

## An Implementation Study of Reminiscence in Dementia Care

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The goal of this mixed methods study was to identify factors affecting successful implementation of a group reminiscence intervention led by professional caregivers for persons with dementia residing in a long-term care (LTC) facility and their family members. Implementation outcome variables included fidelity, feasibility, adoption, appropriateness, sustainability, and acceptability of reminiscence as a group intervention, and were measured using nominal group technique interviews to collect opinions of both professional caregivers and family members. A subsidiary goal was to gather quantitative data on the effectiveness of reminiscence in improving mental health and quality of life (QoL) of persons with dementia using a pre-post intervention design. Results indicated high fidelity and feasibility for reminiscence as a group intervention in dementia care. Both groups of participants considered the intervention to be appropriate. The adoption of reminiscence as an activity might be limited by a lack of confidence of the professional caregivers in their abilities to conduct a group intervention. Family members shared this opinion. The professional caregivers also expressed potential difficulty in integrating reminiscence in their work routine, thus diminishing its acceptability in dementia care. For family members, the sustainability of the program may depend on their level of implication in the development and organization of the intervention sessions. Results also showed significant improvements (Wilcoxon  $p < .05$ ) in apathy, as self-measured by the residents, and in anxiety, as measured by the professional caregivers. Apathy symptoms as measured by the professional caregivers, however, did not show a significant decrease post-intervention. Family members reported an improvement in their relative's QoL one week post-intervention, whereas the residents reported improvement in their QoL three months post-intervention. Results showed that a group reminiscence intervention was not only possible but also beneficial to residents with dementia.

*Key Terms:* Dementia Care; Reminiscence; Caregivers; Implementation; Mental Health; Quality of Life

According to the World Health Organization and Alzheimer's Disease International (2012), global prevalence of dementia is expected to double by 2030 to 66 million and more than triple by 2050 to 115 million (Chancellor, Duncan, & Chatterjee, 2014). In light of the current demographic explosion, dementia care has become a top priority for healthcare providers, administrators, and policy makers.

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The primary goal of this study, which comprised a total of 32 participants, was to examine factors promoting or hindering successful implementation of a group reminiscence intervention program led by professional caregivers for institutionalized individuals with dementia and their family members. A subsidiary goal was to gather data on the effectiveness of reminiscence in improving the mental health and quality of life (QoL) of persons with dementia. Implementation success was first evaluated through different dimensions of fidelity and feasibility. Other implementation outcomes, namely adoption, appropriateness, sustainability, and acceptability, were evaluated using a nominal group technique (NGT) interview to gather the opinions of professional caregivers leading the reminiscence interventions and of family members attending the reminiscence sessions with their relative with dementia. The NGT serves to generate ideas that are discussed and ranked by the group according to priority (Gallagher, Hares, Spencer, Bradshaw, & Webb, 1993). We hypothesized that all six implementation outcomes would inform us on key factors

that would either promote or hinder successful implementation of a group reminiscence intervention in dementia care. It was also hypothesized that reminiscence would reduce psychological symptoms and improve QoL of individuals with dementia.

Although dementia is multifaceted and may present heterogeneous clinical symptoms (Rainville, Caza, Belleville, & Gilbert, 2006), its course typically involves progressive cognitive deterioration and neuropsychiatric symptoms such as anxiety, apathy, and depression. Unfortunately, these indicators too often result in depersonalization and social isolation. To address these issues, research in dementia care has been investigating the potential benefits of non-pharmacological interventions aimed at sustaining personhood and increasing social interactions in which professional caregivers and family members can play a central role. Despite important advances in developing novel psychosocial interventions, little is known about the implementation of these intervention programs in long-term care (LTC) settings. If the translation of dementia care research into clinical practice is to be successful, the opinions of those adopting and sustaining these interventions need to be better documented.

### *Implementation Research*

Some authors have questioned the ubiquitous “one-size-fits-all” approach to dementia research, which usually consists of carrying out randomized controlled trials (RCTs) to determine successful interventions in dementia care (e.g., de Medeiros & Basting, 2014). Indeed, measuring personal meaning with an RCT is more difficult than observing a change in mood and affect. These authors rather suggested that all evidence be considered, including more qualitative or non-experimental research such as implementation studies, which combine practice and research and provide a solid foundation for evidence-based intervention. Implementation research is defined as a scientific inquiry into questions concerning implementation, i.e., the act of fulfilling or carrying out an intention (Peters, Adam, Alonge, Agyepong, & Tran, 2013). Implementation research thus looks to gain a comprehensive picture of what, why, and how interventions work within real world conditions, as opposed to trying to control these conditions or remove their influence as causal effects. In addition, it usually pays close attention to the audience that will benefit from the intervention or program (Peters et al., 2013). Unfortunately, very few dementia intervention programs have been systematically implemented in LTC settings or been studied using implementation outcomes (Moniz-Cook, Vernooij-Dassen, Woods, & Orrell, 2011) despite the notion that context (i.e., both environment and presence of stakeholders) plays a central role in implementation research. Implementation research evaluates issues of how to conceptualize and assess the successful implementation of treatments, programs, or

services (Proctor et al., 2011). This type of research is an important step in establishing whether an intervention is favorable, as an intervention will not be effective if it is not implemented correctly. Implementation studies should thus precede clinical trials as there is no way to know, if treatment fails, whether it is due to ineffective treatment or to a good treatment that was simply not properly deployed.

Although some have inferred implementation success by measuring clinical outcomes at the beneficiary level, Proctor and colleagues (2011) argue that implementation outcomes should be conceptually and empirically distinct from clinical effectiveness measures and suggested a taxonomy that we used in the current study. These implementation outcomes include: 1) *fidelity*, the degree to which the intervention is implemented as intended by the program developers (Dusenbury, Brannigan, Falco, & Hansen, 2003; Rabin, Brownson, Haire-Joshu, Kreuter, & Weaver, 2008); 2) *feasibility*, the extent to which an intervention can be successfully carried out within a given setting (Karsh, 2004); 3) *adoption*, which determines the initial incentive of individuals to participate in a novel intervention; 4) *appropriateness*, the perceived relevance or compatibility of the intervention for an intended group; 5) *sustainability*, the extent to which participation to the intervention is maintained throughout its course; and 6) *acceptability*, the perception among implementation stakeholders that the intervention is agreeable or satisfactory. Implementation studies use these outcome variables to assess how well implementation has occurred and they provide insights about how the program contributes to the beneficiaries’ well-being (Peters et al., 2013).

