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Linking two new E-health caregiver interventions to meeting centres for people with dementia and their carers; a process evaluation

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ABSTRACT

Objectives: Research shows that carers of people with dementia experience worse physical and psychological functioning than non-caregivers or than caregivers of people with a different chronic illness. This study investigated the implementation of two new e-health interventions for carers of people with dementia, Dementelcoach (telephone coaching) and STAR e-learning (online platform to learn about dementia). The interventions were linked to existing Meeting Centres for people with dementia and their carers.

Method: We conducted a qualitative multiple case study. Semi-structured interviews regarding experienced influencing factors were conducted with 15 key figures/stakeholders (14 interviews) in eight Meeting Centres during the preparation, starting and continuation phases of the implementation of Dementelcoach and STAR e-learning.

Results: Several influencing factors were found on micro level (e.g. PR, training, qualified personnel), meso level (e.g. finances, division of tasks) and macro level (e.g. laws and regulations, national and regional policy) during the different phases of the implementation process. Factors mentioned by most stakeholders were human and financial resources. Another important factor found was the fit between the interventions and region.

Conclusion: Insight into facilitators and barriers in the implementation of Dementelcoach and STAR e-learning provided by this study will inform and enable other Meeting Centres to adopt a fitting strategy to implement these interventions in their own centre. This is expected to help disseminate the intervention further, and will result in better-informed and supported carers. This will contribute to the prevention of overburdening in carers and will potentially enable carers to provide better care for their relatives with dementia.

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Introduction

Caregivers of people with dementia often face a difficult task of taking care of their relative while at the same time having to deal with the physical, psychological and social consequences that dementia has for themselves. Research shows that carers of people with dementia experience worse physical and psychological functioning than non-caregivers (Pinquart & Sörensen, 2003) or than caregivers of people with a different chronic illness (Schoenmakers, Buntinx, & Delepeleire, 2010). Burden in caregivers is highly influenced by patient behavioural problems, caregiver coping and personality traits, and caregiver feeling of competence (van der Lee, Bakker, Duivenvoorden, & Dröes, 2014). Overburdening of informal caregivers is one of the important reasons for nursing home admission of people with dementia (Gaugler, Yu, Krichbaum, & Wyman, 2009).

With the expected increase in the number of people with dementia (Prince et al., 2015) and the earlier diagnosis of dementia (Jack et al., 2018), partly because of new diagnostic techniques, more and more informal caregivers will be involved in caring for their loved ones and also for a longer period of time. To help carers, there is a need for timely, effective and efficient support. Effective support should preferably focus on information regarding dementia and the practical, emotional and social consequences of dementia. Various psychological and psychosocial interventions are used to support the caregiver and many have proved effective. These interventions include e.g. Cognitive Behaviour Therapy (Kwok et al., 2014), Mindfulness (Brown, Coogle, & Wegelin, 2016), Psychoeducational interventions (Coon, Thompson, Steffen, Sorocco, & Gallagher-Thompson, 2003). Also, dyadic interventions (Laver, Milte, Dyer, & Crotty, 2017; Van't Leven et al., 2013), which focus on both the person with dementia and the caregiver have been found effective for caregivers.

However, receiving timely support in dementia is a challenge. People with dementia and informal caregivers recognize the need for help at a late stage and often do not know which support options are available and how to use them (Van der Roest et al., 2009). Caregiver interventions that are offered at a distance (e-health interventions), in addition to face-to-face interventions, can make it easier and cheaper for caregivers to participate. Several of these interventions have been found effective (Boots, De Vugt, Van Knippenberg, Verhey, & Kempen, 2014), such as the STAR online dementia course (Hattink et al., 2015),

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Dementia online coaching (Blom et al., 2015) and Dementelcoach telephone coaching (van Mierlo, Meiland, & Dröes, 2012). Again, however, the challenge is to inform the target group about these interventions.

One way to provide access to informal caregiver interventions can be to offer them via existing Meeting Centres for people with dementia and informal caregivers. In the Netherlands there are more than 150 Meeting Centres spread across the country. These centres offer a combined support programme for people with mild to moderately severe dementia and their families, called the Meeting Centres Support Programme (MCSP). MCSP is offered in an easy-access location in the community, and it consists of a day club where the people with dementia can participate in a range of creative and recreational activities and psychosocial interventions, and for caregivers there are discussion groups and informative meetings that aim to inform and support them emotionally and practically in dealing with the person with dementia. There are also social group activities for both the person with dementia and their caregiver, to develop and maintain social contacts and to counteract loneliness. Participants in the MCSP, which is based on the adaptation coping model (Dröes, Meiland, Schmitz, & van Tilburg, 2011a; Brooker, Dröes, & Evans, 2017) are guided by information, practical help and emotional and social support in dealing with the consequences of dementia. Repeated scientific research (Dröes, Breebaart, Ettema, van Tilburg, & Mellenbergh, 2000; Dröes, Breebaart, Meiland, van Tilburg, & Mellenbergh, 2004; Dröes, Meiland, et al., 2011a; Dröes, van der Roest, van Mierlo, & Meiland, 2011b) showed that the participants who received MCSP had fewer behavioural and mood problems and more self-esteem, and their informal caregivers felt more competent in comparison with participants with dementia and caregivers who utilised regular day treatment. Moreover, lonely informal carers appeared to have fewer health complaints; and finally, nursing home admission was postponed.

