bohlmeijer, 2006). But we have to remember that this thesis makes clear that reminiscence is certainly not effective for everyone. Apart from further effectiveness research, the task for science is now to guide us on the question for whom it is and for whom it is not effective. So that reminiscence interventions find their ways to the right people at the right moment.

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Abstract

Chapter 1 presents a general introduction to this thesis. It is argued that the high prevalence of major and minor depression among older adults warrants a public mental health approach in which indicated prevention has to play a major role. Reminiscence is most likely an attractive indicated preventive intervention for older adults with depressive symptomatology but was not applied as such in mental health care at the start of this thesis. The aim of this thesis is to develop and evaluate two new preventive reminiscence interventions for older adults with depressive symptomatology. A model for the evidence based development and implementation of preventive interventions is presented as a framework.

Chapter 2 presents a review of the progress and emerging trends in conceptual and applied understanding of reminiscence in the last two decades. The topics of (1) types and functions of reminiscence, (2) reminiscence throughout the life-span, (3) processes of reminiscence, and (4) clinical interventions and their effectiveness are addressed. Most promising are clinical interventions in which structured and evaluative reminiscence (life-review) is combined with other therapeutic approaches. Reminiscence therapy may be especially indicated for depressed people who in response to negative life-events or life-transitions have spontaneously started to review their lives and think about the meaning in life.

Chapter 3 gives a report of the results of a meta-analysis that was conducted to assess the effectiveness of reminiscence and life review on late-life depression across different target groups and treatment modalities. Twenty controlled outcome studies were retrieved from Psychlit, Medline and Dissertation Abstracts. For each study a standardised effect size, d, was calculated and a random-effects meta-analysis was conducted. An overall effect size of 0.84 (95% CI = 0.31 – 1.37) was found, indicating a statistically and clinically significant effect of reminiscence and life review on depressive symptomatology in elderly people. This effect is comparable to the effects commonly found for pharmacotherapy and psychological treatments. The effect was larger in subjects with elevated depressive symptomatology (d = 1.23) as compared to other subjects (d = 0.37). Other characteristics of the subjects or interventions were not found to be related to increased or decreased effect sizes. It was concluded that reminiscence and life review are potentially effective treatments for depressive symptoms in the elderly and may thus offer a valuable alternative to psychotherapy or pharmacotherapy. Especially in non-institutionalised elderly people – who often have untreated depression – it may prove to be an effective, safe and acceptable form of treatment. Randomized trials with sufficient statistical power are necessary to confirm the results of this study.

Chapter 4 presents the results of a meta-analysis to assess the effectiveness of reminiscence and life review on psychological well-being across different target groups and treatment modalities. Fifteen controlled outcome studies were retrieved from Psychlit and Medline Abstracts. For each study a standardised effect size, d, was calculated and a random-effects meta-analysis was conducted. An overall effect size of 0.65 (95% CI = 0.41 – 0.89) was found, indicating a statistically significant effect of reminiscence and life review on life-satisfaction and emotional well-being in elderly people. A significant larger effect was found in studies in which life-review was the intervention (d = 0.98) as compared to studies that used simple reminiscence (d = 0.50). Other characteristics of the subjects or interventions were not found to be related to increased or decreased effect sizes. It was concluded that reminiscence in general but especially life review are potentially effective methods for the enhancement of psychological well-being in the elderly.

Particularly in elderly people with a reduced level of psychological well-being it may prove to be an effective, safe and acceptable form of treatment. Randomised trials with sufficient statistical power are necessary to confirm the results of this study.

Chapter 5 presents the results of the evaluation of the first new intervention: Searching for the meaning in life. Life-review may be further enhanced by the creative expression of memories in stories, poems or drawings. In this way people are encouraged to create and discover metaphors, images and stories that symbolically represent the subjective and inner meaning of their lives. In this chapter, a new intervention which combines reminiscence and creative expression aimed at early treatment of depression, is described. Searching for the meaning in life consists of twelve group sessions of 2.5 hours each. Each session focuses on one theme (for example: friendships, houses where you lived, turning points). Each session has a structure in which reminiscence, dialogue and creative expression alternate.
The results of a one-group pre-post test design show that the intervention Searching for the meaning in life may generate medium-sized effects in reducing depressive symptoms in women, but not in men. Additionally, it appears to have medium effectiveness in improving mastery in both men and women. Several possible ways to enhance the effectiveness of the intervention are described.