In the current study, the implementation outcomes described above were measured by professional caregivers, who were trained to lead reminiscence interventions, and by family members who attended the reminiscence sessions, following the implementation of a group reminiscence intervention program in an LTC setting.

### *Reminiscence Intervention*

There is currently no treatment to reverse dementia, and pharmacological treatment is not always recommended due to the risks of adverse effects associated with antipsychotics and other medications; these risks include the development of new symptoms or even mortality (Kales et al., 2012). Furthermore, persons with dementia are often isolated and not engaged in meaningful activities because of their decreased ability to pursue and/or access them or because they are not available (Burgio et al., 1994; Cohen-Mansfield, Marx, & Werner, 1992). Risk for cognitive decline is increased among persons who are socially disconnected (Fratiglioni, Wang, Ericsson, Maytan, & Winblad, 2000) and a lack of stimulating activities tends to amplify neuropsychiatric symptoms, with 85% of institutionalized individuals

presenting at least one symptom (Benoit & Robert, 2005; Buettner, Lundegren, Lago, Farrell, & Smith, 1996; Engelman, Altus, & Mathews, 1999). To alleviate these negative effects, the development of non-pharmacological interventions—used either in conjunction with or as an alternative to pharmacological treatment—has been the object of numerous studies in the past two decades. These include psychosocial interventions such as reminiscence and cognitive stimulation, as well as cultural and creative arts activities, like music and dance therapy (Beard, 2012; Livingston, Johnston, Katona, Paton, & Lyketsos, 2005; Woods, Aguirre, Spector, & Orrell, 2012; Woods, Spector, Jones, Orrell, & Davies, 2005).

Over the last two decades, reminiscence studies have provided empirical support for the important psychosocial functions of significant memories in the general population (e.g., Cappeliez & O'Rourke, 2006; O'Rourke, Cappeliez, & Claxton, 2011; Robitaille, Cappeliez, Coulombe, & Webster, 2010; Stinson, 2009; Webster, 1993, 1997). In dementia, most reviews of reminiscence studies have measured successful interventions using RCTs. This study design is considered the gold standard for clinical trials, as it includes large sample sizes, randomization, and control groups. Woods et al. (2005) performed a Cochrane review that comprised four RCTs (Baines, Saxby, & Ehlert, 1987; Lai, Chi, & Kayser-Jones, 2004; Morgan, 2000; Thorgrimsen, Schweitzer, & Orrell, 2002) and which indicated improvement in cognition and mood in persons with dementia four to six weeks post-reminiscence intervention, with a significant improvement in self-care and communication. Importantly, no adverse effects were reported. However, in a recent RCT, Woods and colleagues (2012) examined the effectiveness of a group reminiscence intervention for community-dwelling persons with dementia and their family caregivers. Results indicated no differences between the intervention and control groups on a self-reported measure of quality of life (QoL) for persons with dementia and an increase in anxiety and stress for family caregivers. The authors concluded that the study provided no support for the effectiveness of the reminiscence intervention for persons with dementia, but that the reasons for these conflicting results relative to previous studies needed to be explored further.

### *Professional Caregivers and Family Members in Dementia Care*

Whether a novel intervention can be successfully implemented and become a viable part of dementia care critically depends on the people providing care for persons with dementia. Professional caregivers are especially important for sustaining both personhood and significant relationships, which represent two central tenets of dementia care. We owe it to Tom Kitwood for the development of high standards for dementia care in the realm of a person-centered care approach (1988, 1997a). The term is used to embody a philosophy of care that

goes beyond treatment and/or management of disease-related symptoms, and in which communication and relationships play a central role (Passalacqua & Harwood, 2012). Brooker (2003) proposed a model that elegantly embodies person-centered dementia care. The relationship-centered care approach, developed by Beach and colleagues (2006), is an important corollary of Kitwood's view. The authors suggested four principles that can also be applied to dementia care: 1) relationships in health care should include the personhood of the individual; 2) affect and emotion are important components of these relationships; 3) all health care relationships occur in the context of reciprocal influence; and 4) the formation and maintenance of genuine relationships in health care is morally valuable.

Learning about the resident's life story to better understand and meet the needs of that person is one of the many ways professional caregivers can embody person- and relationship-centered dementia care (Hansebo & Kihlgren, 2000). According to Cohen-Mansfield and colleagues (2009), activities that aimed to explore past experiences, interests, and hobbies resulted in increased engagement and fostered a sense of self-identity in persons with dementia. Because reminiscence focuses on preserved abilities and sharing personal memories, it has the potential to increase interactions between professional caregivers and their residents.

Furthermore, successful implementation of a reminiscence intervention program may be accrued by involving family members. Following institutionalization of a relative with dementia, family caregivers are faced with novel sources of stress (Aneshensel, Pearlin, Mullan, Zarit, & Whitlach, 1995; Zarit & Whitlatch, 1992), including adjustments in their relationship, loss of social support, and concerns about what to do or talk about during visits (Ducharme, Levesque, Gendron, & Legault, 2001). For many family members, guilt regarding placement is also an important issue (Garity, 2006). A recent study showed that family members manifest distress concerning the notion that LTC staff may not be connecting with their relative in a significant way (Bramble, Moyle, & McAllister, 2009). Although families report wanting to spend more time with their relatives, having a poor relationship with staff was identified as one of the barriers to family members visiting their relative (Lindman Port, 2004).

While professional caregivers should seek to build a caregiving partnership with family members of residents in LTC facilities, many caregivers may not be open to family involvement in resident care, a situation that makes it very difficult to realize the benefits of family-caregiver collaborations (Maas et al., 2001). Indeed, we believe that partaking in a shared activity could provide the necessary stepping-stone towards a caregiving partnership between these two parties. This is especially important for reminiscence given that families hold precious biographical information about their relative that could enrich the care provided by LTC staff while

allowing families to maintain their role as primary caregivers.

