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The implementation of *snoezelen* in psychogeriatric care: an evaluation through the eyes of caregivers

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ABSTRACT

Many intervention studies lack an investigation of the extent to which the intervention was implemented as intended, which makes outcome measures difficult to interpret. The aim of the present study was to gain insight into the implementation process of *snoezelen* in 24-h dementia care. The intervention in each of six experimental wards comprised training sessions in 'snoezelen for caregivers', evaluated using a questionnaire. To study experience with implementation, the follow-up and general meetings (20 in total) were attended and semi-structured interviews (six in total) were conducted. The results indicated that the implementation of *snoezelen* effected a change from task-oriented care to resident-oriented care. The nursing assistants also experienced changes at the resident level and organisational changes. However, the lack of intervention in the organisational structure and obstructive factors such as understaffing seemed to get in the way of the integration of multi-sensory stimulation in the daily care in two of the six wards.

1. INTRODUCTION

Dementia is a progressive and irreversible neurological disease that affects the physical, cognitive, behavioural and emotional domains of 1% of the Dutch population of 65 years and above. This rises to 40% among the 90-year-olds or those even older (Alzheimer Nederland, 2002). As a result of dementia, psychogeriatric nursing home residents gradually lose their verbal and nonverbal communicative abilities. *Snoezelen*, or multi-sensory stimulation, has become widely used in the last 15 years to improve residents' quality of life (Lancioni et al., 2002). Traditionally, *snoezelen* was applied in a special room with an array of equipment, offering multiple stimulation, covering all the sensory channels (i.e., a vibrating bed, soft comfortable furnishings, aroma steamers, spotlights, mirrors and music), both to stimulate and to relax (Noorden, 1999; Lancioni et al., 2002). In the present study, *snoezelen* was extended to the 24-h daily care. It can be defined as an integrated approach, applied by caregivers during daily care, which actively stimulates the senses by light, sound, smell and taste (Kok et al., 2000). The intention is to provide individualised, gentle sensory stimulation in a non-threatening environment without the need for higher cognitive processes, such as memory or learning. By incorporating personal circumstances such as lifestyle, preferences, desires and cultural diversity, *snoezelen* is tailored to the resident needs. Consequently, the application of

snoezelen requires a resident-oriented attitude, knowledge and skills, allowing certified nursing assistants (CNAs) to attend to residents' physical, emotional, social and spiritual needs, in order to achieve or maintain a state of well-being (Noorden, 1999). In the light of the concept of patient-centredness, the caregivers do not restrict themselves to the 'disease of the resident', but orient themselves towards the 'resident with the disease'. The ultimate goal is the caregivers' understanding of the residents' real needs, preferences and wishes (Bensing, 2000).

The effects of *snoezelen* in long-term care are not well known (Chung et al., 2002). We are currently investigating the effects of *snoezelen* in long-term dementia care. Within this framework, it is important to know the factors that facilitated or hindered the implementation. Hence, the aim of this paper is to evaluate the implementation process of an integrated *snoezelen* approach in the 24-h daily care, delivered by CNAs. Many intervention studies lack an investigation and description of treatment process variables, although they allow researchers to understand which aspects of the intervention are successfully implemented (Finnema, 2000; Burgio et al., 2001; Schrijnemaekers et al., 2002). Without an accurate assessment of whether the intervention was delivered as intended, conclusions regarding outcome measures are questionable (Phillips and van Ort, 1995; Burgio et al., 2001).

Generally, the implementation of interventions is preceded by training and followed by the introduction of the new care model in the ward. With respect to the training, insight is needed to measure the extent to which the training goals are reached. The effectiveness of the training maybe affected by a number of factors, such as characteristics of the programme (i.e., topics, exercises and duration) and the working environment (i.e., support from superiors and colleagues). The success of the learning process may also depend on complementary factors, such as the relationship with the teacher, sympathy and support among the participants and an intention to change behaviour after the training (Francke et al., 1995).

