Chapter 8

Towards an evidence based implementation model and checklist for personalized dementia care in the community.

Van Mierlo LD, Meiland FJM, Van Hout HPJ, Dröes RM. Towards an evidence based implementation model and checklist for personalized dementia care in the community. (Submitted)
Abstract

Objectives: The aim was to develop an evidence-based model that focuses specifically on factors that enable the provision of personalized care to facilitate and promote the implementation of community-based personalized dementia care interventions.

Method: The model is based on our previous research and additional literature. The Theoretical model of adaptive implementation was used as a framework to structure our model. Facilitators and barriers considered relevant for personalized care were extracted from our studies and additional literature and were synthesized into the new evidence-based implementation model and checklist for personalized dementia care in the community.

Results: The model addresses several issues: how personalized care interventions should be offered and to whom; if they are able to adapt to personal characteristics and needs of clients and informal caregivers; if both organizational management and staff that provides the intervention support personalized care and are able to focus on providing individualized care; continuity of care aspects, collaboration among care professionals and organizations; and law- and legislation aspects of personalized care.

Conclusion: Our model provides a checklist for researchers, professional caregivers and policy makers who wish to develop, evaluate or implement personalized care interventions.
Introduction

Over the past several years, there has been an increase in attention and need for studies on personalized psychosocial care interventions to support people with dementia and their informal caregivers (Moniz-Cook et al., 2014). The definition of personalized or individualized dementia care differs among people, settings and context (Brooker, 2004). In this article, we refer to personalized care as care and support that is attuned to individual needs of clients, to who they are as a person and to what they will benefit from most. A lot of recent literature on person-centered care interventions focuses on the intramural setting. Fossey et al. (2014) and Testad et al. (2014) recently conducted systematic literature reviews on personalized psychosocial care interventions in the nursing home. However, the implementation of psychosocial interventions is not always adequate and needs more attention (Vernooij-Dassen & Moniz-Cook, 2014). Several studies report on facilitators and barriers to the implementation of intramural person-centered interventions in general (Clisset et al., 2013; Kurucz, 2010; Hill, 2004). These studies focus on how staff in nursing homes and acute care settings can adopt a “person-centered” care approach in taking care of their residents. Similar research focusing on the implementation of personalized care in the home setting is scarce. However, several studies that report on the effects of different types of personalized psychosocial interventions also provide insight into barriers and facilitators of the implementation of these individual interventions (Van ’t Leven et al., 2012; Meiland et al., 2005; Minkman et al., 2009).

In order to provide efficient care for people with dementia and their informal caregivers in the community, it is important to know which subgroups benefit from which psychosocial interventions. To date, there has been little research into the effects of psychosocial interventions for subgroups of people with dementia or their caregivers. Our previous reviews (Van Mierlo et al., 2010; 2012) provided the first insights into the personal characteristics of people with dementia and their informal caregivers that are related to positive psychosocial intervention outcomes. These results emphasize the importance of developing and implementing personalized care interventions for specific target groups. Again, as with personalized care in general, we found that the majority of studies describing interventions for subgroups of people with dementia were aimed at institutional settings, while relatively few focused on the home setting.

In order for personalized interventions to find their way into practice, guidelines are needed that promote and support the implementation of personalized care. Implementation research can also help to interpret outcomes of intervention studies by assessing whether the intervention was executed per protocol or whether
implementation error occurred (Vernooij-Dassen & Moniz-Cook, 2014). Proven
effective or beneficial interventions are not automatically implemented on a large
scale (Meiland et al., 2004) or necessarily personalized. Implementation of
interventions is dependent on effective implementation strategies, which can be
derived from existing theoretical models such as the Implementation of Change
model (Grol et al., 2005), Intervention Mapping framework (Bartholomew et al.,
2001), the RE-AIM framework (Glasgow et al., 1999; 2001), the MIDI instrument
(Fleuren et al., 2012) and the Theoretical model of adaptive implementation (Dröes
et al., 2003; Meiland et al., 2004). The latter model is partly based on the Model of
Innovative Management Ability of Institutions (Nies, 1994; Vrakking & Cozijnsen,
1990) and partly on research into the national implementation of the Meeting
Centers Support Program for people with dementia and their carers (Meiland et al.,
2005). It provides a systematic guideline to care innovations and states that several
phases can be distinguished in the implementation of an innovation: the
implementation (preparation and execution phase) and the continuation phase.
Factors that may influence the different phases of implementation are:
characteristics of the intervention, operational preconditions, personal and financial
resources and organizational conditions. The above-mentioned models provide a
holistic insight into implementation issues, based on numerous steps that involve
planning, adapting, introducing and evaluating the implementation of an
intervention on a micro-, meso- and macrolevel, but they do not focus on
components relevant to personalized care.
Based on our previous research (Van Mierlo et al., 2010; 2012a; 2012b; 2014;
submitted(a) submitted(b)) and the literature we developed an evidence-based
model/checklist for the implementation of personalized care interventions for
community-dwelling people with dementia and their informal caregivers. The aim
was to develop an evidence-informed model that focuses specifically on factors
that enable the provision of tailored care (and indicates potential barriers so that
they can be dealt with), and thus facilitates and promotes community-based
personalized dementia care interventions.