The recently conducted 'Meeting Centres 3.0' project, also known as the Individualized Meeting Centers Support Program (iMCSP, 2016–2019) investigates whether a broader 'tailor-made' service offer will lead to more timely and effective support for informal caregivers and also for people with dementia.

This broader offer consists of three new individual interventions, two for informal caregivers and one for the people with dementia. For the caregivers these interventions are:

- Dementelcoach: caregivers of people with dementia receive 8–10 sessions of telephone coaching.
- STAR e-Learning: informal caregivers follow an internet course on dementia, support and care, and how to take care of themselves as caregivers.

And for the people with dementia:

- DemenTalent: people with dementia become active as volunteers in society, based on their talents, and supervised and supported by staff of the workplace where they volunteer and the Meeting Centre.

In the Individualized Meeting Centers Support Program, the implementation and (cost)effectiveness of these new interventions are compared with the current Meeting Centre offer for people with dementia and their informal carers.

In this article we report on the results of the implementation study, more specifically on the facilitating and impeding factors of linking the two caregiver interventions, Dementelcoach and STAR e-Learning, to existing Meeting Centres for people with dementia and their informal caregivers.

Central questions in this study were:

1. Which factors (at user, organization and law/regulation levels) promote or impede linking Dementelcoach and STAR e-Learning to Meeting Centres for people with dementia and their informal caregivers?
2. Which modifications are desirable to successfully link these two interventions to the Meeting Centres?
3. Which implementation strategies are advised by those involved in linking Dementelcoach and STAR e-Learning to Meeting Centres?

Method

Design

A qualitative multiple case study was conducted. During the preparation, starting and continuation phases of the implementation of Dementelcoach and STAR e-Learning, we interviewed key figures/stakeholders involved in the implementation regarding experienced facilitators and barriers in the implementation process (on a micro, meso and macro level; see measurements and procedure), possible modifications in the interventions needed and recommended implementation strategies for linking the new interventions to the Meeting Centres

Setting and participants

In the period of March 2017–October 2018, we conducted in total 14 interviews with a variety of stakeholders involved in the implementation of Dementelcoach and STAR e-Learning in the 8 Meeting Centres that participated in this study. In one interview two different stakeholders were present (a manager and a care worker). This resulted in 15 stakeholders in total. The number and type of stakeholders were based on purposively selection (Barbour, 1999), taking into account their varied expertise, role in the implementation process, and their experience with different aspects of the implementation (see Table 1). In practice this number of 15 proved sufficient as data saturation was reached on the different aspects of implementation.

A stakeholder was eligible for inclusion if he or she was a representative (e.g. manager, coordinator, activity coach) of one of the Meeting Centres where Dementelcoach and STAR were implemented or of another organization involved in one or more of the implementation phases (preparation, starting, and continuation) of these interventions. Stakeholders varied from a representative of the supplier of the interventions to a municipality or health insurance company. There were no specific exclusion criteria.

Table 1. Overview of interviewed stakeholders and their role in the Individualized Meeting Centers Support Program.

Interview	Interviewee	Role in the project
Interview 1	Projectleader Meeting Centre	Implemented Dementelcoach and STAR
Interview 2	Projectleader Meeting Centre	Implemented Dementelcoach and STAR, and completed the course to become a Dementelcoach
Interview 3	Projectleader Meeting Centre	Implemented Dementelcoach, STAR and DemenTalent
Interview 4	Projectleader Meeting Centre	Implemented Dementelcoach, STAR and DemenTalent
Interview 5	Projectleader Meeting Centre	Implemented Dementelcoach, STAR and DemenTalent
Interview 6	Duo interview with projectleader Meeting Centre and manager Meeting Centre	Projectleader and manager; they worked together in implementing Dementelcoach, STAR and DemenTalent
Interview 7	Representative Dementelcoach	Director of the co-operation Dementelcoach, part of the project group
Interview 8	Representative Dementelcoach	Employee Dementelcoach, coached the Meeting Centres in the implementation
Interview 9	Representative STAR e-learning	Representative of STAR e-learning in the Netherlands
Interview 10	Coach contracted by Dementelcoach	Coached informal caregivers who signed up for Dementelcoach
Interview 11	Representative municipality	This municipality funded the new interventions in several meeting Centres, who kept the representative of the municipality up to date on the progress of the implementation.
Interview 12	Representative municipality	This municipality did not approve funding for the project
Interview 13	Representative Alzheimer Nederland	This representative was part of the project group
Interview 14	Representative health insurance company	Member of the sounding board of the project