### *A Group Reminiscence Intervention Program in an LTC Setting*

Reminiscence intervention may take several forms (for a review see Caza, 2013), but some may be better suited to meet the particular needs of persons with dementia residing in LTC. Empirical evidence suggests that the retrieval of past memories in individuals with dementia generally follows Ribot's law (1881), which postulates that older memories resist better to the detrimental effects of dementia than recent ones (Eustache et al., 2006; Tulving, 2002). According to some researchers, these earlier memories are more closely embedded in semantic memory (Squire & Zola, 1998), which may support a global sense of identity. Hence, by focusing on better-preserved memories via structured reminiscence, families and caregivers may help maintain and promote self-identity in persons with dementia (Kitwood, 1997b; Thorgrimsen et al., 2002). Another key aspect of group reminiscence for persons with dementia is to focus on past memories that generally elicit pleasure and positive feelings in those reminiscing, as opposed to other forms of reminiscence interventions such as life review (Brooker & Duce, 2000; Haight, Gibson, & Michel, 2006). As previously mentioned, affect and emotion are important components of relationship-centered care (Beach et al 2006) and empirical evidence suggests that persons with dementia are able to recognize emotions even in the more advanced stages of the disease (Evans-Roberts & Turnbull, 2011; Koff, Zaitchik, Montepare, & Albert, 1999; Luzzi, Piccirilli, & Provinciali, 2007) and are better able to identify positive emotions than negative ones (Maki, Yoshida, Yamaguchi, & Yamaguchi, 2013; Rosen et al., 2006). A recent study showed that being inclusive and providing a failure-free environment is an important factor in keeping residents engaged (Fritsch et al., 2009). Hence, to ensure all professional caregivers are competent in leading a reminiscence intervention in dementia care, training which targets specific issues related to persons with dementia and encourages families to partake is required.

## Method

### *Participants*

*Persons with dementia.* Ten persons with dementia who had been residing at the Institut universitaire de gériatrie de Montréal (IUGM), an LTC facility, for at least six months were recruited for the present study. Initial contact was made via a letter sent to the residents' home address. Residents and family members interested in the study contacted the research team and were screened using the following inclusion criteria: 1) DSM-IV criteria for dementia (American Psychiatric Asso-

ciation, 1994), 2) ability to communicate in French, 3) absence of auditory and/or visual deficits that could prevent communication, 4) ability to function in a group setting, 5) ability to give informed consent, and 6) availability of a family member to complete questionnaires concerning the resident (mandatory) and attend the reminiscence sessions (optional). Participants were recruited from two distinct pavilions (Pavilions A and B) at IUGM; two reminiscence groups ran in parallel, one in each pavilion. Two residents from Pavilion A were excluded from the study: One family member withdrew her grandmother from the study before the intervention, stating she did not have time to participate and did not wish for her relative to participate without her; another resident (whose family member was unable to attend the sessions) participated in all sessions but died shortly after the reminiscence intervention; no follow-up evaluations were completed. A total of eight residents (six women) completed the study (three in Pavilion A; five in Pavilion B). The mean age of residents was 86.88 (SD = 6.88, range = 73-94) and the mean score on the Mini-Mental State Examination (Folstein, Folstein, & McHugh, 1975) was 16/30 (SD = 4.60, range = 9-23). Participants had mild to moderate dementia. As being inclusive is valued in person-centered dementia care, and given that implementation research stresses the value in assessing interventions/programs in real world settings/situations, we included residents with different types and severities of dementia, namely Alzheimer's disease (4), vascular dementia (2) and mixed dementia (2).

*Professional caregivers.* A total of 15 professional caregivers participated in the study. Eight of them, four nurses and four nurses' aids, were trained as facilitators to conduct the reminiscence sessions in pairs, as primary or co-facilitator. Seven of these eight facilitators (three nurses and four nurses' aids) were available to be subsequently interviewed to measure implementation outcomes. All facilitators completed a one-day training program, which was inspired by the Remembering Yesterday Caring Today approach (Bruce, Hodgson, & Schweizer, 1999) and administered by the research team. Training comprised a theoretical course, dementia-sensitivity activities, and sitting in on an informal reminiscence session for observation. None of the facilitators had received formal training in reminiscence before. Each caregiver conducted four reminiscence sessions (out of eight sessions) as primary or co-facilitator.

Seven other professional caregivers, two nurses and five nurses' aids, participated in the study as evaluators so we could gather clinical outcome measures. Only primary caregivers (providing care for more than three days/week to a participating resident) acted as evaluators in the study. They completed mental health and QoL assessments of residents before and after completion of the reminiscence intervention program. One evaluator (a nurse's aid) suffered a physical injury and only completed the pre-intervention measures for one resident.

*Family members.* Eight family members, three spouses and five adult children, accompanied their relative during the reminiscence intervention. They also completed mental health and QoL assessments of their relative to gather data on clinical outcome measures. Six of these relatives (three spouses and three adult children) were subsequently available for an NGT interview to measure implementation outcomes.

The Research and Ethics Committee of the IUGM approved this study and participants (persons with dementia, professional caregivers and family members) gave informed consent.

## *Materials and Procedure*

*Group reminiscence intervention program.* The intervention program created in the present study was inspired by two handbooks on how to run reminiscence groups (Bruce et al., 1999; Goldberg, Schweitzer, Bruce, & Hodgson, 2008). Important characteristics of the program included: weekly group sessions led by two professional caregivers, use of multisensory triggers, and targeted themes. Eight themes were selected for the present study, with a particular focus on earlier lifetime periods: “Where I grew up,” “My family and its history,” “School days,” “Summertime,” “Childhood games,” “Festivities,” “Going out and looking good,” and “My favorite foods.” The research team provided multisensory objects (e.g., hats, photographs, sand in a bucket) and some family members provided photographs and familiar objects to trigger personal memories. Prior to the intervention, between 1½-2 hours was spent with each resident and their family member to gather biographical information (e.g., a resident enjoyed playing with marbles during recess). During the reminiscence sessions, participants formed a circle around objects that were placed in the middle of the group so that they were visible to everyone. Each session opened with a 15-minute introductory period during which participants greeted one another and engaged in a sing-along to a popular song from the 50’s (the same one each session entitled “Parlez-moi d’amour” by Lucienne Boyer). This was followed by a 30-minute theme-driven session conducted by the two facilitators. When a prompt (e.g., a pair of gloves) was introduced, facilitators would ask whether the resident had any memory associated with that object or a similar object. The constant presence of triggers allowed participants to be reminded of the session’s theme and encouraged spontaneous participation. The last 15 minutes of each session were marked by a sing-along to another popular song (“La mer” by Charles Trenet) followed by tea and cookies. The teatime period allowed participants to engage in a less structured fashion that favored social contact and informal conversation among group members. To ensure continuity, sessions were held weekly at the same time of day and location in each pavilion.

