

Enabling meaningful activities and quality of life in long-term care facilities: The stepwise development of a participatory client-centred approach in Flanders

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Abstract

Introduction: Meaningful activities of daily living promote the quality of life of residents of long-term care facilities. This project aimed to develop an approach to enable meaningful activities of daily living and to guide long-term care facilities in a creative and innovative attitude towards residents' meaningful activities of daily living.

Method: The approach was developed in six steps: (1) in-depth-interviews with 14 residents; (2) a survey with 171 residents; (3) a systematic map and synthesis review on interventions enriching meaningful activities of daily living; (4) qualitative analysis of 24 'good examples' and, to support future implementation, (5) focus groups with staff ($n = 69$). Results determined the components of the new approach which was (6) pilot-tested in one long-term care facility. Quantitative and qualitative data were gathered concerning benefits for the residents and feasibility for the staff.

Results: A client- and activity-oriented approach was developed, characterised by an active participatory attitude of residents and staff and a systematic iterative process. Significant positive effects were found for the number of activities, the satisfaction with the leisure offered, the social network, medication use, but not for quality of life. The approach appeared to be feasible.

Conclusion: This approach stimulates residents' meaningful activities of daily living and social life. Further investigation is needed to evaluate its outcome and implementation potentials.

Keywords

Intervention, nursing homes, medication, social, satisfaction, systematic approach

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Introduction

In Flanders (the Dutch speaking part of Belgium), more than 70,000 people are living in a long-term care facility (LTCF); more than 70% are severely care-dependent and approximately half suffer from dementia (Lemaitre, 2015). Flanders' LTCFs have a mix of residents who might need different levels of care but have one thing in common: they all need a home-replacing environment, because possibilities for at-home care or short-term residential care are no longer sufficient (Vander Stichele et al., 2006). Residents in LTCFs are frail, with a high prevalence of co-morbidities and medication use (Azermai et al., 2017).

Transition to a LTCF puts high stress on quality of life (QoL) (Boling, 2009). Society perceives QoL in older age as rather negative, due to progressive losses, and it might be assumed that, since LTCF residents are frail and dependent on others in everyday life (Kanwar et al., 2013), they are more at risk for a low QoL. Nevertheless, observational studies in LTCFs showed mixed results (for example see Haugan, 2014; Van Malderen et al., 2016).

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Numerous factors influencing QoL are identified. Although each factor seems to have a certain impact on the QoL of residents, these observational studies – employing both quantitative and qualitative designs – exhibit varying quality of methodology and thus, also, in the strength of the presented evidence. Hence, it is known that QoL is affected by personal factors, such as depression, sense of self and identity (Cooney et al., 2009); dignity and spiritual wellbeing (Burack et al., 2012); physical abilities and enthusiasm on initial admission (Wilkinson et al., 2012); the attitude towards living in a LTCF (Bergland and Kirkevold, 2006); educational level, socio-economic status, length of stay (Tseng and Wang, 2001) and religion (Vitorino et al., 2016); social factors such as contacts and relationships with family (Wilkinson et al., 2012), with a partner (Tu et al., 2006), with co-residents (Wilkinson et al., 2012) and emotional support from the environment; and environmental factors such as the physical environment (Cooney et al., 2009), food (Burack et al., 2012) and quality of care (Wilkinson et al., 2012).

QoL-inducing factors extend far beyond care and health-related aspects (Schenk et al., 2013). More and more, it seems that participation in meaningful activities of daily living (MADL) is of utmost importance for the QoL of residents (Bergland and Kirkevold, 2006; Cooney et al., 2009). Nevertheless, there is increasing evidence that, once in a LTCF, a decline in MADL is observed when residents seem to be largely inactive and have low activity levels (Den Ouden et al., 2015). A study from the Flemish Government showed that although the global satisfaction in Flemish LTCFs was high, satisfaction with activities and participation scored relatively low (Flemish Government, 2014); probably because activities were not tailored to the needs of the residents, which is considered pivotal for the dignity and sense of purpose of the residents (Slettebø et al., 2017).

Therefore, we set out to develop a participatory client-centred approach to structurally identify the needs of LTCF residents, concerning MADL, and to guide facilities and staff in a more creative and innovative attitude towards enabling residents' MADL. The development of such an intervention is a complex and demanding process, which should be undertaken very carefully and involve all relevant stakeholders in the field. Therefore, guidance to develop complex healthcare interventions should be used, encompassing several consecutive steps. This paper aims to report on the process of the project and the stepwise development, offering the essential elements of the methods and highlights the results for the reader to understand the complex process of developing an occupational therapy program.

Method

Figure 1 shows the development of the approach, inspired by 'the framework for design and evaluation of complex interventions to improve healthcare' (Campbell et al., 2000), and the Medical Research Council Guidance to develop and evaluate complex interventions (Craig et al., 2008). In a mixed-method design, from January 2013 to

January 2017, six subsequent steps – in which the results of one step led to the following step – were undertaken.

Ethics

The qualitative (step 1 and 4) and survey study (step 2) were approved by the Ethical Committee of University Hospital Brussels, Belgium (B143201215540/I/U) and written or oral consent was obtained from all participants. The pilot study (step 6) was approved by the Ethical Committee of University Hospital Ghent, Belgium (B670201628925) and written consent was obtained from all participants.

Sample

During the subsequent steps, two distinct samples – residents and care professionals – were employed using the same criteria.