The Dementelcoach and STAR e-Learning interventions

The Dementelcoach intervention was developed more than 10 years ago by a care organisation in Leusden in collaboration with the regional health care organisation Beweging 3.0 in the middle of the Netherlands. It was initiated to provide emotional, social and practical support for caregivers of people with dementia. Professional caregivers were trained as telephone coaches to provide informal caregivers the appropriate support and, if relevant, to refer them to other care and support services that met their needs (van Mierlo et al., 2012). The strategy to use professional caregivers who in addition to their job work as telephone coaches, also aimed to increase the productivity of a large number of part-time workers in the psychogeriatric sector, especially women (Telkamp & De Koning, 2008). The Dementelcoach intervention consists of a maximum of eight to ten telephone calls over a period of 20 weeks between caregivers and telephone coaches, lasting approximately 45 minutes and covering issues caregivers want to discuss. Professional caregivers are trained to become telephone coaches so they can provide the appropriate support caregivers need and, if relevant, refer them to other care and support services. Earlier research showed that Telecoaching according to the principles of Dementelcoach combined with respite care (psychogeriatric day care) is more effective in improving the sense of competence and reducing burden and health complaints in informal caregivers of community-dwelling people with dementia than telecoaching or day care only (van Mierlo et al., 2012). The cost of the Dementelcoach intervention connected to a Meeting Centre is 575 euro per individual.

The STAR e-learning course was developed in a European Leonardo da Vinci Life Long Learning Programme project, which aimed to improve the knowledge about dementia and care skills of informal caregivers, volunteers, and professionals in dementia care by developing and evaluating an online training programme in different languages and at different difficulty levels. The course consists of 8 modules on different topics in dementia care: 2 on a basic level and 6 both at intermediate and an advanced level. It also includes a Learning Path Advisor to help people decide at which point to start the course via an online tool integrated in STAR that assesses baseline knowledge and confidence; and there are Facebook and LinkedIn communities to promote peer support and provide opportunities to contact other dementia care professionals. Results from a randomized controlled trial showed significant positive effects on caregiver attitudes, empathy and sense of competence (Hattink et al., 2015). The course subscription costs are 25 euros, which gives access for one year.

Implementation of dementelcoach and STAR e-Learning

The implementation of both new interventions took place at 8 Meeting Centres according to a stepwise plan. First the centres were recruited among members of the National Working Group of Meeting Centres: all centres in the Netherlands received an email in which they were invited to participate in the project. Centres who were willing to do so, and had been operational for at least 1.5 years, were eligible for the study.

Secondly, representatives of the participating centres were informed about the study, the content of both new interventions and the implementation procedure in a 3-hour information meeting. Subsequently the personnel of the centres applied for funding from municipalities, health insurance companies or other funding organizations. At the same time, the Meeting Centres started to recruit potential caregivers for these interventions. To this end they developed flyers, advertisements and press announcements/releases and contacted and informed potential referrers, such as general practitioners, case managers and district care teams.

Measurements and procedure

A semi-structured interview schedule was composed specifically for the process evaluation of this implementation study to identify facilitating and impeding factors during the preparation (3-6 months before the official start of the program), starting (0–1 year after the official start) and continuation phases (more than 1 year after the official start) of the implementation.

This schedule was based on the theoretical framework for tracing facilitators and barriers of adaptive implementation of care innovations developed by Meiland, Dröes, De

Table 2. Facilitating and impeding existing conditions.

	+	−
Characteristics project/ interventions	• Dementelcoach is a clear concept • The interventions fit with a specific target group • Anonymity and flexibility make the new interventions stand out from other interventions • Good addition to Meeting Centres programme	• Project leader doesn't think the interventions provide added value • It is hard to reach the target group • The interventions are not compatible with culture in every region
Operational conditions	• Having a project plan	• Obtaining funds takes a lot of time in the preparation period
Human and financial recourses	• Motivated and creative project leader and team • Funds available at the start of the project • Funds to hire personnel for the implementation • Project leader has enough time to invest in the project	• No clear information about budget • No extra budget, funds or hours to implement new interventions • Dementelcoach cooperation had limited resources to coach the Meeting Centres
Organizational conditions	• Meeting Centre is located in an active region and part of care network • External coaching before and during the implementation process	• No support from organization • Organization wants to transform Meeting Centre into a regular day-care centre (without carer support) • Minimal external coaching for implementation of the Dementelcoach intervention