*Implementation outcomes.* Implementation success was first measured by looking at fidelity and feasibility, which were described in the Introduction (all implementation measures can be found in Table 1).

*Professional caregivers.* Opinions of professional caregivers acting as facilitators in the reminiscence sessions were gathered in an NGT interview and pertained to three implementation outcomes (see Table 1). Two experienced mediators who were not part of the research team conducted the interview one week after the final reminiscence session. The mediators explained the general procedure of the interview, its objectives, and the role of the caregivers in examining each question, stressing that subjective feelings are as important as factual statements. Once the first question was introduced, a 10-minute discussion ensued; key words or suggestions were provided to stimulate discussion. The leading mediator then visually projected a series of potential answers (between four and six per question) that had been predetermined by the research team based on current literature (Fujiwara et al., 2012; Givens, Lopez, Mazor, & Mitchell, 2012; Passalacqua & Harwood, 2012; Wu, 2011). The research team decided upon a list of possible answers based on verbal, informal feedback from the professional caregivers post reminiscence sessions and on anticipated reactions. The research team felt it was necessary to provide answers so as to trigger ideas among the caregivers, all while encouraging participants to provide their own answers as a group. Indeed, group members could also add answers they had discussed. With this final list of answers, the co-mediator distributed a sheet of paper to each participant and asked them to indicate the answer they personally considered most important. The vote was anonymous. The co-mediator then collected all sheets of paper and tallied the number of votes for each answer; the one with the greatest number of votes was ranked as the “number one” group answer. If two answers received the same number of votes, a second round of votes was initiated to determine the most popular answer based on a majority of votes. This procedure was carried out to obtain the three leading answers to each of the six questions relating to implementation success of a group reminiscence intervention in an LTC setting. The NGT interview lasted two hours and was audio recorded and transcribed for qualitative analysis.

*Family members.* Opinions of family members were gathered, also in the context of an NGT interview, regarding four key implementation outcomes (Adoption, Appropriateness, Sustainability, and Acceptability – See Table 1) one week after the final reminiscence session. The same two mediators who had interviewed the professional caregivers obtained the three leading answers to the five questions from family members (six questions had been prepared, but only five were presented for lack of time). The interview lasted two hours and was audio recorded and transcribed for qualitative analysis.

Table 1

*Implementation measures*

Variable	Definition	Measure
Fidelity	The degree to which the intervention is implemented as intended by the program developers	<ul style="list-style-type: none"> <li>• Adherence to the reminiscence themes</li> <li>• The “amount” of intervention program delivered</li> </ul>
Feasibility	The extent to which an intervention can be successfully carried out within a given setting	<ul style="list-style-type: none"> <li>• Recruitment of participants</li> <li>• Retention of participants, as measured by individual participation rates during the reminiscence program for all those involved</li> </ul>
Adoption	Determines the initial incentive of individuals to participate in a novel intervention	<p><i>Professional caregivers:</i></p> <ul style="list-style-type: none"> <li>• In the very beginning, what were the factors that contributed to your willingness to participate in a reminiscence program?</li> <li>• What were your predominant fears or apprehensions towards a reminiscence activity before participating in the program?</li> </ul> <p><i>Family members:</i></p> <ul style="list-style-type: none"> <li>• In the very beginning, what were the factors that contributed to your willingness to participate in a reminiscence program?</li> </ul>
Appropriateness	The perceived relevance or compatibility of the intervention for an intended group	<p><i>Professional caregivers:</i></p> <ul style="list-style-type: none"> <li>• What change in your practice have you most observed following your participation in the reminiscence program?</li> <li>• What were the main highlights during the reminiscence sessions?</li> </ul> <p><i>Family members:</i></p> <ul style="list-style-type: none"> <li>• What changes have you observed in your relative since his/her participation in the reminiscence program?</li> </ul>
Sustainability	The extent to which participation in the intervention is maintained throughout its course	<p><i>Family members:</i></p> <ul style="list-style-type: none"> <li>• According to you, what were the factors that contributed to the maintenance of your participation during the reminiscence program?</li> <li>• Based on your recent participation in the reminiscence program, what elements could be improved?</li> </ul>
Acceptability	The perception among implementation stakeholders that the intervention is agreeable or satisfactory	<p><i>Professional caregivers:</i></p> <ul style="list-style-type: none"> <li>• According to you, what would be the main advantages in integrating a reminiscence program on your unit?</li> <li>• According to you, what would be the main inconveniences in integrating a reminiscence program on your unit?</li> </ul> <p><i>Family members:</i></p> <ul style="list-style-type: none"> <li>• According to you, what differentiates reminiscence from the other activities that are offered at IUGM?</li> </ul>

*Clinical outcomes.* To help in the design of a future RCT, five measures were taken at three different time points (before, one week after, and three months post-reminiscence intervention) to gather quantitative results on the short- and long-term effects of reminiscence on mental health and QoL in persons with dementia. The resident (self-rated), and/or a primary caregiver (evaluator), and/or a family member completed each measure. None of the participants were blind to the residents' treatment. The following measures were used to evaluate psychological symptoms of dementia.

*Apathy.* The *Apathy Evaluation Scale* (Marin, Biedrzycki, & Firinciogullari, 1991) is a scale including 18 items phrased as statements to be agreed or disagreed with on a four-point Likert scale. The AES was adapted

to the dementia population by the research team by reducing the number of questions from 18 to 12, as some statements did not apply to persons with dementia living in LTC (e.g., “I get things done during the day”). Six questions were reworded in a way that was more comprehensible for individuals with dementia, without changing the meaning; all 12 statements were turned into questions to make it easier for the residents to understand (e.g., “Someone has to tell me what to do each day” was changed to “Does someone have to tell you what to do each day?”). Both the resident and caregiver completed the AES.

*Anxiety.* The *Rating Anxiety In Dementia* scale (Shankar, Walker, Frost, & Orrell, 1999) is designed to measure anxiety in dementia with 20 items to be

answered on a four-point Likert scale. The primary caregiver completed the RAID.