The LTCF residents

Participants in the residents group were: (1) cognitively intact (that is, no diagnosis of dementia and a mini mental state examination (MMSE) score of > 18/30, which is the threshold for mild cognitive impairment), to ensure that they were able to answer the questions; (2) had been living in the LTCF for at least 1 month, to avoid responses that might be impacted by a resident's adaptation process; and (3) not acute nor terminally ill or having palliative care.

The care professionals

The participants in this group included both frontline professionals (such as occupational therapists, nurses, nurse assistants, physiotherapists and recreational therapists) and managers.

Step 1: Semi-structured, in-depth interviews with residents

Firstly, the need for this new approach was identified. A qualitative study with purposive sampling in seven LTCFs and semi-structured, in-depth interviews with 14 residents was used to capture the residents' feelings and experiences, concerning MADL and how this related to their QoL. Interviews were transcribed verbatim – based on a phenomenological hermeneutical approach – and analysed line by line using the constant comparative method, resulting in meaningful topics (Lindseth and Norberg, 2004)

Step 2: Survey in LTCF engaging the residents

Secondly, the theoretical basis of the approach was explored. Derived from the qualitative study, the major confounders of MADL – factors associated with (1) the residents themselves, (2) LTCFs' material and social environment and (3) the activities – were investigated.

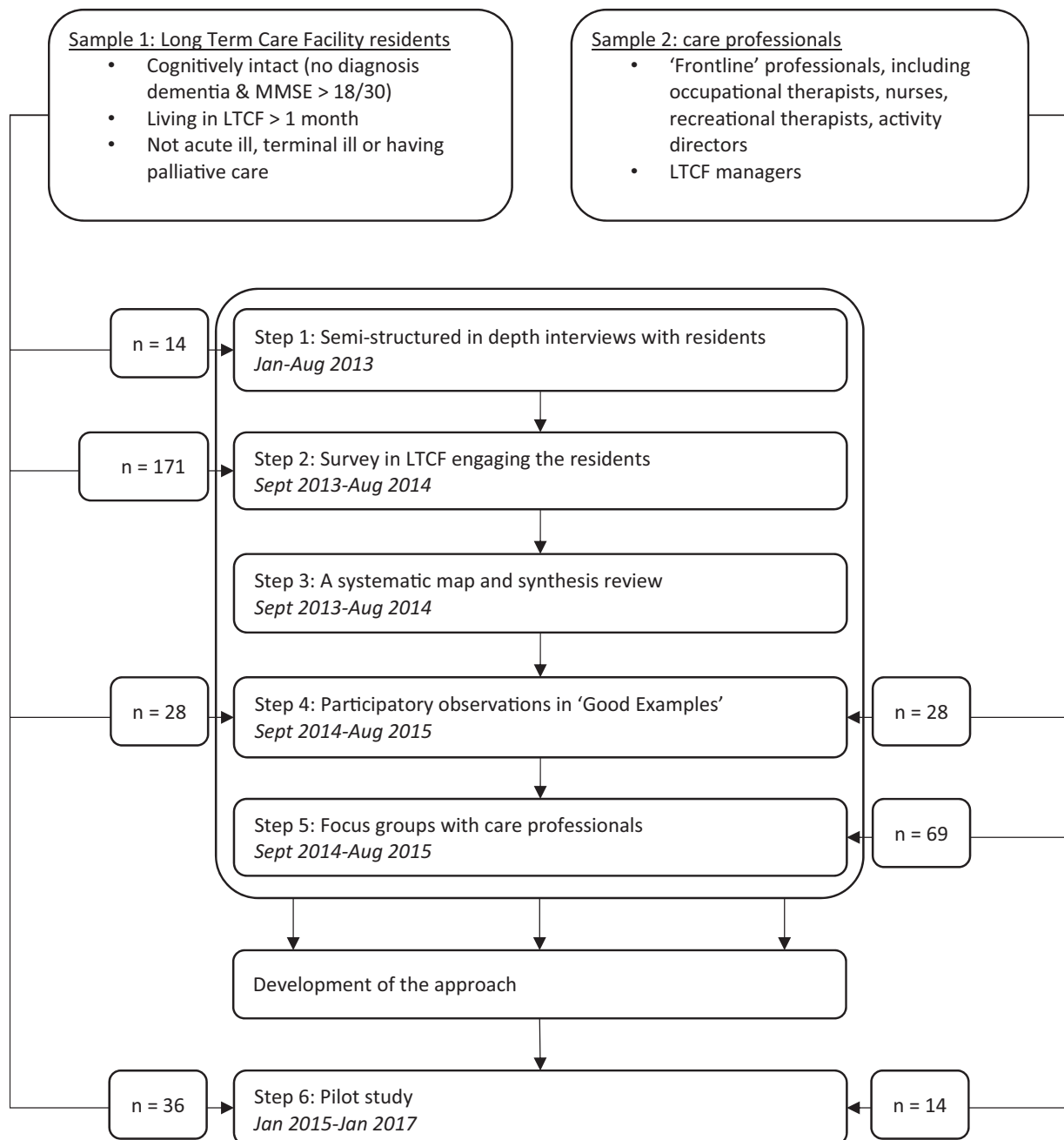


Figure 1. Overview of the subsequent steps and samples undertaken in the study based on 'the framework for design and evaluation of complex interventions to improve health care' (Campbell et al., 2000; Craig et al.; 2008). LTCF: long-term care facility; MMSE: Mini Mental State Examination.