Lange and Vernooij-Dassen (2004) and successfully applied in a previous study into the implementation of the community-based Meeting Centres Support Programme for people with dementia and their carers. This framework distinguishes three levels: the micro-level (primary process/user level), the meso-level (inter-organizational level) and the macro-level (societal level: health care system, legislation, and policy). It also includes (pre)conditions which exist before the start of the implementation, which can play a role also later on in the implementation process. Examples of these conditions: features of the intervention to be implemented, operational conditions, human and financial resources, and organizational conditions. Based on this theoretical framework, an interview schedule was composed with open-ended questions on micro, meso and macro level, with topics that were potentially related to factors that facilitated or impeded the implementation process during the different phases of implementation. For each stakeholder/key figure, specific topics were selected in the interview that matched their expertise and involvement in the different phase(s) of the implementation process.

The interviews were conducted by two junior (CP, AvR) and two senior researchers (RMD, FM). All researchers were actively involved in the research, the junior researchers were most active on the executive level and the senior researchers functioned as projectleader and daily supervisor. Anonymity was guaranteed. The interviews were conducted between 13 and 32 months after the start of the implementation period of Dementelcoach and STAR e-Learning, depending on the role of the stakeholders in the implementation process and the start date of the new interventions in the participating Meeting Centres, and lasted between 41.01 and 118.01 minutes, with a mean length of 58.01 minutes. All stakeholders were interviewed once.

Data analysis

All interviews were recorded on tape and transcribed verbatim. The content of the 14 interviews was analysed using ATLAS.ti (Hsieh & Shannon, 2005). To ensure reliability, the content analysis was done by a team of three researchers (AvR, RMD and FM). The researchers coded an interview independently, and then came together in couples to compare their coding. When they disagreed about a code, it was discussed until consensus was reached. After following this double coding procedure for 40% of the interviews, the remaining interviews were divided among the researchers who coded these independently.

The framework of Meiland, Dröes, Lange, and Vernooij-Dassen (2004) was used as a coding schedule for analysing the interviews. When factors appeared relevant for the implementation but were not yet included in the coding schedule, new codes were added (e.g. 'complexity of implementing the intervention', 'commitment/motivation of volunteer workplace' and 'unforeseen events in the organization'). Next, the facilitating and impeding factors influencing the implementation were clustered by theme and described. Quotations of the interviewed stakeholders were added to explain the different influencing factors citations.

Results

Participants

14 interviews were conducted with 15 stakeholders. From the Meeting Centres, we interviewed six programme coordinators/project leaders, one manager and one person hired externally for the project. All participating Meeting Centres received help implementing Dementelcoach and STAR e-Learning, from the Dementelcoach cooperation and the VU medical center respectively. We interviewed two representatives from Dementelcoach and one representative from the VU medical center. Additionally, we interviewed two representatives of municipalities, one representative of Alzheimer Nederland and one representative of a health insurance company.

Facilitators of and barriers to implementation

An overview of the experienced facilitators and barriers when implementing Dementelcoach and STAR e-Learning is provided in Table 2 and Figure 1. Some facilitators and barriers were related to conditions that already existed before or at the start of the implementation, and influenced the implementation process during the preparation phase or at a later stage. These are summarized under *existing conditions* (see Table 2). Facilitators and barriers in the *preparation, starting* and *continuation phases* are summarized on three levels: micro, meso and macro level (Figure 1).