*Depression.* The *Cornell Scale of Depression in Dementia* (Alexopoulos, Abrams, Young, & Shamoian, 1988) is a 19-item scale evaluating depression symptoms in dementia. Each item is assessed on a three-point Likert scale. The primary caregiver completed the CSDD.

*Psychopathological symptoms.* The *Neuropsychiatric Inventory* (Cummings, 1997) assesses the frequency, severity, and distress over the last month from 12 domains of psychopathological symptoms: Delusions, hallucinations, agitation/aggression, depression/dysphoria, anxiety, elation/euphoria, apathy/indifference, disinhibition, irritability/lability, aberrant motor behavior, sleep, and appetite. The primary caregiver completed the measure.

*Quality of life.* The *Quality of life in Alzheimer's Disease* (Logsdon, Gibbons, McCurry, & Teri, 2002) measures QoL of persons with dementia and includes 13 items rated on a four-point Likert scale. The resident and family member completed the measure.

At each time point, self-assessments of the residents took between 1 hour and 1½ hours, Family members completed assessments alone while their relative was with a member of the research team. Assessments by primary caregivers took between 1 hour and 1½ hours. Residents responded to the questionnaires with the help of the researcher who presented each question/item and answer choices verbally. No resident completed the questionnaires themselves with a pen and paper.

## Data Analyses

A qualitative approach using the NGT interview was used to assess implementation success of a group reminiscence intervention program in an LTC facility using data obtained from both facilitators and family members of persons with dementia. Statistical analyses were also carried out using SPSS Statistics 19.0.0 to test for significant changes in mental health and QoL before and after the reminiscence intervention. Given the small number of participants in each pavilion, data were pooled together in a single analysis for both groups and Wilcoxon Signed Rank Tests were used since the final sample size was less than ten participants. With such a small sample size the resulting data may violate the normality assumption of the dependent-samples *t*-test (Field, 2009).

## Results

### Implementation Outcomes

Implementation success was first evaluated by looking at two dimensions of fidelity: Adherence to the proposed themes and amount of program delivered by the professional caregivers. Results showed that the eight theme-driven reminiscence sessions ran weekly in each

pavilion as planned. All sessions were delivered on schedule by two trained professional caregivers, acting as facilitator and/or co-facilitator.

Feasibility was evaluated by measuring recruitment and retention of participants, as measured by individual participation rates throughout the reminiscence intervention for all those involved. For persons with dementia, the initial goal was to recruit ten residents (two groups of five individuals) to participate in the reminiscence intervention program. We met this goal; however, we could not recruit additional residents to replace the person that declined participation prior to the beginning of the intervention. Of the nine residents that agreed to participate, all completed the eight-session program (although eight residents completed the entire study). Each person with dementia took part in at least seven reminiscence sessions, with five out of nine residents attending all sessions. The minimum participation rate we were aiming for was for all participants to attend at least half of the sessions, i.e., four sessions per person. We therefore largely exceeded our expectations but believe one of the predominant reasons for such a high participation rate was due to the participation of the family members. For facilitators, the aim was to recruit eight professional caregivers to lead the reminiscence interventions. We easily met this goal with all caregivers completing the one-day training and leading a total of four reminiscence sessions, as planned. Lastly, for family members, the objective was to recruit family members from at least 50% of residents participating in the reminiscence intervention. We more than met this goal by having a total of six family members complete the whole program with their relative by attending at least seven out of eight sessions.

*Professional caregivers.* Questions addressed to professional caregivers were designed to assess the adoption, appropriateness, and acceptability of a reminiscence intervention led by the caregivers themselves. The three leading answers provided by the group for each question are presented in Table 2. Of note, the caregivers only added a total of two answers to those initially suggested by the research team.

*Family members.* Questions addressed to family members were designed to evaluate the adoption, appropriateness, sustainability, and acceptability of the intervention program. The three leading answers provided by the group for each question are presented in Table 3. The family members added a total of six answers to those initially suggested by the research team.

### Clinical Outcomes

Table 4 presents the results of the psychological symptoms measured in the present study. Comparisons were made between baseline measures and those taken a) one week post-intervention, and b) three months post-intervention.

Table 2

*Questions and Answers (Including Top Three) from NGT Interview with Professional Caregivers (n = 7)*

1. In the very beginning, what were the factors that contributed to your willingness to participate in a reminiscence program?	<ol style="list-style-type: none"> <li>1. Improve the residents' psychological well-being</li> <li>2. Strengthen my relations with the residents and their families</li> <li>3. Contribute to research               <ul style="list-style-type: none"> <li>• Improve my work</li> <li>• Get involved in my work environment</li> <li>• Desire to grow closer to the residents</li> </ul> </li> </ol>
2. What were your predominant fears or apprehensions towards the reminiscence activity before participating in the program?	<ol style="list-style-type: none"> <li>1. My lack of confidence in my abilities to conduct a group</li> <li>2. That my participation would lead to a work overload</li> <li>3. Working with people I don't know (residents/families/staff)               <ul style="list-style-type: none"> <li>• Feeling intimidated by the family members being present</li> <li>• Not be able to fulfill my commitment until the end of the program</li> <li>• Working with researchers</li> </ul> </li> </ol>
3. What change in your practice have you most observed following your participation in the reminiscence program?	<ol style="list-style-type: none"> <li>1. A better knowledge of the resident as an individual</li> <li>2. A better ability to work with a group of residents</li> <li>3. More curiosity/interest concerning the resident's life story               <ul style="list-style-type: none"> <li>• A better ability to listen</li> <li>• None</li> <li>• A better understanding of the residents' behaviors/moods</li> </ul> </li> </ol>
4. What were the main highlights during the reminiscence sessions?	<ol style="list-style-type: none"> <li>1. Seeing the residents socializing amongst each other</li> <li>2. The support and encouragement of the research team<sup>a</sup></li> <li>3. Seeing the residents reminisce through object manipulation               <ul style="list-style-type: none"> <li>• The presence of family members</li> <li>• Singing together</li> <li>• Each resident's personality</li> <li>• Discovering the residents</li> <li>• Viewing the pictures</li> </ul> </li> </ol>
5. According to you, what would be the main advantages in integrating a reminiscence program on your unit?	<ol style="list-style-type: none"> <li>1. Improve the residents' psychological well-being</li> <li>2. Get to know the residents/family members better</li> <li>3. Offer an activity that encourages socialization               <ul style="list-style-type: none"> <li>• Offer a personalized activity to the residents</li> <li>• Improve my work</li> <li>• Break the work routine and the residents' routine</li> </ul> </li> </ol>
6. According to you, what would be the main inconveniences in integrating a reminiscence program on your unit?	<ol style="list-style-type: none"> <li>1. Incorporating a program in the staff members' work routine</li> <li>2. A lack of time to conduct/organize reminiscence sessions</li> <li>3. Finding space and participants (residents/families/staff)<sup>a</sup> <ul style="list-style-type: none"> <li>• A lack of family members to obtain autobiographical information about the residents</li> </ul> </li> </ol>

*Note.* <sup>a</sup>Answers added by the group. Numerals preceding answers indicate the rank order of the most frequently cited responses. Answers preceded by bullets fell outside of the three most frequently cited responses.