Cognitively, healthy residents ($n = 171$) (randomly sampled and a maximum of four per LTCF) were interviewed in 47 conveniently selected LTCFs. The survey encompassed a comprehensive assessment, including: (1) demographic information: gender, age, length of stay at the facility, marital status, education and care-dependence (Katz-Index Belgian version); (2) person-oriented characteristics: QoL, which is measured by the Anamnestic Comparative Self-Assessment (ACSA), a self-anchored (biographical) method for the measurement of subjective wellbeing (Bernheim, 1999), cognition with the MMSE (Folstein et al., 1975), mood with the Geriatric Depression Scale (GDS-5), five items from Yesavage

(1988) and mobility with the Elderly Mobility Scale (EMS) (Yu et al., 2007); (3) environmental characteristics: funding type of the LTCF (public or private); (4) satisfaction socially and finally, (5) a questionnaire concerning MADL: an activity repertoire administered before and during admission, based on a standardised list of activities derived from the qualitative study, priority, performance and satisfaction in activities, measured with the Canadian Occupational Measurement of Performance (COPM) (Law et al., 1990) and additionally, the extent to which activities were challenging. Descriptions were recorded, followed by a correlational analysis. In addition, parametrical tests were employed with p -value, a priori, < 0.05 .

Step 3: A systematic map and synthesis review

In the modelling phase of the development for the approach, a systematic map and synthesis review (Grant and Booth, 2009) was performed. The aim was to both get a clear view on effective interventions that intend to enable MADL and explore whether components that were mapped in the preceding steps (that is, the qualitative research and survey) have been researched and proven to be effective. Therefore, the databases *PubMed*, *Web of Science* and *PsycINFO* were screened, using a set of keywords (not reported here). Only randomised and clinical controlled trials were included. Subsequently, title, keywords and abstract (and if that was inconclusive also the full text) of the articles were screened independently by three persons and selected if they covered the key elements that were mapped in the preceding steps.

Step 4: Participatory observations in 'good examples'

Additionally, participatory observations in 24 good examples (GEs) in enabling MADL for residents were performed to identify the context, contents and process of providing MADL. GEs were described as initiative-enhancing activities, based on the interests and wishes of residents, and they were selected after a call via social media and conferences. Additionally, to gain a deeper

understanding, semi-structured interviews were conducted with those involved in the GEs: 28 residents, 14 professionals and 14 managers. Data were analysed using an open-minded approach with constant comparative analysis. Success factors of MADL were identified.

Step 5: Focus groups with professionals to facilitate the implementation of the new approach

To facilitate the future implementation of the approach, nine semi-structured focus groups were organised with different stakeholders, including: 20 nurse assistants, 13 recreational therapists, 21 occupational therapists, 5 nurses, 5 physiotherapists and 5 managers. This step aimed to identify their point of view towards MADL and the experienced barriers and facilitators of the organisation. All focus groups were audiotaped, transcribed verbatim and coded line by line. Data were analysed using an open-minded approach, using the constant comparative method.

Step 6: The effect and feasibility of the new approach, a pilot study

The new approach (see Figure 2) has been growing during the entire project but got its final form between step 5 and 6. The approach was tested in one facility.



Figure 2. The 'Because Activities should be Meaningful' (BAM) approach.

Participants were consecutively included in the study. A quasi-experimental design with pre–post design was exploited, using the same comprehensive set of measurement tools as in the survey, with additional data from medication use and the Nursing Home Active Ageing Questionnaire (Van Malderen et al., 2016). The measurement tools were completed orally. They served as baseline measurements, but they were also the start of the approach and guided the staff and residents to prioritise goals and enable MADL. Afterwards, the same measurements were completed for the post evaluation. Effects were assessed with the Student's *t* test and two-tailed *p*-values, a priori, < 0.05 . In addition, through individual interviews with the residents ($n = 36$) and two focus groups with the staff ($n = 14$), feasibility and acceptability were evaluated.

Results

Step 1: Semi-structured, in-depth interviews with the residents

The residents expressed that it was crucial to have 'something meaningful to do' and to participate in the daily life of the LTCF. Moreover, it seemed to be of utmost importance to promote their autonomy and QoL. They undertook both self-initiated and organised activities. MADL was defined by the participants as 'any kind of activities from the morning to the evening, including what we do at night' and were essential to confirm and to evolve their identity, interests and personal values. MADL could also be performed 'for the benefit of others or for ourselves'. Meaningfulness emerged when activities: (1) were useful, (2) stimulated social interaction, (3) connected residents to their original home environment, (4) offered residents structure in time, (5) permitted residents to make their own choices and, finally, (6) empowered residents to stay active. The keywords were: (1) freely chosen, (2) social connections and (3) connection with the past. The move to the LTCF led to a loss of MADL, explained by three inhibiting factors related to: (1) the staff, as they have limited time and skills for identifying personal needs of the residents; (2) the material and social environment of the LTCF, which is not adapted nor enabling; and (3) the participants recognising themselves as being frail with functional impairments.