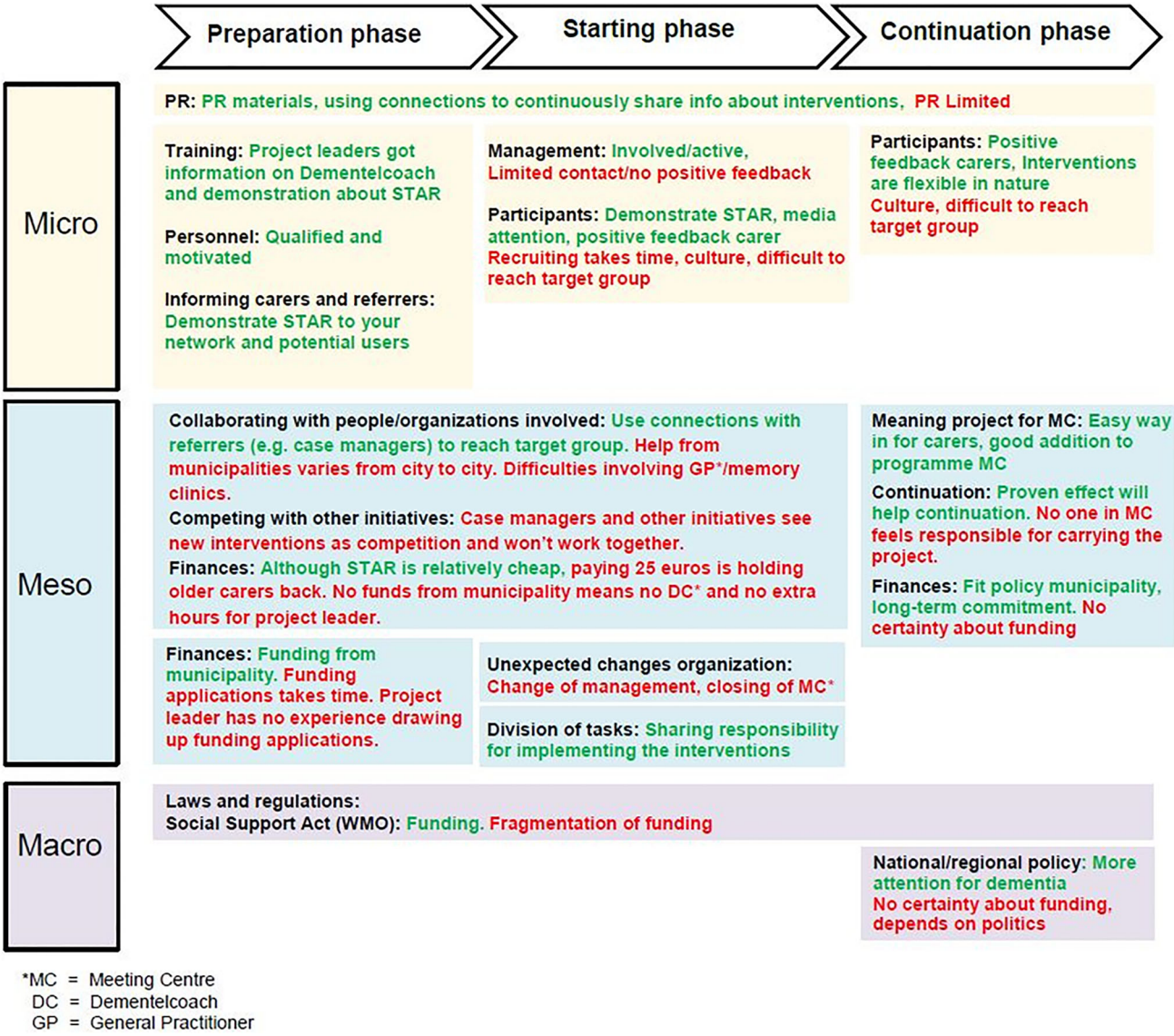

Figure 1. Facilitating and impeding factors in the preparation, start and continuation of the implementation of Dementelcoach and STAR e-learning (color version online).

Existing conditions

The majority of the interviewed project leaders told us that the Dementelcoach concept was very clear to them and that they believed both interventions (Dementelcoach and STAR e-learning) are good additions to the MCSP. This was experienced as very helpful for the implementation process. Project leaders believed the interventions were suitable for a specific target group of carers who might e.g. not be willing to participate in the discussion groups in the Meeting Centre.

> *'Yes, it is compatible with the needs of certain carers in this region, Dementelcoach in particular. Some people don't like to participate in a support group, and are not a good fit for the group. They can express their feelings to a Dementelcoach.'* - Project leader

With regard to human and financial resources, appointing a motivated and creative project leader, who has enough time to invest in the project, was important. Funds available for the project facilitated creating this time or hiring personnel to help with the implementation. Project leaders who did not have these funds emphasized this was an impeding factor. Another problem was that the Dementelcoach cooperation lacked the financial resources to provide the amount of coaching to the Meeting Centres they would have liked to guide and stimulate the implementation.

Organizational conditions were related to this topic: organizations that supported their personnel in implementing the new interventions were more likely to provide human/financial resources, or helped to find solutions if problems were experienced in this area. Thus, it is important that (as mentioned above) not only the project leader believes in the program, but also that the whole organization is devoted to implement this. Another important organizational condition proved to be being located in an active region, i.e a region where innovative care initiatives are happening, and opportunities for starting new ones are available, as well as collaboration exists between care and welfare organisations. Being part of a care and welfare network proved to be a facilitating factor as it helped to reach the target group. On the other hand, lack of support from the own organization and insufficient external coaching were mentioned as impeding the implementation.

> *'I'm an enthusiastic ambassador I think. I'm very involved with the project and I would love to continue together. We also want to set up these interventions throughout the whole organization.'* – Meeting Centre manager

Micro level

Public relations: Important throughout the preparation, starting and continuation phases was continuous promotion of the new interventions, by sharing PR materials (e.g. flyers, news articles) and using connections with care and welfare professionals and organizations to spread to word. In the preparation phase, the training about Dementelcoach and STAR e-Learning was found to be helpful to prepare for the implementation. In this training, project leaders were informed about the interventions and received a demonstration of the STAR modules. Especially the STAR demonstration was said to be helpful, and some project leaders used this same method to inform carers and referrers about the intervention.