Taking a course is only the first step towards implementation. The introduction of a new care model requires permanent behavioural changes in caregivers. Positive changes in knowledge and skills do not automatically lead to actual behavioural changes. The step from 'knowing' and 'knowing how' to 'showing' is influenced by organisational and structural characteristics of the professional working environment (Kruijver, 2001). A combination of approaches appears to be the most effective way to achieve lasting change (Grol and Grimshaw, 1999). Implementation can only be effective if it tackles obstacles such as disagreement with the content of the new care model, doubts about its feasibility in daily practice and reluctance from colleagues (Grol, 1997; Schers et al., 2001). Furthermore, organisational adjustments (i.e., creating organisational and structural conditions, restructuring the care processes, changing tasks, providing resources and support) maybe necessary to maintain the change (Grol and Grimshaw, 1999).

In conclusion, the effects of the implementation of a new care model, such as *snoezelen*, depend on different factors that may facilitate or hinder its implementation. This study, therefore, addressed the following research questions:

What factors facilitated or hindered the implementation of *snoezelen* in the experimental wards in the eyes of the caregivers?

Do caregivers experience changes at the level of caregivers, residents and the organisation, as a result of the implementation of *snoezelen* in 24-h care?

2. RESEARCH MODEL

The relationship between facilitating and hindering factors during the implementation period and changes resulting from the implementation is shown in Fig. 1.

[FIGURE 1]

The research model is adapted from the model for Implementation of Change in Health Care (ICHC model) (Theunissen et al., 2003). In the process evaluation, by analysing the interventions that were successfully executed, facilitating and hindering factors were identified. The absence of a facilitating factor may be considered to be a hindering factor (e.g., the lack of financial support might be an implementation barrier). Interventions during the implementation process were subdivided as

interventions under:

- *Knowledge*: providing theoretical information;
- *Skills*: training caregivers to bring the theory in practice;
- *Motivation to change*: using motivational techniques, discussing the new care model and finding consensus within team-members;
- *Habits*: changing caregivers' behaviour and existing working styles;
- *Organisational structure in which the intervention is implemented*: adapting an existing structure or developing a new one;
- *Organisational structure needed to establish implemented changes*: making policy and making structural changes to guarantee the continuation of the implemented care model.

Further, we wanted to find out which contextual variables hindered the implementation process and the results. In particular, characteristics of the working environment were studied.

With regard to the evaluation of the results, special attention was given to:

- *Changes in caregivers*: actual changes in the behaviour of caregivers;
- *Changes in residents*: actual changes in the behaviour of residents;
- *Organisational changes*: actual changes in the organisation of the care.

The final results 'changes in the quality of care' and 'changes in the quality of life' will be expanded upon in a separate study.

3. METHODS

3.1. Design of the study

A randomised pre-test–post-test control group design was carried out. The study was performed at 12 psychogeriatric wards of six Dutch nursing homes. The homes included in the study had not yet implemented *snoezelen* in the daily care of their residents. Randomisation took place at the ward level. Six experimental wards implemented *snoezelen* in their 24-h care and were compared to six control wards that continued to give standard care. The implementation period lasted 18 months per ward in the period between January 2001 and February 2003.

3.2. Implementation process

In short, the implementation process in the experimental wards consisted of the steps discussed in the following sections.

3.2.1. Training

The CNAs were trained in *snoezelen* by a qualified and experienced professional trainer of the Bernardus Center of Expertise/Fontis. The in-house training comprised four, weekly, 4-h sessions. The main aims of the training were to improve the caregivers' knowledge and skills with regard to *snoezelen*, to dissipate reluctance, if necessary and to motivate all team members to implement the new care model in 24-h care (see Box 1).

[BOX 1]

In total, 80 caregivers attended the training programme, 70 of whom were team-members, i.e., CNAs ($n = 59$), head nurses ($n = 6$), nutrition assistants ($n = 2$), activity therapists ($n = 2$) and a student nurse ($n = 1$). The other 10 participants were not formally supervised by the head nurse of the ward, i.e., activity therapists of a separate division ($n = 8$), a care manager ($n = 1$) and a clerical worker ($n = 1$). On average, 11.7 team-members (range 11–13) participated in the training. Compliance to the training sessions was 92.5%.

3.2.2. Study group

On the last day of training, a study group was started in each nursing home, usually comprising three CNAs, the head nurse and an activity therapist or co-ordinator in sensory stimulation. The aim of the study group was to evaluate the implementation process, adapted where necessary and to start new activities, appropriate to the needs of their own ward.