Step 2: Survey engaging the residents

All LTCFs met the criteria from the government and subsequently had the disposition of a team of nurses, occupational therapists, activities, rehabilitation workers and physiotherapists. The characteristics shown in Table 1 display a representative sample of 171 participants. Data concerning MADL showed an average loss of 19.2 MADL (range 0–43; \pm SD 8.5), compared with their living situation before admission. The highest loss was seen in household activities (such as shopping, handling finances, cleaning and washing laundry), advanced

activities (such as leisure, physical activities, hobbies) and social activities (such as doing trips, caring for others, having pets). Self-care activities remained relevant, though residents experienced mild (21.7%) to severe (73.7%) limitations in washing and dressing etc., mainly due to physical limitations (93%). For household activities, residents also experienced physical limitations (93%) but, furthermore, reported limitations due to environmental shortcomings (87.7%).

For advanced activities, residents reported physical (98.8%), environmental (91.8%) and social (84.8%) reasons for limitations. Self-care activities were the most important activities for them and scored an average importance score of 7.8/10. Household and advanced activities scored an average score of 6.7/10 and 6.2/10, respectively. Self-reported performance in activities scored an average score of 5.6/10. Moreover, satisfaction with activities scored an average score of 5.6/10. All residents seemed to experience a lack of challenge in current activities (mean = 5.3/10). The QoL showed a small, though significant, positive correlation with the EMS ($r = 0.151$; $p < 0.05$) and the self-perceived satisfaction with activities, according to the COPM ($r = 0.195$; $p < 0.05$); and a significant negative correlation with the GDS-5 ($r = 0.358$; $p < 0.05$). No other significant correlations were found between QoL and any of the activity-related characteristics.

Step 3: A systematic map and synthesis review

The search key gave 4002 hits; respectively, 1435 (*PubMed*), 1492 (*Web of Science*) and 1075 (*PsycINFO*). After screening titles, abstracts and keywords, 132 articles were selected; respectively, 68 (*PubMed*), 17 (*Web of Science*) and 47 (*PsycINFO*). After reading the full text with specific attention to the mapped key elements, as described in step 1, only seven randomised controlled trials (Anderson-Hanley et al., 2003; Chang et al., 2010; Kerse et al., 2008; Peri et al., 2008; Ronnberg, 1998; Tse, 2010) and five controlled clinical trials (Chang et al., 2008; Haslam et al., 2014; Hersch et al., 2012; Hersch et al., 2012; Knight et al., 2010; Travers and Bartlett, 2011) articles remained. Overall, three types of interventions were identified, focusing on: (1) improving autonomy, (2) empowering personal choices and (3) pursuing MADL. The results of this review revealed limited effects on QoL. Though, this improvement was only possible when interventions had a social component. Having a 'cultural heritage' component or offering connection to the past was also beneficial. The methodological quality was low and none of the interventions really investigated the effect of 'having MADL'.

Step 4: Participatory observations in 'GEs'

We found many GEs in LTCF to realise MADL, and we met with enthusiastic staff with creative, innovative and entrepreneurial skills. Ideal MADL reflected normal daily life, were in line with residents' life history and

Table 1. Characteristics of the respondents in the survey engaging the residents ($n = 171$).

| | |
|--|-------------------|
| Demographics | |
| Gender (male/female) (n) | 46/125 |
| Age (years) (mean \pm SD) | 85.43 \pm 5.88 |
| Length of stay in LTCF (months) (mean \pm SD) | 33.49 \pm 39.20 |
| Care dependence group according to the Belgian Katz Index (n, (%)) | |
| No or mild care-dependency (O-profile) | 29 (17.0) |
| Moderate care-dependency (A-profile) | 48 (28.1) |
| Severe care-dependency (B-profile) | 67 (39.2) |
| Complete care-dependency (C-profile) | 27 (15.8) |
| Material state (n, (%)) | |
| Living together with partner | 27 (15.8) |
| Living alone (widow(er), divorced, never married) | 142 (83.0) |
| Other | 2 (1.2) |
| Educational level ($n = 169$) (n, (%)) | |
| Primary school (until age 12 years) | 27 (16) |
| Partially secondary school (until age 14 years) | 76 (45) |
| Complete secondary school (until age 18 years) | 49 (29) |
| University College of Applied Sciences | 14 (8.3) |
| University | 3 (1.8) |
| Person-oriented characteristics | |
| QoL according to ACSA (range -5 to $+5$) (mean \pm SD) | $+2.12 \pm 2.16$ |
| Cognition according to MMSE ($./30$) (mean \pm SD) | 24.6 ± 3.41 |
| Risk for depression according to GDS-5 ($\geq 2/5$) (n , (%)) | 114 (66.7) |
| Mobility according to EMS ($./20$) (mean \pm SD) | 13.23 ± 5.51 |
| Environmental and social characteristics | |
| Living in a public/private-funded LTCF (n) | 52/119 |
| Self-perceived quality of the social network (n, (%)) | |
| Very satisfying | 46 (26.9) |
| Quite satisfying | 96 (56.1) |
| Quite unsatisfying | 22 (12.9) |
| Very unsatisfying | 7 (4.1) |
| Activity-related characteristics | |
| Number of meaningful activities before admission LTCF (mean \pm SD) | |
| Self-care activities | 6.0 ± 0 |
| Household activities | 8.1 ± 1.4 |
| Advanced activities | 24.1 ± 6.9 |
| Total | 38.1 ± 7.6 |
| Number of meaningful activities during admission LTCF (mean \pm SD) | |
| Self-care activities | 6.0 ± 0 |
| Household activities | 3.3 ± 1.4 |
| Advanced activities | 9.5 ± 5.0 |
| Total | 19.2 ± 8.5 |
| Total number of lost meaningful activities (mean \pm SD) | |
| Self-care activities | 0 ± 0 |
| Household activities | 4.7 ± 1.9 |
| Advanced activities | 14.5 ± 7.8 |
| Total | 19.2 ± 8.5 |
| Importance of activities according to the COPM ($./10$) (mean \pm SD) | |
| Self-care activities | 7.8 ± 2.3 |
| Household activities | 6.7 ± 1.9 |
| Advanced activities | 6.1 ± 1.7 |
| Self-perceived performance of activities according to the COPM ($./10$) (mean \pm SD) | 5.6 ± 1.4 |
| Self-perceived satisfaction with activities according to the COPM ($./10$) (mean \pm SD) | 5.6 ± 1.6 |
| Challenge experienced with activities ($./10$) (mean \pm SD) | 5.3 ± 2.6 |