Methods

For the development of the evidence-based model for implementation of
personalized care interventions in dementia, we used our previous work on the
relationship between personal characteristics of people with dementia and
caregivers and positive intervention outcomes in the community setting (studies 1
and 2: Van Mierlo et al., 2010; 2012a), our research on the effectiveness and
implementation of DEM-DISC, a web-based interactive social chart that provides information on health and care services tailored to the needs of people with dementia and carers (study 3: Van Mierlo et al., submitted(a)), our results from the Dementelcoach study on a telephone intervention for informal caregivers of people with dementia (study 4: Van Mierlo et al., 2012b), our study on a tailored mental health transfer intervention for patients with dementia and complex problem behaviors following nursing home admission (study 5: Van Mierlo et al., accepted(b)) and a process evaluation of the implementation of two case management models for dementia as part of the COMPAS study (study 6: Van Mierlo et al., 2014). These were our key publications. From these publications, we extracted information about factors that facilitate and impede the delivery of personalized care by care professionals. The Theoretical model of adaptive implementation (Dröes et al., 2003; Meiland et al., 2004) was used as the generic model for our study and was operationalized for personalized care by incorporating those facilitating and impeding factors that are considered relevant for the implementation of personalized care in the community. We distinguished between preconditions that can influence the implementation of personalized care at the start and throughout the process and factors that influence the implementation during the execution and continuation phases of the implementation. The relevant factors were discussed in the project group of researchers (LvM, FM, HvH, RMD) and synthesized into the new evidence-based Implementation Model and Checklist for Personalized dementia care in the community.

Additional literature searches were conducted to trace any other studies investigating the implementation of personalized care interventions for people with dementia or caregivers that could be integrated in our model. When nursing home studies were found, the described barriers and facilitators were examined on relevance for community-dwelling people with dementia. The Pubmed and Web of Science search engines were used with the following key words: implementation, integration, personalized care, person-centered care, psychosocial, dementia, support program, interventions. Inclusion criteria were: studies that describe facilitators or barriers to the implementation of personalized psychosocial care interventions for people with dementia or informal caregivers. Exclusion criteria were studies that described outcomes of effect evaluations without describing the implementation process. The PubMed search resulted in 59 articles and Web of Science in 81 articles. Based on expert advice we also traced and used a report on validated barriers and facilitators for implementation of innovations (Fleuren et al., 2012), used recent published work describing the transformation of nursing home-based day care centers into socially integrated community day care (Van Dijk et al, 2014; Van Haeften-Van Dijk et al, submitted) and cross-referenced recent reviews on personalized dementia care (Boersma et al., in press; Fossey et al., 2014;
Testad et al., 2014). A total of 16 articles were relevant for our model, of which 8 were community based and 8 were institution based. Because the results of our own previous studies did not cover implementation aspects related to the macro-level (e.g. laws and legislation that could influence the delivery of personalized care), we conducted an additional search to specifically target research papers that covered law and legislation aspects that were associated with costs and self-management of dementia through personal budgets¹ via health insurance for people with dementia. Keywords were: dementia, personal budget, self-management, costs. This resulted in two additional publications relevant to our model (Alzheimer’s Disease policy report UK, 2011; Knapp et al., 2014).

Results

Figure 1 presents the constructed evidence-based model for implementation of personalized care interventions. The model consists of different implementation components containing core questions and detailed subquestions, all based on factors that affect the implementation of personalized care in the community setting. For each component of personalized care, we have described certain considerations to keep in mind, and potential barriers that negatively affect the delivery of personalized care. The model includes preconditions that can influence the implementation as well as factors that are relevant during the execution and continuation phases of implementation. The different “core components of personalized care” (C-PC1, C-PC2 etc.) of the evidence-based model as well as the considerations and barriers are explained in the text.