Chapter 6 gives a report of the effects of Searching for the meaning in life on personal meaning. 57 older persons that participated in the program filled out a sentence completion questionnaire measuring personal meaning and a depression scale before and after the program. In comparison to a group from a representative survey which was matched on life contexts, the personal meaning profile of the intervention group was more negative and more focused on the self. Hence, a group with impoverished meaning was participating in the program. After the intervention the personal meaning profile was more positive, in particular with regard to self-evaluations and evaluations of social relations. The group which improved most on depression also improved most on personal meaning. It is concluded that further research on the program is warranted.

In chapter 7 the results of a explorative, quasi-experimental study on the effects of THE STORY OF YOUR LIFE on depressive symptoms are presented. The story of your life combines integrative reminiscence with narrative therapy. The program consists of seven sessions of two hours and one follow-up session after eight weeks. It is directed at community-dwelling people of 55 years and older with mild to moderate depressive symptoms. Each session has a different theme: youth and family, work and care, love and friendship, difficult times, life as a book with chapters, metaphors, meaning in life. After the intervention the participants showed significantly less depressive symptoms and higher mastery, also in comparison with a waiting-list control group. Demographic factors and initial levels of depressive symptomatology and mastery were not found to moderate the effects. The effects were maintained at a three months after completion of the intervention.

In chapter 8 the results of a explorative, quasi-experimental study on the effects of THE STORY OF YOUR LIFE on meaning in life are presented. A significant improvement in the overall meaning in life in the participants of the intervention is found, but this these effects were not significant in comparison to a waiting-list control group. The group that improved most in their depression scores also improved in their meaning in life. Furthermore, there is a specific effect of the intervention in that it results in a decline of negative evaluations of the self and an increase in positive evaluations of social relations. These findings are stronger for women than for men and stronger for persons that also declined more in depressive symptoms. Last, the program results in more positive and less negative evaluations

of the past as well as in less negative evaluations of the future. Again, this is found most strongly for women and persons improving most with regard to depression.

In chapter 9 the implications of the main findings of this thesis are discussed within the framework for developing and evaluating interventions. The conclusion about phase 1 (review) is that internationals studies have shown substantial effects on depressive symptomatology and that good guidelines for developing reminiscence interventions can be produced on the basis of theoretical developments and empirical studies. As to the second phase (innovation & evaluation) it is concluded that the effects of the two new reminiscence interventions on depressive symptomatology are lower than may be expected on the basis of our meta-analysis. When the results of phase 2 were compared to the review phase, four recommendations could be given. (1) specification of processes that are linked up to reduction of depression. (2) more intensive training of counselors on the additional therapeutic approaches. (3) the inclusion of questionnaires measuring relevant prognostic factors. (4) more elaborate information for the participants about how reminiscence and depression are related. The chapter ends with some reflections on the future of reminiscence as indicated prevention and treatment of depression in later life.

Samenvatting

Achtergrond

Wanneer rekening wordt gehouden met verloren levensjaren en levensjaren doorgebracht in ziekte behoort depressie in 2020 tot de drie ziektes met de zwaarste belasting. In Nederland heeft ongeveer 3% van de ouderen in Nederland een klinische depressie. Daarnaast heeft 10 tot 15% van de ouderen last van klinisch relevante depressieve klachten. Zowel depressies als sub-klinische depressies hebben grote invloed op de kwaliteit van leven. Mensen met een sub-klinische depressie hebben daarnaast een verhoogd risico dat hun depressieve klachten verergeren en chronisch worden (langer dan 8 maanden gaan duren). Het signaleren van depressieve klachten in een vroeg stadium en het bieden van laagdrempelige, psychologische hulp zijn daarom belangrijke doelen en vormen de kern van (geïndiceerde) preventie.