3.2.3. Stimulus preference screening and *snoezel* (care) plan

After the training, the caregivers started to use *snoezelen* in the 24-h care of the residents. Every trained CNA was matched to one resident. The CNA took a detailed history of the residents' life and preferences by interviewing family members. Then, stimulus preference screening was arranged to find out what stimuli the resident enjoy most (Lancioni et al., 2002). Therefore, the participating resident was observed during ten, weekly, 1-h sessions, according to the methodology acquired in the training. At the end of the observation period, the CNAs wrote an individual *snoezel plan*, based on the observations. The *snoezel plan* describes the residents' specific behaviours, e.g., anxiety, distress or aggression, and how to react on these behaviours (e.g., "Anxiety: Mrs. X is anxious when she goes to bed. Approach: Sit down on the bedside, stroke her cheek, hold her hand. Then, she will sleep soon"). Next, the *snoezel plan* was translated into the residents' *snoezel care plan*, in order to integrate the required approach into the Activities of Daily Life, in particular the morning care. Thereby, all other caregivers, including temporary employees, were informed as to how the resident should be approached to achieve, or maintain, an optimal state of well-being (e.g., how the resident has to be waked, how eye-contact can be used, whether the resident is capable of choosing her own clothes, whether the residents likes to be touched, whether aroma therapy, music, perfume or make-up can be used). Also the activities, carried out by activity therapists or other caregivers, are based on the stimulus preference screening and the *snoezel plan*. The *snoezel plan*, *snoezel care plan* and activities had to be evaluated and adapted regularly, preferably during interdisciplinary consultations. The methodology of systematic *snoezelen* is summarised in Fig. 2.

[FIGURE 2]

3.2.4. Follow-up meetings

During the implementation period of 18 months, the caregivers were offered three in-house follow-up meetings under the guidance of the same professional trainer.

The aim of the follow-up meetings was to support the implementation of *snoezelen* in daily care. The observations of the residents' reactions to sensory stimulation were discussed and the development of integrated care plans, based on the observations, was evaluated and supported. The caregivers also received (video-) exercises and feedback.

In addition, there were two general meetings, attended by three representatives of each nursing home (e.g., head nurses, care managers). The aim of these meetings was to support the implementation of *snoezelen* at the organisational level. In the first meeting, the participants received theoretical information about implementation barriers and learned how to write a long-term implementation plan. In the second meeting, they had to present the implementation plans to each other. In both meetings, there were subgroup discussions about implementation problems, introduced by the organisation itself.

3.3. Measuring instruments

Data collection was carried out using a questionnaire about the training, interviews about the implementation and attending the follow-up meetings, also regarding implementation.

3.3.1. Questionnaire

In order to identify the extent to which training objectives has been achieved, the trainees completed a questionnaire at the end of the programme. The questionnaire, developed by the Bernardus Center of Expertise/Fontis, included questions from the IKN (Integraal Kankercentrum Noord Nederland), to measure nurses' opinions about the training programme (Kruijver, 2001). The following points

were considered to be decisive factors in effecting changes in knowledge, skills and motivation:

- content of the training (10 items; eight yes/no questions and two open questions),
- the professional competence of the trainer (four items; all 5-point Likert-type questions, varying from 1 'not' to 5 'very/a lot'),
- the atmosphere during the training sessions (two items; both 5-point Likert-type questions),
- the social system of the working environment (three items; two 5-point Likert-type questions and one open question),
- the intention to change after the training (four items; three 5-point Likert-type questions and one open question),
- the overall opinion about the training (one item; a mark from 1 'very bad' to 10 'excellent').

To gain further insight into the implementation process and the results of the implementation, a qualitative approach was used.

3.3.2. Interviews

Six semi-structured interviews were held with the head nurses and sometimes also with the project leader. The interviews focused on experiences with the implementation, in particular facilitating and hindering factors, and changes as a result of the training. The interviews lasted approximately 1 h. All interviews were audiotaped and relevant issues were transcribed verbatim.

3.3.3. Follow-up meetings

The implementation process was monitored by the researcher (JvW) by attending the three follow-up meetings with the trainees. The main topics of interest were the same as in the interview scheme. All the relevant issues, brought up by the caregivers, were recorded verbatim. The same procedure was followed during the two general meetings.

3.4. Data analysis

Data analysis of the questionnaire was done using descriptive statistics. The questionnaires of team-members were completed by 66 trainees (94.3%).