> *'Yes, I think you have to show it to persuade someone. If you just tell them about it, they are not going to remember. But if I take my computer and show the modules, then they can see and say 'OK', that's when it becomes clear.'* – Project leader

Commitment of management: In the starting phase, the involvement of the management was important. A committed and active manager was experienced as facilitating, while a disinterested manager can undermine the motivation of the project leader.

Recruitment: Recruiting carer-participants was an important task in the starting phase, and multiple project leaders mentioned it took some time to get participants. A problem encountered in recruiting in some regions was that the interventions were not compatible with the local culture, as carers preferred face-to-face talks. Facilitating factors in finding participants were media attention, carers sharing their positive stories and, as mentioned earlier, demonstrating the STAR course to potential participants and referrers. Some of these factors were also mentioned with regard to the continuation phase (positive feedback and fit with the culture), and were used to decide whether to continue with the interventions after the project. A reported impeding factor during the starting and continuation phases was reaching the target group. Carers are inclined to think of the needs and care of the person with dementia first, because they are the ones that have a disease. In helping their loved ones, the carers tend to focus on staying strong and provide support. In order to ask help for (the carer) themselves, they will need to make themselves vulnerable, which is the opposite of the strong figure they want to be for their loved ones.

In the words of one representative of the Dementelcoach cooperation:

> *'An issue we [Dementelcoach] have been facing from the start is that carers are naturally inclined to prioritize the care for their loved one, and only at a later stage will think about what they need themselves and won't actively search for help.'* - Dementelcoach worker

Meso level

Collaboration with referrers: One effective way to reach the target group was to be close collaboration with other health care professionals. Referrers such as GPs, nurse practitioners and case-managers are very likely to see people with dementia and their carers at an early stage, and they can recommend the new interventions and refer to the Meeting Centres. Some project leaders mentioned that involving GPs and memory clinics was time consuming and had relatively little effect, due to the latter's generally high workload.

Competition: In some regions the new interventions, but especially Dementelcoach, were seen as competition by case-managers, and therefore met resistance. This was an impeding factor in both the preparation and starting phases of the implementation.

Finances: Finances proved a big factor influencing the implementation of the interventions at the meso level, but the reasons differed per phase. In the preparation phase, the project leader needed to apply for funds. A time-consuming activity most project leaders are not trained for, which is why they mentioned it as an impeding factor. The majority of Meeting Centres eventually did get funding, which of course facilitated the implementation of the interventions. Two Meeting Centres did not succeed in raising funds for Dementelcoach during the time of the project, and could therefore only start with the STAR intervention. Furthermore, the project leader of this Meeting Centre could only spend limited time on the project, as she did not get extra hours from her organization without the funds. This was a barrier both during the preparation and starting phases. A facilitating factor for STAR was that this intervention is relatively cheap (25 euros for a year's subscription). Nevertheless, several project leaders reported that the costs for STAR were still an impeding factor for some, especially older carers. Fewer problems were experienced with younger carers (e.g. daughters and sons).

> *'The forty- or fifty-year-old carers don't mind as much. But if they are older, everything adds up. They have quite a few expenses.'* – Project leader

Organization: A few Meeting Centres experienced unexpected and impeding changes in their organization during the starting phase, such as change of management or the Meeting Centre moving to another location (one centre). What helped during the starting phase was dividing tasks and sharing the responsibility of starting two new interventions in the Meeting Centre.

Added value for Meeting Centre: Finally, the positive impact of the interventions on the Meeting Centre facilitated the continuation of the interventions. Stakeholders mentioned that the new interventions made it easier for carers to get in touch with the Meeting Centre, and that the interventions are good additions to the Meeting Centres programme. The departure of a project leader left that Meeting Centre without a person taking charge of the project. This illustrates the vulnerability of the implementation and the importance of shared commitment both on a micro and a meso level of an organization in order to secure the continuation of the interventions in the long term.

Macro level

Laws and regulations: In 2015 the law involving elderly care was divided into three new and separate support and care acts. Most Meeting Centres received funds from their municipality as part of the Social Support Act (WMO), which was a facilitating factor. Several stakeholders said the separate support acts make obtaining funds for the Dementelcoach

intervention more difficult as the savings from providing telephone coaching to caregivers are not felt by the municipality but by the long term care because of the delay in nursing home admission.