ACSA: Anamnestic Comparative Self-Assessment; COPM: Canadian Occupational Performance Measurement; EMS: Elderly Mobility Scale; GDS: Geriatric Depression Scale; LTCF: long term care facility; MMSE: mini mental state examination.

habits and embedded in the daily care and routines. Knowing the residents was essential. Therefore, staff listened carefully and observed the residents, using mostly clinical expertise to involve them in the identification and realisation of MADL. Furthermore, MADL took place in a homely atmosphere. Interpersonal interactions, with persons from either inside or outside the LTCF, were success factors.

Despite the enthusiasm, the use of standardised tools and a consequent evaluation of the organised activities was lacking. The realisation of MADL was often solely based on the gut feeling of the staff, instead of systematically embedded.

Step 5: Focus groups with professionals to facilitate the implementation of the new approach

Focus groups with staff confirmed the results from the GEs. MADL should be organised, more structured and transparent, as they are often organised spontaneously and based on the ‘gut feeling’ of the staff. Staff reported that they had no protocols or tools to organise, enhance or evaluate MADL. An achievable, well-structured approach was lacking. Care professionals agreed that realising MADL was a complex process and demanded a clear vision and mission statement of the LTCF, as these activities required the involvement of the whole multidisciplinary team, a match between the resident and the activity and a warm and welcoming environment.

The approach: Because Activities should be Meaningful (BAM)

Based on the results and insights of the previous studies, the ‘Because Activities should be Meaningful’ (BAM) approach was developed. This approach demonstrates a client-centred manner to tailoring MADL to the individual needs of residents. The approach is a systematic process of four phases, and it is characterised by an active participatory attitude of the residents and the entire staff of professional caregivers. The occupational therapist is the leading party, but other professionals should be involved to (1) share the outcome of these four phases, (2) create a broad inter-professional consensus and support and (3) enable the MADL throughout the day. In each phase, the dialogue between residents and caregivers is the key component. The first phase encompasses an initial ‘getting to know each other’ interview. Through conducting in-depth, one-on-one interviews, the individual wishes, desires and priorities concerning residents’ MADL should be clarified, followed by a comprehensive assessment of standardised tools to clarify variables concerning the individual (such as mobility, cognition and mood), the environment (that is, material of social factors that could enhance or inhibit activities) and the activities. Essential in this phase is the ‘unprejudiced listening’ attitude of the caregivers, who need to be trained in communication strategies for the in-depth interviews and the administration of standardised tools.

In the second phase of this approach, a ‘goal-setting’ interview will be carried out. Hence, it is essential that residents formulate self-prioritised goals. To enable them to formulate goals, several therapeutic methods can be applied. Caregivers need to be trained in helping and empowering residents to express their goals. A protocol helping caregivers to undertake these conversations is provided. In the third phase, a ‘plan’ should be set out, based on the goals that need to be translated into real actions; whereby, the professional can apply a large variety of interventions. For these actions, several categories can be chosen: (1) target on enhancing the persons’ capacities, (2) education of the primary or professional caregiver, (3) advice and instruction in the use of assistive devices, (4) adaptation of the environment or (5) a comprehensive strategy (including all previous actions). In this phase, the creativity and innovative attitude of the professional is pivotal. The fourth phase incorporates the evaluation of the outcomes, such as reflecting on satisfaction with the accomplished goals. The BAM is an ‘iterative’ approach in which the phases can act as a repeating process with the aim to realise the desired goals and targets. The occupational therapist initiates and monitors the process, while empowering the residents and the caregivers to realise the goals.

Step 6: The effect and feasibility of the BAM, a pilot study

Table 2 shows the characteristics of the 36 participants included in this part of the study (that is, 10 men and 26 women; mean age 86.8, \pm SD 5.4; mean length of stay 27.4 months; \pm SD 38.99). Significant positive effects were found for medication use, particularly for the number of psychotropic drugs and antidepressants; self-perceived quality of the social network; and number of household activities. According to the Nursing Home Active Ageing Questionnaire, residents experienced a higher satisfaction with their social environment and participation, and they were significantly more satisfied with the offered leisure. QoL remained unchanged, as well as self-perceived performance of activities and the satisfaction with the activities.

The qualitative data showed that, although this approach was time consuming – according to the professionals – and could only be administered with extensive training, it was seen as beneficial since they felt they knew the residents much better, compared with the period before the approach was used. Also, an unexpected positive effect was the increased job satisfaction of the professionals. However, the extensive first phase was an important barrier and seen as not user-friendly nor for further use after the pilot. A short version of the assessment tools was requested.