*Apathy.* First, apathy symptoms, as self-assessed by the person with dementia using the AES (Marin et al., 1991) (a higher score indicates less apathy) were a) significantly reduced immediately post-intervention,  $T = 0$ ,  $p = .012$  and b) significantly reduced three months post-intervention,  $T = 0$ ,  $p = .011$  (T represents the smaller of the two sum of ranks). No significant changes in apathy were observed according to the primary caregivers (see Table 4).

*Anxiety.* Anxiety symptoms, as measured by the primary caregivers using the RAID (Shankar et al., 1999), were a) significantly reduced immediately post-intervention,  $T = 0$ ,  $p = .017$ , and b) significantly reduced three months post-intervention,  $T = 0$ ,  $p = .026$ .

*Depression.* No significant changes were observed in depressive symptoms, as measured by the CSDD (Alexopoulos et al., 1988), immediately post-intervention nor at three months post-intervention (see Table 4).

*Psychopathological symptoms.* No significant changes were observed on the NPI (Cummings, 1997) (see Table 4).

*Quality of life.* According to the family members' ratings, the QoL of the residents with dementia using the QoL-AD (Logsdon et al., 2002) a) showed a marginally significant increase immediately post-intervention,  $T = 5$ ,  $p = .068$ , but b) did not show any increase three months post-intervention (see Table 4). The change in QoL as self-assessed by the participant revealed a) no significant



Table 3

*Questions and Answers (Including Top Three) from NGT Interview with Family Members (n = 6)*

1. In the very beginning, what were the factors that contributed to your willingness to participate in a reminiscence program?	<ol style="list-style-type: none"> <li>1. Improve the psychological well-being of my relative</li> <li>2. Share a pleasant moment with my relative and others</li> <li>3. A desire to get closer to my relative</li> </ol> <ul style="list-style-type: none"> <li>• Discover what reminiscence is</li> <li>• Allow my relative to meet other residents (for the social aspect)</li> <li>• Contribute to research</li> </ul>
2. What changes have you observed in your relative since his/her participation in the reminiscence program?	<ol style="list-style-type: none"> <li>1. A momentary instant of happiness<sup>a</sup></li> <li>2. None</li> <li>3. The competency of the family members to communicate with their relative<sup>a</sup></li> </ol> <ul style="list-style-type: none"> <li>• Happier disposition</li> <li>• More social/better interpersonal relationships</li> <li>• Remembers more memories</li> <li>• Better communication</li> <li>• Deterioration</li> </ul>
3. According to you, what were the factors that contributed to the maintenance of your participation during the reminiscence program?	<ol style="list-style-type: none"> <li>1. The fact that my relative was enjoying the sessions</li> <li>2. I wanted to fulfill my commitment</li> <li>3. The pleasant atmosphere of the group</li> </ol> <ul style="list-style-type: none"> <li>• The fact that I was spending quality time with my relative</li> <li>• The fact that each session was different by presenting new themes every time</li> </ul>
4. Based on your recent participation in the reminiscence program, what elements could be improved?	<ol style="list-style-type: none"> <li>1. The communication with the team on the process of the project<sup>a</sup></li> <li>2. The lack of experience of the facilitators<sup>a</sup></li> <li>3. The choice of themes</li> </ol> <ul style="list-style-type: none"> <li>• The number of participants in the group</li> <li>• The duration of the sessions</li> <li>• The frequency of the sessions</li> <li>• The time of day of the sessions</li> <li>• The activity choices</li> </ul>
5. According to you, what differentiates reminiscence from the other activities that are offered at IUGM?	<ol style="list-style-type: none"> <li>1. Allows for exchanges between relatives and residents<sup>a</sup></li> <li>2. Its affective/emotional character<sup>a</sup></li> <li>3. Increases the competency of the family members to communicate with their relatives<sup>a</sup></li> </ol> <ul style="list-style-type: none"> <li>• The family's involvement</li> <li>• The triggering of past memories</li> <li>• Reminiscence is a more social activity</li> <li>• Reminiscence is an activity that is more adapted to individuals with dementia</li> </ul>

*Note.* <sup>a</sup>Answers added by the group. Numerals preceding answers indicate the rank order of the most frequently cited responses. Answers preceded by bullets fell outside of the three most frequently cited responses.

increase immediately post-intervention (see Table 5), but b) showed a significant increase three months post-intervention,  $T = 0$ ,  $p = .027$ . We also ran tests of differences between one week post-intervention and three months post-intervention and no difference was significant except for QoL as measured by the residents,  $T = 2.5$ ,  $p = .028$ .

## Discussion

The current study provides new information from professional caregivers and family members of persons with dementia concerning successful implementation of a group reminiscence intervention program in dementia care. The study results also provide data concerning the

short- and long-term effects of a structured reminiscence intervention on mental health and QoL in persons with dementia residing in an LTC facility.