For each component of the model, we refer to our previous studies (1 through 6, see ‘research methods’) more specifically the study that the specific component derived from. Additional literature was found on implementation of personalized care related to both community and institutional settings. Elements from these studies that corresponded with our own results are included with a reference in the model as well.

¹Personal budgets are direct payments provided by health insurers to people with dementia, giving them an individual choice to select, and have control over, care services they want to buy and use.
Important factors and barriers for personalized care

Influencing factors and preconditions: characteristics of the intervention

C-PC1 (core component of personalized care 1): Our two previous reviews (studies 1 & 2) provide an overview of different subgroups that experienced positive effects from psychosocial interventions. These results indicate that the presence of depression or loneliness, the way in which informal caregivers perceive their carer role, their perceived level of control over the situation, their gender, marital status and living situation may influence intervention outcomes. Personal characteristics like these are therefore important to consider when implementing personalized care interventions in dementia care. This helps to target these interventions to the right care recipients resulting in better intervention outcomes. Positive experiences by care recipients and care professionals will enhance the implementation.

While some papers included in our reviews reported positive outcomes for their whole study sample which could be identified or categorized as a subgroup (for instance they were all female), other studies reported post-hoc analyses that revealed specific subgroups from their sample that seemed to benefit more from their intervention than others. While for people with dementia who live at home we only traced one post-hoc subgroup effect, i.e. for people with mild to moderate dementia (Mittelman et al., 1996: individual & family counseling), many subgroup effects were reported for informal caregivers, such as informal caregivers with high levels of depression (Coon et al., 2003: depression management class), high levels of anger expression (Coon et al., 2003: anger management class), positive beliefs about their carer role (Hepburn et al., 2001: Minnesota Family Workshop), female spouses as well as caregiver with low to medium levels of mastery (Mahoney et al., 2003: automated telephone support), female caregivers of people with dementia who live at home (Vernooij-Dassen et al., 1995: an emotional support program), and informal caregivers who are lonely (Dröes et al., 2006: Meeting centers support program).

C-PC2: Today, professional support can be delivered by telephone, in face-to-face meetings or by online support services, individually or in a group. It is important to consider which of these ways of care delivery suits each individual best. Individual interventions, for instance, may be better suited to provide personalized care than group interventions. Also, not all interventions are suited to be offered in different ways.

In the Dementelcoach study (study 4), informal caregivers were offered telephone contacts with a professional coach, receiving emotional, social and practical support for 20 weeks. While the majority of caregivers were satisfied with the
### Figure 1. The evidence-based model and checklist for implementation of personalized care interventions.

#### Influencing factors and preconditions for implementation

<table>
<thead>
<tr>
<th>Characteristics of the intervention</th>
<th>Personal and financial characteristics</th>
</tr>
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<tbody>
<tr>
<td>C-PC1: Are there (personal) characteristics to consider that may influence intervention outcomes?</td>
<td>C-PC5: Is there a clear initiator of the implementation of the intervention?</td>
</tr>
<tr>
<td>- Presence of depression in caregivers</td>
<td>- Is he or she personalized-care oriented?</td>
</tr>
<tr>
<td>- Presence of loneliness in caregivers</td>
<td>Studies # 5 &amp; 6 and refs D, ME, L, P, S &amp; R*</td>
</tr>
<tr>
<td>- How caregivers perceive their carer role by caregiver</td>
<td>- Does the staff that will deliver the intervention have the necessary competencies and attitude to deliver personalized-care?</td>
</tr>
<tr>
<td>- Perceived level of control over situation by caregiver</td>
<td>- Experience in dementia care</td>
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<tr>
<td>- Gender of caregiver</td>
<td>- Enthusiasm for personalized care</td>
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<tr>
<td>- Marital status</td>
<td>- Certain degree of knowledge of personalized care</td>
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<tr>
<td>- Living situation</td>
<td>- Are they able to connect care recipients with suitable care services based on their needs?</td>
</tr>
<tr>
<td>- Severity of dementia</td>
<td>Studies # 5 &amp; 6 and refs D, LE, ME, MI, MO, P, T, L, K, H, V &amp; S*</td>
</tr>
</tbody>
</table>

#### Considerations:

- Which intervention would be effective for certain subgroups or individuals with specific characteristics?
- Is it necessary to modify the intervention for specific subgroups?