> *'Previous research of the VU showed that Dementelcoach can support a carer to a level that they can carry on at home longer, so that moving to a nursing home is delayed for a few months. It saves money for the WLZ [Long Term Care Act]. You would think this money would go back into Dementelcoach, but that is not how those organizations think. That's a barrier in the current system.'* – Representative Dementelcoach

Policy of local government: Representatives from two different municipalities confirmed that STAR and Dementelcoach were very much in line with the policy of their municipality, and mentioned that this would facilitate the continuation of the interventions. The downside of getting funding from the local government is that it is never guaranteed for more than four years because of the limited term of city government.

Recommended modifications

One Meeting Centre started a group for carers who did the STAR e-learning course to discuss their progress and questions among each other, and recommended this to other Meeting Centres.

> *'We organized an intervision group around STAR education. The first few times I was present, but when a saw it worked it really became an intervision group of the Meeting Centre personnel, a couple of volunteers and carers. They met once every three weeks, and discussed one module at a time.'* – Project leader

Recommended implementation strategies

In the interviews we asked the stakeholders if they could share any advice on how to successfully implement STAR and Dementelcoach. They all agreed that collaborating with referrers (e.g. case managers) and healthcare organizations is of key importance, as well as maintaining close connections with the municipalities. Demonstrating STAR e-learning to professionals and potential users is experienced as a good way to get people involved and to persuade carers to try it. Some other Meeting Centres were thinking about similar activities. Lastly, a representative of Dementelcoach recommended appointing a project leader for starting up the two interventions and to really commit to implementing both interventions fully in the organization.

Discussion

This study provides insight into the facilitating and impeding factors of implementing the Dementelcoach intervention and STAR e-learning in the Meeting Centres Support Programme (MCSP). Several facilitating and impeding factors were found on a micro level (e.g. *PR, qualified personnel, response participants; demonstrating the STAR course to potential participants*), meso level (e.g. *finances, division of tasks, collaboration with other organizations*) and macro level (e.g. *laws and regulations, national and regional policy*) during the different phases of the implementation process (preparation, start, continuation).

The most important factors seemed to be *human and financial resources*. Successful implementation of the two interventions requires an enthusiastic project leader, who is constantly doing PR, to successfully implement the new interventions in the MCSP. Funds are needed to finance this time, for example by the local government, and additionally a supportive management is necessary. Another point of interest is the *fit between the interventions and region* of the Meeting Centre. One project leader experienced limited interest in the region, and she felt this was due to the anonymity of the distance interventions (via telephone and internet) . According to the project leader, people in her region preferred talking face to face to someone. This impeded the recruitment in this region and made it more challenging to set up the interventions.

Except from the suggestion to set up a group for carers to further discuss the themes of the STAR e-Learning no modifications were advised on the new interventions when linking them to Meeting Centres. Recommended implementation strategies include making one or two workers responsible for the implementation, close collaboration with referrers (e.g. case managers) and healthcare organizations and maintaining connections with the municipalities for regional planning of carer support and funding. Informative meetings where the interventions are demonstrated are of crucial importance.

The study showed that the added value of the new carer interventions experienced by the majority of stakeholders and the positive impact of the new interventions on the Meeting Centres (they made it easier for carers to get in touch with the Meeting Centres) proved to facilitate the implementation and continuation of the interventions. Together with the positive evaluation of the interventions by carers and the conclusion that these interventions can serve as a good alternative of the regular carer programme (discussion groups and informative meetings) of the MCSP for a subgroup of carers (Dröes, van Rijn, Rus, & Meiland, 2019) and therewith broaden the group of carers that utilize the support offered by the Meeting Centres, this gives sufficient ground to promote further dissemination and implementation of these interventions in other Meeting Centers in- and outside the Netherlands. This is also in the light of the growing number of people with dementia and carers in the coming decades and the demonstrated information and knowledge needs of carers, as well as the need to address their psychological health and to manage caregivers' own lives, in many caregiver studies (McCabe, You, & Tatangelo, 2016). The intensity of the coaching and the detailed information provided by STAR e-Learning could be complementary to the support offered by the dementia case managers.

Several of the factors that influenced the implementation of Dementelcoach and STAR e-learning were also reported in similar implementation studies. van Mierlo, Meiland, Van Hout, Dröes and Van De Ven (2015) studied the implementation and effect of a personalized e-intervention for informal and professional caregivers of people with dementia, called DEM-DISC. As in our study, strong collaboration with relevant organizations or referrers proved to facilitate the implementation, while a personal financial contribution from the carers was appraised as a potential impeding factor. Interestingly, the proposed modification

to discuss STAR education with a small group of other carers was also mentioned in the process evaluation of the social support programme for caregivers of people with dementia called 'Inlife' (Dam et al., 2019).