Discussion and conclusion

Engagement of residents in activities promotes autonomy, wellbeing and QoL, and it is crucial to experience dignity and to avoid boredom, apathy, social exclusion and solitude (Schenk et al., 2013; Slettebø et al., 2017). However,

Table 2. Effects of the BAM - outcome measurements of the pilot study ($n = 36$).

| Variables | Baseline | Post measurement | Significance p -value |
|--|-------------------|-------------------|-------------------------|
| Characteristics participants | | | |
| Gender (male/female) (n) | 10/26 | | |
| Age in years (mean \pm SD) | 86.83 \pm 5.40 | | |
| Stay LTCF (mean \pm SD) | 27.4 \pm 38.99 | | |
| Care dependence group n (%) | | | |
| O | 10 (27.78) | | |
| A | 11 (30.56) | | |
| B | 10 (27.78) | | |
| C | 5 (13.89) | | |
| Living state, n (%) | | | |
| Living together with partner | 1 (2.78) | | |
| Living alone (widow(er), divorced, never married) | 34 (94.44) | | |
| Other | 1 (2.78) | | |
| Educational level n (%) | | | |
| Primary school (until age 12 years) | 14 (38.89) | | |
| Partially secondary school (until age 14 years) | 11 (30.56) | | |
| Complete secondary school (until age 18 years) | 11 (30.56) | | |
| University College of Applied Sciences | 0 (0.00) | | |
| University | 0 (0.00) | | |
| Cognition (MMSE) (mean \pm SD) | 25.95 \pm 2.53 | | |
| Mood | | | |
| At risk for depression (GDS > 1/5) n (%) | 12 (33.33) | | |
| Mobility (EMS) (mean \pm SD) | 13.66 \pm 5.36 | | |
| Outcome measures | | | |
| QoL (ACSA) (mean \pm SD) | 1.64 \pm 2.50 | 1.97 \pm 2.15 | 0.502 |
| Medication use (mean \pm SD) | | | |
| Number of drugs | 9.4 \pm 5.01 | 9.2 \pm 5.19 | 0.648 |
| Number of psychotropic drugs | 1.06 \pm 0.98 | 0.72 \pm 0.91 | 0.008* |
| Number of antidepressants | 0.39 \pm 0.55 | 0.22 \pm 0.42 | 0.032 |
| Number of hypnotics, sedatives, anxiolytics | 0.50 \pm 0.65 | 0.44 \pm 0.69 | 0.487 |
| Number of antipsychotics | 0.17 \pm 0.38 | 0.08 \pm 0.28 | 0.083* |
| Self-perceived quality of the social network n (%) | | | |
| Very satisfying | 1 (2.78) | 14 (38.88) | |
| Quite satisfying | 12 (33.33) | 16 (44.44) | |
| Quite unsatisfying | 19 (52.78) | 4 (11.11) | |
| Very unsatisfying | 0 (0.00) | 2 (5.55) | |
| Total score (./4) (mean \pm SD) | 2.86 \pm 0.60 | 3.28 \pm 0.74 | 0.025 |
| Number of household activities (mean \pm SD) | 2.74 \pm 1.67 | 10.51 \pm 6.38 | <0.001 |
| Number of hobby and leisure activities (mean \pm SD) | 11.83 \pm 8.34 | 8.63 \pm 6.81 | 0.114 |
| Total number of activities (mean \pm SD) | 14.57 \pm 8.62 | 19.14 \pm 10.37 | 0.108 |
| Self-perceived performance of activities according to the COPM (./10) (mean \pm SD) | 6.10 \pm 2.79 | 5.88 \pm 2.79 | 0.139 |
| Self-perceived satisfaction with activities according to the COPM (./10) (mean \pm SD) | 5.76 \pm 2.69 | 5.51 \pm 2.63 | 0.234 |
| Satisfaction with the NH environment (NH Active Ageing Questionnaire) (mean \pm SD) | | | |
| Culture | 77.96 \pm 11.02 | 77.59 \pm 12.26 | 0.858 |
| Lifestyle | 76.94 \pm 10.00 | 74.26 \pm 10.22 | 0.129 |
| Psychological aspects | 71.67 \pm 11.97 | 74.44 \pm 12.27 | 0.251 |
| Physical environment | 79.17 \pm 7.49 | 76.54 \pm 6.81 | 0.072* |
| Social environment | 66.89 \pm 11.87 | 71.33 \pm 9.00 | 0.059* |
| Economical aspects | 66.48 \pm 15.90 | 70.93 \pm 12.66 | 0.070* |
| Care | 78.33 \pm 10.44 | 77.31 \pm 10.70 | 0.493 |
| Leisure | 67.50 \pm 11.79 | 72.57 \pm 11.01 | 0.027 |
| Participation | 70.33 \pm 8.60 | 72.11 \pm 10.14 | 0.333 |
| Total | 73.16 \pm 8.33 | 74.01 \pm 7.74 | 0.482 |

ACSA: Anamnestic Comparative Self-Assessment; COPM: Canadian Occupational Performance Measurement; EMS: Elderly Mobility Scale; GDS: Geriatric Depression Scale; LTCF: long term care facility; MMSE: Mini Mental State Examination; NH: nursing home; QoL: quality of life. Bold: significant; *trend

engaging MADL in LTCFs is hardly the case and is also viewed as an additional burden for busy staff (Morgan-Brown et al., 2011). In Flanders, Belgium, this is not different, as pointed out by the survey of the Flemish Government. Nevertheless, studies and policy-makers recommend that LTCFs should strive to develop programs supporting MADL for their residents. Responding to this need, we developed a new client-centred approach to enable MADL in LTCFs, called the BAM. In six steps, the BAM was developed and pilot-tested.