Eén van de verklaringen waarom sub-klinische depressies vaak voorkomen bij ouderen is dat zij relatief veel verlieservaringen hebben. Ernstige verlieservaringen doen een groot beroep op de veerkracht van mensen. In eerste instantie zullen de meeste mensen zich hulpeloos voelen en passief worden (overweldigd). Ook zal het leven tijdelijk als minder zinvol worden ervaren. Doelen die voorheen belangrijk werden gevonden, zijn dat nu niet meer. Er moet een nieuwe balans gevonden worden. De meeste mensen zijn uiteindelijk in staat om deze periode (na een periode van rouw) goed door te komen. Voor vele anderen geldt dit echter niet. Zij kunnen het verlies moeilijk verwerken (blijven zich verbitterd en slachtoffer voelen), vereenzamen, zijn niet in staat om nieuwe positieve doelen te stellen en hebben geen vertrouwen dat zij in staat zijn om hun situatie positief te beïnvloeden. Wanneer dit het geval is, neemt de kans op depressie sterk toe. En op dat moment kan preventieve zorg effectief zijn. Zo zijn er in Nederland reeds cursussen waarin ouderen leren om te gaan met depressieve klachten, gespreksgroepen rond rouwverwerking en zelf-management trainingen. Een interventie die in de ambulante preventieve geestelijke gezondheidszorg in Nederland nog niet werd toegepast is reminiscentie. Reminiscentie is een vorm van hulpverlening waarbij het ophalen van herinneringen centraal staat. Reminiscentie zou om verschillende redenen juist voor oudere mensen aantrekkelijk kunnen zijn. Het sluit aan bij een herkenbare, dagelijkse activiteit: herinneren. De deelnemers aan reminiscentie hoeven geen nieuwe therapeutische taal of kader aan te leren. Het toont optimaal respect voor ouderen; het focust immers op de levenservaring en levenswijsheid van oudere mensen. De doelstelling van dit proefschrift is om reminiscentie op een wetenschappelijk onderbouwde wijze toe te passen voor mensen van 55 jaar en ouder met depressieve klachten. Allereerst werd daartoe een overzichtsstudie (review) van wetenschappelijk onderzoek naar reminiscentie verricht (hoofdstuk 2) en werd middels twee meta-analyses van internationaal onderzoek onderzocht welke effecten reminiscentie-interventies hebben op depressie en psychologisch welbevinden (hoofdstuk 3 en 4). Vervolgens werden twee nieuwe interventies *Op zoek naar zin* en *Het verhaal van je leven*[4] ontwikkeld en als onderdeel van de innovatie geëvalueerd. De effecten van *Op zoek naar zin* worden in hoofdstuk 5 en 6 beschreven. De effecten van *Het verhaal van je leven* in de hoofdstukken 7 en 8. Het proefschrift eindigt met de vraag over de betekenis van de gevonden resultaten voor verder onderzoek en toepassing.

[4] Per 1 januari 2007 is de titel *De verhalen die we leven*.

De wetenschappelijke kennis over reminiscentie: de empirische onderbouwing

De grondslag voor reminiscentie als psychologische interventie werd gelegd door Butler (1963) in zijn beroemde artikel *The life-review: an interpretation of reminiscence in the aged*. Hierin beschreef hij zijn klinische observatie dat er een toename van reminiscentie – de daad of het proces van herinneringen ophalen – is bij ouderen, en veronderstelde dat dit te wijten was aan het universeel optreden van een innerlijke ervaring of mentaal proces van reflecteren op het eigen leven. Hij benoemde dit proces 'life-review' en definieerde dit fenomeen als een spontaan of natuurlijk optredend proces dat wordt 'gekarakteriseerd door een progressieve terugkeer naar de bewustwording van ervaringen uit het verleden, en in het bijzonder de heropleving van onopgeloste conflicten'. Vanaf de tweede helft van de jaren 80 zijn wetenschappers reminiscentie meer systematisch en empirisch gaan onderzoeken. Empirisch bevolkingsonderzoek laat zien dat mensen om acht verschillende redenen reminisceren: vermindering van verveling, voorbereiding op de dood, identiteitsvorming, oplossen van problemen, converseren, behouden van intimiteit, herleving van verbittering en kennisoverdracht. Het 'life-review' van Butler komt het meest overeen met identiteitsvormende reminiscentie. Recent onderzoek laat zien dat reminiscentie met als doelen het bestijden van verveling en het uiten van verbittering positief gecorreleerd is met depressie en angst. Ook blijkt dat mensen met een 'neurotische persoonlijkheid' vaker deze stijlen van reminiscentie toepassen. Reminiscentie gericht op identiteitsvorming en het oplossen van problemen lijkt eerder positief gecorreleerd met geestelijk welzijn. Identiteitsvormende reminiscentie (life-review) is niet alleen voorbehouden aan ouderen. Ook adolescenten, jongvolwassenen en volwassenen blijken volop gebruik te maken van deze vorm van reminiscentie. Tevens blijkt dat de helft van alle ouderen geen proces van life-review doormaken, zoals door Butler beschreven.