Strengths and limitations

A wide variety of stakeholders were interviewed; this ensured the implementation process was evaluated thoroughly. The theoretical framework of Meiland et al. (2004) was used in order to ensure a structured data collection and analysis of the different phases and levels of implementation. Although the interview scheme was based on this theoretical framework, it was used dynamically and knowledge obtained from earlier interviews was continuously used to add codes and adapt the interview scheme for new interviews. Finally, three researchers were involved in the data analysis and part of the data (40%) was coded by two researchers in order to optimize reliability.

However, the process evaluation also had limitations: First, the investigation period of the continuation phase of the implementation was shorter than the other phases, because of the limited duration of the study and the delayed start of the implementation of Dementelcoach and STAR e-learning in some Meeting Centres. At the end of our study four of the eight Meeting Centres reached the continuation phase, i.e. one year after starting the implementation of the interventions. Information collected about the continuation phase is therefore less extensive compared to information collected in the preparation and start phase. The results of the continuation phase should therefore be interpreted with some caution: more influencing factors may be found in the continuation phase of the implementation in case of a longer period of investigation.

A second limitation is that not every Meeting Centre actually started the Dementelcoach or STAR e-learning interventions within the timeframe of the project. This was either because they did not receive funds (in time) to finance the Dementelcoach intervention (three centres), or the project leader of the Meeting Centre did not have enough time for PR and recruitment of participants for STAR e-learning (one centre) and was therefore unsuccessful in recruiting carer participants.

Finally, the focus of the process analysis described in this paper was limited to tracing factors that facilitated or impeded the implementation of the new interventions, modifications of the interventions needed when linking them to Meeting Centres and recommended implementation strategies. In the effect evaluation study that followed the implementation of the new interventions we also investigated in more detail the reach and satisfaction of participants in the Dementelcoach and STAR e-Learning interventions (Dröes et al., 2019). Moreover, specific parts of the interviews in which the implementation process was explained (rather than facilitators and barriers or modifications needed) were analysed thematically and used for decription of the implementation process in a practical guidebook to implement the new interventions at Meeting Centres (Van Dijk & Dröes, 2019).

Scientific and clinical relevance

The scientific relevance of our research lies in the fact that this is the first study that provides insight into factors influencing the success of implementing two innovative and caregiver-oriented interventions, STAR e-learning and Dementelcoach, into an already existing, successfully operating intervention programme, the MCSP. The centres can therefore be informed on how to reach a broader group of carers, who are now not receiving support from the centres, by means of Dementelcoach and/or STAR e-learning. Our study demonstrated the feasibility of this implementation process. Also, positive results were experienced by carers and other stakeholders in places where Dementelcoach and STAR e-learning was implemented successfully. The results of this implementation study will be translated into a practical guide on conditions and strategies to successfully link the new carer support interventions to existing Meeting Centres.

Future research should focus on the effectiveness of these new individualized e-Health interventions to support carers of people with dementia compared to the regular group-oriented MCSP on the functioning and quality of life of carers, and also on the cost-effectiveness of these interventions.

Societal relevance

An increasing number of informal caregivers are expected to be involved in caring for their loved ones with dementia for a longer period of time, as the number of people with dementia is expected to increase, and new diagnostic procedures make it possible to diagnose dementia at an earlier stage. Carers need support to prevent overburdening and exhaustion. The Dementelcoach and STAR e-learning interventions have the potential to fulfil this need in a timely, efficient and effective manner. There are more than 150 Meeting Centres across the Netherlands and another 20 in Europe and beyond, so linking Dementelcoach and STAR e-learning to these Meeting Centres would make these interventions more easily accessible and available for a large group of carers of people with dementia.

One of the main influencing factors we found in our research were the *financial resources*. Most Meeting Centres applied for funding from their municipality and although the majority received the funding needed because it matched the local policy to support carers of people with dementia, this often appeared to be a very time consuming process. With the introduction of the Social Support Act (WMO) in the Netherlands, which transferred responsibility for funding of day care support to the municipalities, they need to acquire all-round knowledge of many care-related topics in order to make informed decisions about the division of funds. More exchange and collaboration between knowledge centres, healthcare and local governments could help make this process more effective and efficient.

Conclusion

The insight into factors that facilitate or impede the successful implementation of Dementelcoach and STAR e-learning provided by this study will inform and enable

other centres to adopt a fitting strategy to implement these new interventions in their own centre. This is expected to help further dissemination of these interventions in Europe and beyond, enabling more carers of people with dementia to find information or support in their own personal environment in an easily accessible manner. Further dissemination of the interventions will result in better-informed and supported carers. This will contribute to the prevention of overburdening in carers and will potentially enable carers to provide better care for their relatives with dementia.

Disclosure statement

No conflict of interest to report.

Ethical approval

The Medical Ethics Committee and the Science Committee of the VU University Medical Centre Amsterdam approved the study protocol. Additionally, this study is registred in the Dutch National Trial Register (NTR), number NTR5521.

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