#### Barriers:

- Indecisive quality requirements regarding qualifications of staff
- Staff not skilled to deliver personalized care
- No education of staff (on personalized care), not used to working in personalized way
- Insufficient knowledge on social chart and available care services

#### Organizational characteristics

- Care organizations or health insurers may not value or have different ideas about the concept of personalized care
- No previous education about personalized care

- Management is not convinced of the added value of personalized care
- A change in management may change their appreciation of personalized care

- Competing interests of other care organizations may impede a personalized care mindset as their focus may be on what is best for the organization instead of a client
**A MODEL FOR IMPLEMENTATION OF PERSONALIZED CARE**

**Execution and Continuation phase (MICRO LEVEL)**

**C-PC11:** Is staff that delivers the intervention able to focus on the personalized care aspects of the intervention?
- Is staff able to perform individualized care?
  - Studies 5 & 6 and refs D, LE, P, T, S, M & MO*

**Barriers:**
- Time pressure (for instance by law and legislation restrictions)
- Low staff occupancy to perform the intervention (less time per client)
- High experienced work pressure → burn out risk
- No continuous structural education about personalized care

**C-PC12:** Does the intervention provide continuity of staff?
- One familiar care worker means clients can "get to know" their professional care, which stimulates personalized care
  - Studies #5 and refs T, K, C & M *

**Barriers:**
- Presence of many part-time workers
- Temporary staff/high turnover

**C-PC13:** Does every client have a personalized care plan?
- Does it contain a biography, needs and potential goals, information on how to deal with behavioral issues and progress during the intervention?
  - Study # 6 and refs K, MO & H *

**Barriers:**
- Insufficient records of a care plan
- New professional carer does not have "same knowledge level" or competency

**C-PC14:** When a client is transferred to another professional carer, is there a complete handover of information about this client?
- This promotes continuity of care and makes it easier for the new care professional to get to know the client
  - Study # 5

**Barriers:**
- Care plans differ across organizations, making a proper transfer difficult
- Insufficient time for information handover
- No frequent discussion of care plan with colleagues and family members (or not involving them at all)

**References:**
- Studies 1: Van Mierlo et al., 2010; Study 2: Van Mierlo et al., 2012a; Study 3: Van Mierlo et al., submitted(a);
- Study 4: Van Mierlo et al., 2012b; Study 5: Van Mierlo et al., submitted(b); Study 6: Van Mierlo et al., 2014

**Community-based implementation studies**
- A: Alzheimer’s Disease UK, 2011; AU: Auer et al., 2013; DU: Ducharme et al., 2006; KN: Knapp et al., 2014; LE: Van’t Leven et al., 2012; M: Mahoney et al., 2008; ME: Meland et al., 2005;
- MI: Melkman et al., 2009; PH: Peersers et al., 2012; PH: Phung et al., 2013; T: TNO, 2012

**Nursing home-based implementation studies**
- C: Clisset et al., 2013; H: Hill, 2004; K: Kuruncz et al., 2010; L: Laurits et al., 2008; MO: Moyle et al., 2014;
- R: Rokstad et al., 2013; S: Stan-Parbury et al., 2012; V: Verkaik et al., 2011

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**Execution and Continuation phase (MESO LEVEL)**

**C-PC15:** Is transparency about the intervention provided to other (competing) care organizations?
- Transparancy about the intervention promotes collaboration and helps to keep a joint focus on what a client needs
  - Study # 6 and refs ME & P

**Barriers:**
- Competing care organizations may not be open to collaboration
- Other organizations have a different idea about what a client needs

**Execution and Continuation phase (MACRO LEVEL)**

**C-PC16:** Do laws and regulations allow clients or professional caregivers to arrange individualized care based on care recipient’s needs?
- Are personal budgets available that allow people with dementia and their caregivers to choose their own care?
  - Refs A & KN*

**Barriers:**
- Tight eligibility criteria to obtain personal budget
- Lack of support from professional carers to support clients in managing their own care
- Lack of clear information about obtaining and managing personal budgets
- No evidence on cost-effectiveness of personal budgets specifically for dementia clients
support, some people felt the telephone coaching was less personal and they would have preferred more face-to-face contact. This indicates that the way in which interventions are offered to care recipients is of importance.

**C-PC3:** An important aspect of personalized care is that it is tailored to the experience of people with dementia and informal caregivers. In general, this can be achieved through user-driven designing or user-participation designing (and pilot tests) from the start of development until the final product. This enables people with dementia and informal caregivers to deliver input about the intervention to ensure that the intervention meets the user-perspective and will be personalizable.