In toenemende mate wordt ook gewezen op het belang om onderscheid te maken tussen reminiscentie en life-review. Reminiscentie beperkt zich tot het ophalen van en vertellen over vooral positieve herinneringen, is meestal ongestructureerd en spontaan, met beperkte doelstellingen. Life-review is gestructureerd en systematisch (bestrijkt de hele levensloop), richt zich op zowel positieve als negatieve herinneringen, staat stil bij de betekenis van herinneringen (evaluatie) en tracht alle herinneringen te integreren tot een coherent levensverhaal. Een nieuwe ontwikkeling is om life-review te combineren met andere therapeutische benaderingen (cognitieve therapie, oplossingsgerichte of narratieve therapie). Als psychologische behandeling of preventieve zorg van depressieve klachten bij ouderen is dit een veelbelovende benadering. Immers negatieve gedachten en visies op het eigen leven die samenhangen met depressie kunnen actief worden besproken en bijgesteld.

Wereldwijd hebben inmiddels vele onderzoeken naar de effecten van reminiscentie op depressie en psychologisch welbevinden plaats gevonden. Middels twee meta-analyses werd onderzocht wat deze onderzoeken gemiddeld aan effecten vonden. Twintig studies onderzochten de effecten van reminiscentie op depressie. Een gemiddeld effect van 0.84 werd gevonden dat als groot kan worden beschouwd. In 5 van de 20 studies werd reminiscentie toegepast bij mensen met ernstige depressieve klachten. Het gemiddelde effect van deze studies was aanzienlijk en significant groter (1.23) dan het effect van de studies die zich richtten op mensen met milde depressieve klachten (0.37). Vijftien studies onderzochten het effect van reminiscentie op psychologisch welbevinden (leefsatisfactie en emotioneel welbevinden). Een gemiddeld effect van 0.54 werd gevonden dat als middelgroot kan worden beschouwd. Life-review interventies leidden tot significant grotere effecten

(1.04) dan ongestructureerde reminiscentie (0.40). Twee kanttekeningen moeten bij deze resultaten worden geplaatst. De kwaliteit van veel studies is matig. De studies betroffen een grote diversiteit aan doelgroepen, settings en interventies.

Twee nieuwe reminiscentie- interventies in Nederland

In het kader van dit proefschrift werden twee nieuwe reminiscentie interventies ontwikkeld. *Op zoek naar zin* (Franssen & Bohlmeijer, 2003) is een preventieve cursus voor mensen vanaf 55 jaar met depressieve klachten. De cursus bestaat uit twaalf bijeenkomsten waarin de volgende thema's worden behandeld: de eigen naam, geuren van vroeger, huizen waar je woonde, normen en waarden, handen, foto's, vriendschap, levenslijn en keerpunten, levensbeschouwing en zingeving, verlangen en identiteit. Zintuiglijke herinneringsoefeningen, creatieve verbeelding en groepsgesprekken wisselen elkaar af in elke bijeenkomst.

In samenwerking met zes GGZ-instellingen werden de effecten van de cursus onderzocht. Aan dit onderzoek namen 78 ouderen deel. De cursus werd gegeven door preventiewerkers, creatief therapeuten, sociaal psychiatrisch verpleegkundigen of GZ-psychologen die daarvoor een tweedaagse training hadden gevolgd. Voor en na de cursus kregen de deelnemers een vragenlijst voorgelegd. Het focus lag op depressieve klachten, 'mastery' (het gevoel dat iemand invloed heeft op zijn of haar leven) en persoonlijke zingeving. Na afloop van de cursus hadden de deelnemers significant minder depressieve klachten en meer 'mastery'. Ook het persoonlijk zingevingsprofiel van de deelnemers was na afloop positiever. De deelnemers oordeelden met name positiever over zichzelf en hun sociale relaties.