In this paper, we want to report on the process of development, which was complex work and took several years to show the different steps taken and how they influenced each other.

The results of step 1 showed that engaging in activities is important for residents, and that they could express clearly how residents perceived meaningfulness in the activities: 'there should be a possibility for choice-making, it should be linked to social engagement, connecting to time and space and activities should somehow be linked to their own past'. These experiences are not only in line with previous research on the topic (Wiseman and Whiteford, 2007) but also add to the body of knowledge that engagement in activities is linked to QoL, wellbeing and health. It has been discussed that people shape their identities through daily activities and that identity could provide an important link in understanding the fundamental relationship between activities and QoL (Christiansen, 2000).

However, in the second phase of this project, it was remarkable to discover that the activities of the participants were not strongly associated with their QoL. The reason why is unclear, but it is assumed that activities were not adapted to the wishes and needs of the participants and, therefore, not personally meaningful. Moreover, they perceived their current activities as unsatisfactory, maybe because activities were provided in general (that is, 'one size fits all') and did not focus on individual needs or meaningfulness. The contrast between the results of the first two studies is objectified by the low scores on the COPM, showing that the activities were not very satisfying nor were they challenging. In this way, it is not surprising that there was no association with QoL, which is unfortunate, since 'having something meaningful to do' is pivotal to maintain one's health and wellbeing (Miguel et al., 2016). Therefore, there is a strong argument that residents should always have the opportunity to take part in MADL to maintain or improve their health and mental wellbeing (NICE, 2013).

The survey revealed an important loss of MADL on the level of household and advanced activities, due to the admission to the LTCF. Residents, however, did not lose self-care activities, since these are indispensable in everyday life. These activities remained relevant and became the most important activities for them. This result is in line with previous research in which it is described that self-care is the first priority for residents (Borell et al., 2001). This relates to the commonly known Maslow's hierarchy of needs (Maslow, 1943), in which low-range needs should be met before high-level needs can be put forward. Self-care assistance was

always guaranteed; however, the more complex the activity, the less help was provided by the staff. This is in line with the Norwegian study which showed that the level of support in physical and social activities remained relatively low (Kjos and Havig, 2016); however, the general care level in LTCFs was high. This shows, on the one hand, that the professionals are strong in assisting, curing and caring activities (that is, Maslow's lower needs), but less strong in guiding and tailoring MADL in relation to the residents' identity and self-fulfilling needs (that is, Maslow's higher needs); although it is considered as pivotal for their perceptions of autonomy (Andresen et al., 2009).

This clearly indicates that professionals should address a broad range of activities and enable residents to perform them the way they want. Reactivating and stimulating residents is considered as useful and even 'obligatory' by each government. This also points to the need of working in a multidisciplinary team where professional boundaries can be left behind; although the occupational therapist can be the leading party in facilitating such an approach, because of his or her specific knowledge and expertise. However, there is an ongoing debate as to whether it should be the responsibility of only one professional or the entire team. For instance, nurses and nurse assistants have an important task in self-care and are continually available for the residents. They should engage in identifying and realising MADL, since they are familiar with the key points of each residents' biography, interests and preferences. As recommended, each caregiver should get to know the resident and actively look for ways to encourage them to engage in MADL (Bishop, 2014).

Keeping the knowledge in mind, from step 1 to 2, a mapping review on interventions to enrich MADL was undertaken. Unfortunately, only 15 studies were found, which focused on aspects of meaningfulness in activities: namely, permitting residents to make their own choices, enabling social interaction and encompassing a 'cultural heritage' component. Each described intervention could enhance the QoL, although methodological quality was low and none of the interventions really investigated the effect of having a meaningful activity. This is not surprising, since such a study would end in a very heterogeneous intervention, with the weakness not knowing exactly what has been causing the effect. However, this step confirmed and, therefore, also validated the results from previous steps and provided fruitful information to establish the BAM approach.

The fourth and the fifth step revealed no or a low systematic process to enable MADL, no or little assessment tools or standardisation in getting to know the residents and his or her preferred MADL and no or a low active participatory attitude of both residents and caregivers. Notwithstanding the existing assessment instruments to prioritise activities, such as the COPM, they are not used in a systematic way. Professionals mainly rely on their gut feeling and act according to what they consider to be the best way without questioning the methodological procedure and without a clear assessment and report plan.

This lack of professional reasoning skills was eminent and has been studied before as a shortcoming in residential care (Van de Velde et al., 2016). Numerous environmental barriers towards MADL were described, in which organisational limitations limited the provision of MADL (Harmer and Orrell, 2008). The GEs, however, showed that it is possible to overcome these barriers and enable MADL. From that perspective, raising awareness of one's competences by offering a systematic approach, could enhance possibilities to enable MADL and to systematically implement in the LTCF. For those who don't have the skills or the organisational possibilities to enable MADL, a systematic approach is needed.