## Implementation Outcomes

We used six key implementation constructs to inform the implementation process (see Table 1). Adherence to the intervention program and amount of program delivered occurred as intended. Participation rates for the intervention program for caregivers acting as facilitators (100%) and for family members attending the sessions (60% rather than an expected 50%) met our expectations and beyond. This latter finding is significant given that family members had to be available on weekday

Table 4  
*Changes in Mental Health and QoL Measures between Baseline and Post-Intervention*

Measure (participant providing responses)	Baseline	Post-Intervention (1 week)	Post-intervention (12 weeks)	Group effect	
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	Wilcoxon Signed Rank Test	
				Baseline - 1 week post- intervention	Baseline - 12 weeks post- intervention
AES <sup>a</sup> (resident)	30.50 (6.78)	38.00 (5.16)	37.88 (4.55)	$p = .012^*$	$p = .011^*$
AES <sup>a</sup> (professional caregiver)	30.38 (4.03)	29.86 (6.47)	31.14 (9.51)	$p = .109$	$p = .672$
RAID <sup>b</sup> (professional caregiver)	5.75 (4.40)	3.29 (3.40)	4.29 (2.69)	$p = .017^*$	$p = .026^*$
CSDD <sup>c</sup> (professional caregiver)	4.75 (3.69)	4.43 (1.72)	4.71 (3.35)	$p = .715$	$p = .590$
NPI <sup>d</sup> (professional caregiver)	6.38 (11.72)	4.00 (3.79)	7.14 (9.79)	$p = .893$	$p = .916$
QoL-AD <sup>e</sup> (resident)	35.25 (8.57)	34.25 (8.24)	38.38 (8.11)	$p = .343$	$p = .027^*$
QoL-AD <sup>e</sup> (family member)	33.63 (6.30)	37.25 (3.88)	35.63 (5.07)	$p = .068$	$p = .351$

Note. <sup>a</sup>(Marin, Biedrzycki, & Firinciogullari, 1991), <sup>b</sup>(Shankar, Walker, Frost, & Orrell, 1999), <sup>c</sup>(Alexopoulos, Abrams, Young, & Shamoian, 1988), <sup>d</sup>(Cummings, 1997), <sup>e</sup>(Logsdon, Gibbons, McCurry, & Teri, 2002)

afternoons for a total of eight consecutive weeks. Yet, resident participation rates were slightly below expectation, with a total of nine residents attending the reminiscence sessions rather than ten and with subsequent difficulties concerning the recruitment of an additional participant. This was unlikely a result of our recruitment method, as we reached a large sample of residents and families. We believe it might be due to the fact that the intervention was novel and had not yet been exposed to “word of mouth.” Also, because it was presented in the context of a research study (with visits pre/post intervention)—rather than being part of the regular curriculum of activities—this may have discouraged some to participate due to the level of commitment that was required. Overall, these findings suggest very good fidelity.

Retention rates were high, with a majority of residents and family members attending at least seven out of eight sessions and all professional caregivers leading

four sessions each, as expected. It should be noted, however, that feasibility of the reminiscence intervention was potentially eased by the presence of the research team. For example, we provided the facilitators with personal information about the residents that was used during the reminiscence sessions and we supported them when they had questions. We thus recommend collecting personal information in line with some of the common themes discussed in the reminiscence program as of the admission process. Overall, these findings suggest that successful implementation of a group reminiscence intervention is feasible in an LTC facility for persons with dementia.

According to professional caregivers, the number one factor that would promote adoption was “to improve the residents’ psychological well-being,” while the “lack of confidence in [their] abilities to conduct a group” was reported as the leading hindering factor. The latter factor may reflect the fact that professional caregivers generally

interact on a one-to-one basis; many are not accustomed to running group activities with residents and may have a tendency to let other professionals run them (e.g., volunteers). But, because nurses and nurse's aids have direct contact and the most frequent interactions with residents, they are the most likely to benefit from gaining knowledge about them. Providing professional caregivers with opportunities to improve their competencies and appropriate training will lead to a greater sense of self-value, a central principle in Brooker's (2003) VIPS model ( $V = \text{"valuing people with dementia and those who care for them"}).$  In line with this view, one nurse's aid mentioned that being a facilitator had improved her confidence in running reminiscence groups: "At the beginning of the first session, I wanted to leave [but] at the end [...] I felt I belonged there." It is therefore important to provide professional caregivers with education and responsibilities, such as helping implement interventions to improve the quality of life of their patients (Stinson, 2009).

Professional caregivers were also worried that "[their] participation would lead to a work overload" - a point of interest for health administrators wishing to adopt novel interventions in dementia care. Allowing staff to be trained in and lead group interventions requires that the activity become an integral part of the dementia care plan. For this to occur, certain resources (time and funds) have to be made available to professional caregivers by health administrators to support the implementation of new interventions.

According to family members, the leading factor promoting the adoption of a reminiscence intervention program was to "improve the psychological well-being of my relative." This common adoption criterion between professional caregivers and family members further highlights the reality of LTC facilities: few psychosocial interventions specifically designed for dementia residents are offered, in spite of the notion that those providing care for them view such tailored activities as a priority (Grant, Kane, Potthoff, & Ryden, 1996; Grant & Potthoff, 1997; Grant, Potthoff, Ryden, & Kane, 1998; Holmes, Teresi, Ramirez, & Golman, 1998; Teresi, Grant, Holmes, & Ory, 1998). This factor also offers common ground to foster partnerships between families and professional caregivers.

In order for the implementation of a novel intervention to succeed, it must be seen as useful and appropriate to those concerned and be compatible with their roles. Facilitators agreed that the main change they had noticed in their practice was their "better knowledge of the resident as an individual," evoking a fundamental dimension of person-centered dementia care. Also, according to professional caregivers, the main highlight of the reminiscence sessions was "seeing the residents socializing amongst each other." Group reminiscence provides the opportunity for caregivers to help residents form and maintain genuine relationships, a major tenet of relationship-centered care (Beach & Inui, 2006).

When family members evaluated the appropriateness of the group reminiscence intervention, they observed that the most important change they had noticed in their relatives was "a momentary instant of happiness," an answer added by the group. This answer is particularly interesting as it supports the caution raised by de Medeiros & Basting (2014), regarding the limitations of using a "one-size-fits-all" approach to dementia research. Furthermore, it raises the question of how to best measure a transient and positive transformative experience using an RCT. While family members reported that the reminiscence intervention did not lead to any obvious changes in their relative with dementia, they felt the intervention provided them with skills enabling them to better connect with their relative (see third answer in response to Question 2 in Table 3). Specific comments by family members in this regard were: "[The reminiscence program] really taught me how to go fishing for memories" and "It made me more competent." This finding provides support for the relationship-centered view of dementia care (Beach & Inui, 2006).