Het verhaal van je leven is een preventieve gespreksgroep voor vier mensen van 55 jaar en ouder met depressieve klachten. De gespreksgroep is bedoeld voor mensen die zijn 'vastgelopen' in hun leven en weinig toekomstmogelijkheden zien. Dit kan zich uiten in gevoelens van somberheid, spanning en zinloosheid. Voor elke bijeenkomst krijgen de deelnemers acht tot tien vragen mee over hun leven. In de eerste bijeenkomst leren de deelnemers elkaar kennen, wordt uitleg gegeven over de methode en staan de deelnemers stil bij de vraag waarom ze deelnemen en wat ze hopen te bereiken met reminiscentie. De thema's die in de volgende bijeenkomsten aan de orde komen zijn: familie en wortels, werk en zorg, liefde en vriendschap, moeilijke perioden, het leven als een boek, metafoor en de betekenis van het eigen leven. Concrete vragen (gericht op specifieke gebeurtenissen) en abstractere vragen (gericht op processen, de levensloop) wisselen elkaar af. In *Het verhaal van je leven* wordt life-review gecombineerd met elementen van narratieve therapie. De kern van de methode is dat het 'probleem' dat de deelnemers op dit moment in hun leven ervaren wordt geplaatst binnen het perspectief van hun levensloop. Dit kan helpen om anders naar het probleem te kijken en het anders te benoemen; het kan ertoe leiden mensen nieuwe oplossingen ontdekken. De interventie beoogt verhalen die uitgaan van 'slachtofferschap en hulpeloosheid' aan te vullen met alternatieve verhalen die gebaseerd zijn op kracht en mogelijkheden.

In samenwerking met zes GGZ-instellingen werden de effecten van de gespreksgroep onderzocht. Aan dit onderzoek namen 108 ouderen deel. 65 ouderen ontvingen de cursus (experimentele groep) en 43 ouderen stonden tijdelijk op een wachtlijst (controle groep). De cursus werd gegeven door preventiewerkers, sociaal psychiatrisch verpleegkundigen of GZ-psychologen die daarvoor een tweedaagse training hadden gevolgd. Voor en na de gespreksgroep kregen de deelnemers een vragenlijst voorgelegd. Op hetzelfde moment ontvingen ook de mensen op de wachtlijst de vragenlijst. Het focus lag wederom op depressieve klachten, 'mastery'

en persoonlijke zingeving. Na afloop van de cursus hadden de deelnemers significant minder depressieve klachten en meer 'mastery'. Ook het persoonlijk zingevingsprofiel van de deelnemers was na afloop positiever maar niet in vergelijking tot de controlegroep. Wel werd een aantal specifieke effecten gevonden. In vergelijking met de controlegroep oordeelden de deelnemers positiever over hun sociale relaties en hun verleden en waren zij na afloop minder negatief over zichzelf en hun toekomst.

Conclusie

Als leidraad voor dit proefschrift werd een model gebruikt voor de ontwikkeling en implementatie van effectieve interventies in de geestelijke gezondheidszorg. Dit model onderscheidt vier fasen: (1) systematische analyse van bestaand wetenschappelijk onderzoek, (2) ontwikkeling en evaluatie, (3) effectonderzoek en (4) implementatie. In elke fase dient een aantal specifieke vragen te worden beantwoord. Voorbeelden van vragen die bij de eerste fase horen zijn: wat weten we over reminiscentie in de algemene bevolking? Wat is de relatie tussen reminiscentie en depressie? Welke klinische toepassingen van reminiscentie zijn ontwikkeld en met welk resultaat? Voorbeelden van vragen die bij de tweede fase horen zijn: werd de doelgroep bereikt met de interventie? Is de nieuwe interventie ogenschijnlijk effectief? Hoe oordelen de deelnemers over de interventie? Dit proefschrift richt zich op deze twee fasen. In het slothoofdstuk werden de resultaten van het onderzoek besproken binnen het kader van dit wetenschappelijk model.

Duidelijk is geworden dat het onderzoek naar reminiscentie lange tijd heeft geleden onder theoretische en conceptuele onhelderheid. De laatste jaren is daar verandering in gekomen. Een belangrijke ontwikkeling is het onderzoek naar de verschillende typen reminiscentie geweest. Dit onderzoek maakt duidelijk dat bepaalde vormen van reminiscentie (met name het uiten van verbittering) juist sterk gecorreleerd zijn met depressie. Het is daarbij onduidelijk of dit type reminiscentie de oorzaak van depressie is of dat depressie dit type reminiscentie in de hand werkt. Dit gegeven heeft belangrijke consequenties voor de klinische toepassing van reminiscentie. Interventies moeten een kader of structuur bieden waarbinnen het mogelijk is om bittere herinneringen aan te vullen met meer positieve herinneringen ofwel waarbinnen de interpretaties en verhalen die ten grondslag liggen aan de bitterheid besproken en veranderd kunnen worden. Om deze reden werden twee interventies ontworpen waarin reminiscentie werd gecombineerd met twee andere therapeutische benaderingen. In het geval van *Op zoek naar zin* betrof dit creatieve therapie en in het geval van *Het verhaal van je leven* narratieve therapie.