In the DEM-DISC study (study 3), informal caregivers could use a web-based digital interactive social chart (DEM-DISC) to help them find care and welfare services in their region, based on their needs. User behavior differed among participants: caregivers who used the DEM-DISC less often felt that the terminology of the questions in DEM-DISC did not always match the needs as they experienced them. Although several iterations with user feedback were included during the development of DEM-DISC (Van der Roest *et al.*, 2009), the final product was still not satisfactory to all users, implying that further attention for personalization of DEM-DISC is needed.

**C-PC4:** One of the key components of personalized care is to adapt the care to individual needs of clients, as was shown in the tailored mental health intervention to improve the transfer of people with dementia to the nursing home (study 5) and in the process evaluation of case management (study 6). This requires an investment in assessing what these needs are, including information about a person’s biography, likes and dislikes and what motivates a person to accept care support.

**Influencing factors and preconditions: personal and financial characteristics**

**C-PC5:** There should be a clear leader who promotes and stimulates personalized care in order for the implementation of an intervention to be successful (studies 5 & 6).

**C-PC6:** Certain characteristics of professional caregivers can play a role in their ability to provide personalized care (studies 5 & 6). They should have experience in dementia care, have enthusiasm for the job, have a certain degree of relevant education and be available for their clients in case of an emerging care need. Furthermore, they should have adequate knowledge of the social chart of the care and welfare services in the area, so they can give their clients the best possible advice. Insufficient quality requirements or qualifications of professional caregivers lead to inconsistent quality of (personalized) care. Lack of proper (structural) education about individualized care also impedes the quality of care provided by professional caregivers.
C-PC7: The availability of tools, such as an expert team or quality handbook of the intervention to help professional carers in their work can contribute to personalized care provision (study 6). The ability to discuss complex client cases with an expert team can support them in their work. The exchange of knowledge and frequent consultation with other care professionals, especially when the situation of a client or informal caregiver changes, creates a strong network around them. Barriers may be: absence of an expert team, difficult to reach expert team, and expert team that lacks personalized care orientation.

Influencing factors and preconditions: organizational characteristics
C-PC8: The ability to provide personalized care is influenced by the attitude of professional caregivers in the care organizations towards this concept (study 5). Providing continuous education to them about the importance of personalized care is necessary to maintain a positive attitude. Furthermore, all relevant care organizations that are primarily involved in the implementation need to be convinced of the value of the personalized care intervention. Care organizations having different opinions about personalized care or insufficient knowledge on its value impedes collaboration and implementation.

C-PC9: Management plays an important role as well, as they can motivate and support their employees to adopt a personalized care approach (study 5). Management or leaders who do not promote personalized care, or a change of leader or management during the implementation are definite barriers.

C-PC10: It is important that other care organizations with which collaboration is necessary adopt a personalized care mindset (study 6). Competing care organizations may pose a barrier if they refuse to collaborate or lack the right mindset.

During the implementation process: execution and continuation phase (MICRO LEVEL)
C-PC11: The ability of professional caregivers to adopt an individualized care approach can be affected by external factors (studies 5 & 6). They often experience time pressure (large caseloads and time restraints following administration procedures due to law and legislation regulations). Combined with a low staffing level this can result in high work pressure that negatively affects the quality of care and available time for individual clients.

C-PC12: Providing personalized care can be best ensured if there is continuity in the professional caregivers who deliver the intervention. This allows them to get to know a care recipient, their favorite leisure activities, what they like and what
motivates them, and helps them attune care to their needs. The presence of many part-time workers and temporary staff impedes this continuity. The study that explored a tailored mental health intervention for people with dementia and behavioral problems who are admitted to the nursing home (study 5) emphasized the importance of continuity of care during this transition by providing professional caregivers with biographical information about clients and advice on how to deal with their behavioral problems. This information can also be gathered through family members, if present.

**C-PC13:** The presence of an individual care plan that is attuned to the wishes and needs of clients can assist care professionals to provide personalized care and needs to be regularly evaluated with family members and other care professionals to keep it up to date (study 6).

**C-PC14:** When a client is transferred to another professional carer, a proper transfer of information between care professionals is essential (study 5). In practice, barriers to a complete transfer of information are that care plans differ across organizations, there is insufficient time to conduct the transfer, the care plan is not well documented or the new care professional does not function on the same level as the previous care professional.

**During the implementation process: execution and continuation phase (MESO LEVEL)**

**C-PC15:** When collaborating with other care professionals it is important to provide transparency about the care that professional carers provide, as this enables good collaboration and the ability to focus on specific needs of clients instead of the interest of the care organization. This aspect was retrieved from the process evaluation of case management (study 6).