Regarding the sustainability of the reminiscence intervention program, we were particularly interested in the family members' opinions, as they are instrumental in making an intervention part of the regular operations of the LTC facility. The main factor that encouraged the maintenance of family participation was "the fact that [the residents] were enjoying the sessions." This answer also provides additional information regarding fidelity, confirming that the reminiscence intervention is a pleasurable activity for residents with dementia. When family members were asked what elements could be improved to sustain their participation, the top three answers were 1) "communication with the team on the process of the research project," 2) "a lack of experience of the facilitators," and 3) "choice of themes." Answers one and three indicate that the family members thought they would have a greater level of input regarding the design of the study. Because the intervention program was introduced within the context of an implementation study, certain conditions had been pre-established by the research team. However, this may not be necessary outside of a research protocol. It should be noted that, prior to the reminiscence intervention, the research team had explained the study design to family members in a one-hour session, including the project's protocol, procedure, and objectives. Still, relatives expressed their desire to be more involved and to provide their input, findings that are compatible with those of Gaugler (2005). According to Gaugler, the new responsibilities for family members of persons with dementia in LTC are to create a personalized and home-like environment and to communicate to staff members their unique insights regarding their relative.

The second answer from family members, "lack of experience of the facilitators," is noteworthy. This finding is congruent with the professional caregivers' number one answer regarding restraint in the adoption of reminiscence in LTC (reported above). It may be that the families

detected the facilitators' lack of confidence in leading group activities. This further supports the need for staff to receive proper training before conducting innovative interventions so as to promote trust and respect from the residents' family members and to maintain the image of professional caregivers as experts in dementia care. Furthermore, according to a recent study by Ayalon et al. (2009), the level of training, education, and beliefs about dementia patients and their needs influence caregiver knowledge about evidence-based practice for the management of dementia and neuropsychiatric symptoms.

To examine the acceptability of the intervention, we asked professional caregivers about the advantages and inconveniences of integrating a reminiscence intervention on their unit. The predominant advantage was that it could "improve the residents' psychological well-being," while the main inconvenience was the potential "difficulty in integrating the program in the staff members' work routine." The caregivers explained that the lack of time would be a major factor to consider when integrating a reminiscence program in LTC. For reminiscence interventions to become part of the facility's curriculum of activities they must be viewed as time well-invested by professional caregivers leading these interventions, given its potential benefits. Health administrators and policy makers need to share the viewpoint that reminiscence intervention can become a fundamental part of the professional caregiver's work tasks so they can support caregivers (e.g., funds for training, physical space for interventions, time for preparing the sessions and talking with families). Raising awareness about the value and potential benefits of reminiscence could help integrate psychosocial activities as an inherent part of dementia care.

When family members evaluated the acceptability of the reminiscence intervention, they generated all three leading answers, ranking these higher than choices initially proposed by the research team. They felt that what differentiates reminiscence from other activities are 1) "[that it] allows for exchanges between relatives and residents" (first answer), and 2) "its affective/emotional character" (second answer). Family member statements in this regard were: 1) "There is no real structure that favors [socialization], [reminiscence] is an interesting activity in that respect," and 2) "[Reminiscence] creates a family [in that] now I don't just come to see my mother. I come to see your mother as well." Interestingly, the second answer taps directly into the second principle of the relationship-centered care approach, which states that affect and emotion are important components of relationships in health care (Beach & Inui, 2006).

### *Clinical Outcomes*

Lastly, our study provides preliminary data suggesting that reminiscence interventions may have beneficial short- and long-term effects on mental health and QoL in residents with dementia.

*Apathy and anxiety.* Apathy symptoms, as self-assessed by the person with dementia, and anxiety symptoms, as measured by the primary caregiver, both showed significant improvements one week and three months post-intervention, with large effects. However, these results should be interpreted with caution as the apathy symptoms could have been alleviated for reasons other than the reminiscence intervention itself, such as the social aspect of the activity, or because the post-assessment was administered by a familiar face of the research team. Also, according to the professional caregivers, the residents' apathy symptoms did not show a significant decrease post-intervention.

*Depression and psychopathological symptoms.* Depressive and psychopathological symptoms showed minimal changes post-intervention in the residents as a group. Importantly, no adverse effects were reported, indicating that reminiscence does not negatively affect residents with dementia.

*Quality of life.* Regarding QoL, a marginally significant improvement one week post-intervention, according to family members, and a significant improvement three months post-intervention, as self-assessed by the residents, were observed. The former finding showed a moderate effect and the latter a large effect. However, as opposed to the family members, the persons with dementia did not report an increase in QoL immediately post-intervention. This difference in our findings between the two groups of participants could be related to several unknown and uncontrolled factors that are not linked to our study. Perhaps the family members noticed an increase in the overall well-being of their relative given that the intervention, as they mentioned during the NGT interview, made them feel closer to other residents and their family members. Furthermore, it is possible that the residents themselves did not notice an overall increase in their QoL immediately post-intervention due to several different variables such as situational factors at the LTC facility, within their family or pertaining to that day. For instance, one of our residents' adult children died unexpectedly a few days following the end of the intervention. On the other hand, the increase in QoL, as observed by residents three months post-intervention, could have been influenced by a positive mood in seeing a familiar member of the research team (all residents remembered her) or other uncontrolled variables we are unaware of. The absence of improved QoL three months post-intervention according to the family members could be due to the fact that they had expected to see a lasting effect of the reminiscence intervention in their relative's mood and well-being. Overall, these interesting findings suggest potential short- and long-term effects of reminiscence intervention on some clinical outcome measures that need to be examined in the context of an RTC using similar implementation conditions.

Some limitations of the present study are worth noting. First, other implementation outcomes could enlighten the issue of novel interventions in dementia care and should be considered for future studies.

Furthermore, this implementation study comprised a limited sample size; it would be valuable to look at implementation in other LTC settings with a larger sample of participants and to determine how this would influence the opinions of the participants. Finally, a heterogeneous group of individuals, both in terms of the severity of dementia and the type of dementia, were used in this study. Although the heterogeneity might be considered a limitation for future RTCs, it reflects actual clinical conditions and provides great ecological validity for evidenced-based practice.

Implementation research is a critical step in translating scientific knowledge into clinical practice. Our findings validate reminiscence as a feasible psychosocial intervention that promotes person-centered as well as relationship-centered dementia care. Given proper training and organizational changes in work schedules, a group reminiscence intervention led by professional caregivers for persons with dementia and their families can be successfully implemented in an LTC setting with the goal of improving mental health and QoL of residents with dementia. We hope the findings from this implementation study may also guide national discussion concerning the improvement of dementia care.

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