Hoewel beide interventies tot significante afname van depressieve klachten bij de deelnemers leidden, waren de effecten kleiner dan op basis van de meta-analyse mag worden verwacht. Verschillende mogelijkheden om de interventies te verbeteren werden besproken. Tevens viel op dat in beide studies een grote variatie bestond in de mate waarop de deelnemers profiteerden van de interventies. Eén van de belangrijkste aanbevelingen is dan ook om in het vervolg systematischer en uitgebreider onderzoek te doen naar factoren die het effect van de interventies voorspellen. Andere aanbevelingen vloeien logisch voor uit de beperkingen van dit proefschrift: het uitvoeren van gerandomiseerd effectonderzoek, het onderzoeken of de effecten ook lange tijd na afloop van de interventie behouden blijven, het gebruik maken van meer uitkomstmaten zoals kwaliteit van leven en psychologisch welbevinden.

Dankwoord

Dit proefschrift was niet tot stand gekomen zonder een specifieke, ondersteunende context die ik graag wil belichten.

Laat ik bij het begin beginnen. Pim Cuijpers reikte mij dit onderwerp aan en maakte het mogelijk aan dit proefschrift te werken. Als geen ander leerde hij mij hoofdzaken van bijzaken te onderscheiden en wetenschappelijk te schrijven. Zijn enthousiasme was een voortdurende motor.

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Iets meer op de achtergrond, maar onmisbaar, is een aantal mensen dat mij met raad en daad heeft bijgestaan: Martin Hulsbergen, met zijn ongelofelijk creativiteit, liefdevolle geduld en zijn ontdekkingsreizen in de wereld die ICT heet en voor mij altijd wel een jungle zal blijven. Paul Anzion, met zijn grote redactionele vaardigheden en de leuke gesprekken over bestemming. Arno Bohlmeijer, met zijn scherpe, taalkundige adviezen. Roisin de Jong, met haar vertaal- en redactioneel werk, altijd op het laatste moment beschikbaar. Judith Blekman, medereiziger, met haar betrokkenheid en onze leuke gesprekken over de toekomst van de geestelijke gezondheidszorg. Angita Peterse en Toine Ketelaars met hun geduldige ondersteuning bij literatuur-searches en referentie-management.

In dit dankwoord mogen mijn ouders, Pieter en Margreet, niet ontbreken. Zij vormen de eerste en o zo belangrijke achtergrond waaruit de figuur van mijn leven, waar dit proefschrift nu deel vanuit maakt, naar voren komt. Als het gaat om

de vraag wat het betekent om mens te zijn, heb ik veel van hen geleerd. En dan denk ik niet in de laatste plaats aan het vertellen van levensverhalen.

Laat ik ook bij het begin eindigen. Mijn leven begon toen ik deze vrouw ontmoette. Zij stimuleerde mij om bij het Trimbos-instituut te gaan werken en is de belangrijkste co-auteur van mijn levensverhaal. Zij brengt mijn hoofd op hol en tot stilstand. Zij spreekt klare taal, en dat is een geschenk voor een dwaalgeest als ik. Monique is het einde. Ik draag het proefschrift aan haar op.

Curriculum Vitae

Ernst Thomas Bohlmeijer (1965) studied psychology at the university of Leiden and graduated in 1990. He started his career as a prevention worker and manager in several mental health care institutes. As of 1999 he, first, worked as head of a research program and, secondly, as a senior researcher at the centre of prevention and brief intervention at the Trimbos-institute, the Netherlands Institute of Mental Health and Addiction.

His main topic of interest is mental health promotion in the elderly and the implementation of reminiscence in particular. During these years he developed an integral program for prevention of depression in the elderly and (co)developed and evaluated five reminiscence interventions. He (co)authored about 30 publications in national and international journals and books. In 2005 he published *De dominee en zijn mevrouw* which deals with the life-story of his parents. In 2006 he was editor of the book *De betekenis van levensverhalen.* In spring 2007 a new book *De verhalen die we leven* will be published.

He lives in Zutphen with his wife Monique and two cats, Maní and Zosja, who keep him at peace with the world.

Afterword

- Hey you, gravedigger.
- *Hmmm.*
- You have a nice way of putting it.
- *Oh…wow…thank you…that's nice.*
- But I don't buy this shit.