**During the implementation process: execution and continuation phase (MACRO LEVEL)**

**C-PC16:** Personal budgets for people with dementia via their health insurance enable them to arrange their own individualized care based on their needs. In practice, criteria to obtain such personal budgets can be strict and there is a lack of clear information about how to obtain these budgets. Also, professional caregivers may not always adequately support informal caregivers in how to use personal budgets. As a result, personal budgets are not adequately received or used by care recipients. This was retrieved from additional literature on law and legislation aspects of the implementation of personalized care (Alzheimer’s Disease UK, 2011; Knapp et al., 2014).
Discussion

In this paper we presented evidence-based core components that facilitate the implementation of personalized care. At the same time this provides a checklist for researchers, health care providers, policy makers and other care professionals who are involved in the development or implementation of personalized care interventions in the community. The checklist contains 16 factors that explain essential conditions to effectively implement personalized care, along with potential barriers to consider. The purpose of making this evidence-based model was to integrate knowledge which was gained in several reviews (on the relationship between positive intervention outcomes and personal characteristics of people with dementia and informal caregivers) and implementation studies (including our own studies) into personalized care with the aim to facilitate/guide the implementation of personalized dementia care interventions and to promote better sustainability of these interventions.

The model may not comprise all aspects of implementation, but it focuses on crucial components that are particularly relevant to the implementation of personalized community-based dementia care. Our model can be used in combination with other implementation models (Bartholomew et al., 2001; Dröes et al., 2003; Meiland et al., 2004; Grol and Wensing, 2005) for a holistic and integrated implementation approach.

The widely used RE-AIM model to assess the implementation of interventions is an interesting framework relevant to implementation research and practice (Glasgow et al., 1999; 2001). The model lists five dimensions that need to be considered when evaluating the implementation of an intervention. The framework states that it is important to consider the target group that is reached by the intervention (Reach), the probable impact or positive outcomes of the intervention (Effectiveness), how many and which care organizations or settings use the intervention and how many partners have adopted the program (Adoption), how well the intervention is implemented in real life according to the principles and essential components of the intervention (Implementation) and how well the intervention and positive effects on participants are sustained over time (Maintenance). Ideally, personalized care interventions should have a high Reach (as they can be altered to fit personal needs to serve a large group of clients) and high Effectiveness (as they can be targeted to specific problems and offer the right care). The RE-AIM framework can be used to assess strengths and weaknesses of interventions but also to guide (further) development and implementation of interventions. Many studies have used the RE-AIM model to either develop an intervention or to conduct an interim evaluation of the implementation (Gaglio et al.,
2013; Altpeter et al., 2013; Gitlin et al., 2010). Our evidence-based model for implementation of personalized care can be used in a similar way to evaluate already implemented interventions, but it can also be used to trace the causes or origins of (potential) problems when preparing or executing the implementation (are problems with providing personalized care related to collaboration problems or due to rigid content of the intervention?), and it can help solve these problems efficiently in order to increase personalized care.

While this model aims to promote the implementation of personalized care interventions in the community setting, the checklist can also be adopted by nursing homes to help implement or develop individualized care interventions in the residential setting. The key components that were traced in our previous studies, such as full management support toward practicing personalized care and the necessity to invest in assessing needs of care recipients, are comparable to essential components described in the literature for the implementation of personalized care in nursing home settings (e.g. Kuruncz, 2010; Hill, 2004).

A limitation of this study is that we did not perform a systematic literature search and therefore may have missed other relevant studies. Furthermore, the essential components of our model were not independently reviewed by the researchers. It must be mentioned, however, that all components were derived from previous studies in which facilitators and barriers to implementation were traced by two independent reviewers. A strength of the study is that we have incorporated multiple studies, covering a range of different types of interventions (telephone, internet and face-to-face interventions as well as systematic literature studies) and integrated their results into our model. The additional literature we found on the implementation of personalized care interventions both in the community and in the nursing home confirmed our own findings and strengthens the scientific basis of our model. The evidence-based model for implementation of personalized care aims to promote the use and development of tailored interventions based on abilities, needs, wishes and personal characteristics of people with dementia and their informal caregivers. Interventions should ideally be adaptable to individual clients, both in content and the way of care delivery to optimize its effectiveness.

Future research should be targeted at evaluating the application of this evidence-based model in different care settings to estimate its expediency to improve the implementation of personalized care and psychosocial interventions.
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