Both from a socio-political and a management point of view, residents are still seen as beneficiaries of care instead of active agents, given their vulnerability. This premise is supported by the NICE (2013) standards, in which it is discussed that residents should continuously be encouraged to take an active role in choosing and defining activities that are meaningful for them.

Finally, the BAM, offering a stepwise, well-structured approach to enable MADL, was tested in one facility and showed good results for medication use, self-perceived quality of the social network, the number of household activities and the satisfaction with the leisure offered. As far as it is known, there have been no effective studies that focus on enabling MADL in LTCF nor comparable programs for LTCF. The 'Living Well Through Activity in Care Homes' of The Royal College of Occupational Therapists (RCOT, 2013), a free online toolkit that shows how meaningful activities can be achieved and contains ideas on how staff can support activities, comes most close to the BAM. Furthermore, the BAM goes along with the recent tradition of multi-component programs, offering a systematic approach instead of focusing on specific interventions. The BAM shows a lot of similarities with, for example, the Tailored Activity Program (Gitlin et al., 2009) and the Community Occupational Therapy in Dementia study (Graff et al., 2006); however, both were applied in community-dwelling older adults with dementia and their caregivers. These programs have been successful; however, in the present study the residents' QoL did not improve significantly. This can partly be explained by the choice for the ACSA to evaluate QoL. The ACSA adapts the assumption that QoL is an overall feeling and appreciation of the degree of global satisfaction over all domains in life, which are important for the individual (Bernheim, 1999) and should be evaluated as one overall construct, supporting the idea that QoL – although mostly seen as multi-factorial – is one dimensional. Therefore, the ACSA might represent a robust feeling of QoL, which is probably more stable than the multi-dimensional ones and difficult to quantify and influence (Kane and Kane, 2015). Nevertheless, the ACSA was a deliberate choice in this study since this prevented overlap between the other outcome measurements.

Care for older people is in 'transition'. Finances are under pressure, qualified professionals are needed, residents' profiles are changing (on the one side, more dependency;

and on the other side, more demanding) and the strong biomedical model is making place for a more bio-psycho-social way of reasoning and person-centred care. The BAM enables residents and staff to focus on individual, personal wishes concerning MADL and the ability to make own choices. This approach provides a recipe for all LTCF residents, but it is the task of the caregivers to modify the BAM to the individual resident. Subsequently, the approach is flexible and adaptable to the current care situation of the individual, the situation of the professional and the local circumstances as recommended by Craig et al. (2008).

The strength of this study lies in the systematic development method – based on Campbell et al. (2000) and the guidelines of the Medical Research Council – and the broad support of residents, bedside professionals and managers involved. However, the steps did not follow a linear sequence. Rather, the development was an iterative process, in which understanding the phenomenon was important. In addition, the intervention leaves room for adaptation to local circumstances of the individual and the particular facility. Although this is recommended by Craig et al. (2008), it also contains an insidious risk for replication and synthesis of the evidence.

The pilot study involved only a small sample of residents; yet, a bigger sample, combined with a control group, could have improved the method and strengthened the results. However, given the fact that all possible participants were frail, we considered that the number of 36 participants is sufficient to analyse. Therefore, based on the promising results, the newly developed approach might be considered as a 'proof of concept' and needs to be investigated in a controlled setting (such as a randomised controlled trial) to really evaluate its effectiveness on QoL. Once effectiveness has been proven, implementation studies can be carried out.

Key findings

- Older people lose activities due to admission in a LTCF.
- The BAM approach enables MADL, based on a participatory client-centred attitude.
- The BAM reduces drug use and increases the social network of the residents.
- Realising MADL requires the involvement of the multi-disciplinary team.

What the study has added

When using a systematic approach and involving all stakeholders – including the residents – it was possible to develop a participatory client-centred approach to enable MADL and improve satisfaction, social life and decrease medication use in LTCFs.

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of long term care facilities throughout East and West Flanders and Antwerp (the Dutch speaking part of Belgium). The project was supervised by an advisory panel, consisting of different disciplines from the field, such as occupational therapists, nurses, and managers. Additionally, to warrant implementation in education, lecturers of the Department of Nursing (Artevelde University College), Occupational Therapy (Artevelde University College and Ghent University), medical management assistant (Artevelde University College), gerontology (Vrije Universiteit Brussel) and activity directors and recreational therapists (VSPW Kortrijk) were involved in the advisory board. We are also indebted to the team of long term care facility at Leihome and the members of the 'Project on Psychotropic drugs' in Flanders. Last but not least, we wish to thank the numerous students who were involved in the project. Discussions with them were always inspiring and we hope we were as much inspiring for them.

Research ethics

The qualitative (step 1) and survey study (step 2) were approved by the Ethical Committee of the Universitair Ziekenhuis Brussel, VUB, Belgium (B143201215540/1/U), 2012. The pilot study (step 6) was approved by the Ethical Committee of the University Hospital Ghent, Belgium (B670201628925), 2016.

Consent

Participants gave written and oral consent.

Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Contributorship

Patricia De Vriendt, Elise Cornelis, Ruben Vanbosseghem, Valerie Desmet and Dominique Van de Velde were involved in the concept and design of the study, in the acquisition of data and in drafting the manuscript. Patricia De Vriendt, Elise Cornelis and Ruben Vanbosseghem analysed the data.

Patricia De Vriendt, Elise Cornelis and Ruben Vanbosseghem have shared first authorship.

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