The interview data, and the data from the follow-up meetings and the general meetings, were analysed qualitatively. Responses were grouped into categories, separate from the implementation model (see Fig. 1). Numbers and letters are used throughout this paper to represent: the nursing home (NH), the caregiver (CG), the follow-up meeting (FM1–FM3) and the interview (I1–I6). Quotes given in the text are illustrative and reflect the responses given by caregivers.

4. RESULTS

4.1. Evaluation of the training programme

First, we evaluated the caregivers' opinion of the content of the training programme with respect to knowledge and skills. The majority found the training informative (100%), applicable (100%), practical (98.5%) and interesting (98.5%). In their opinion, the information was clear and well-structured (100%) and the training suited their expertise and working situation (96.9%). In addition, the participants were asked to indicate what they considered to be the most useful aspects of the training. Half of the participants (50.0%) considered the entire training programme to be very useful. Another 25.8% were especially enthusiastic about the aromatherapy session. Four respondents (6.1%) praised the development of an integrated *snoezel* care plan. The others (18.2%) highlighted different aspects.

As regards the least useful aspects, 37.9% filled in nothing, 33.3% said explicitly that nothing was useless. The only part of the training, mentioned by more than two people as not being useful, was the therapeutic touch (adaptation) session (19.7%).

Table 1 shows that the participants were very satisfied with the professional competence of the teacher. They felt comfortable with both the teacher and the participants and were encouraged by their head nurses and colleagues to implement *snoezelen* in 24-h daily care. The majority felt

sufficiently encouraged to implement the new care model in practice and intended to practice what they had learned in future. In answer to the open question, aromatherapy, in particular (26x), and the use of an individual resident-oriented approach (17x) were considered to be applicable in practice. Arm-hand massage (7x), the use of materials, music and light (7x), the use of a *snoezelroom* (6x), therapeutic touch (adaptation)/overall massage (5x) and the improvement of history taking and individual care plans (4x) were also mentioned.

[TABLE 1]

On average, the overall assessment of the training by the caregivers was 8.4 (SD 0.75; range 7–10).

4.2. Process-evaluation: facilitating and hindering factors

Although the results of the questionnaire indicated that the caregivers assessed the training programme very positively, more than half of the trainees ($n = 35$; 53.0%) expected that at the end of the training programme there would be obstacles to the implementation of *snoezelen*, especially in respect of: workload/lack of time (15x), shortage of staff (11x), lack of money or materials (9x), support of the central management (8x), lack of room or other facilities (5x) and resistance of family members (4x).

Both the interviews and the follow-up meetings provided a detailed view on actual experience with implementation. The reported results of the interviews and the follow-up meetings represent the opinion of the caregivers (CNAs and head nurses). As the head nurses and the project-leaders usually attended the follow-up meetings, we did not find any contradiction between the information gathered by the interviews and the information presented during the follow-up meetings.

Table 2 shows facilitating interventions that are carried out. The content of the table will be discussed below.

[TABLE 2]

4.2.1. Facilitating interventions to change habits

The training was identified as the basis for a change in habits. During the implementation process, the caregivers still acknowledged the importance of these changes, though they reported, particularly in the first and second follow-ups, that it was *not always easy to achieve or to adhere to* the new working style.

That was a major contradiction in our team, it was very difficult to drop the old style approach. The change in attitude is extremely important. The resident is the starting-point of the care. (NH2, CG1, FM2)

It's easy to slip back into old ways of thought. (NH4, CG5, FM1)

All wards reported that the *follow-up meetings* were motivating in maintaining and further changing habits. Caregivers' experience of these meetings was an encouragement in continuing with their implementation.

During daily practice, individual *coaching and feedback* proved to be essential in establishing changes in habit. The head nurse usually coached the implementation process and gave regular feedback to the caregivers. However, it seemed to be very difficult to sustain the efforts when there was no co-operation with other staff members. Three head nurses were coached by the care manager, which they found helpful and in some cases indispensable. In two wards, a special, independent, qualified person was appointed (e.g., a 'co-ordinator in sensory stimulation') to support the head nurse in coaching the staff and to provide individual feedback to the caregivers during daily practice. These interventions were reported to be very effective, because the caregivers felt safe with them and were able to discuss improvements in daily procedures. In one ward special training was offered to the caregivers on providing feedback to one another.

Furthermore, the use of snoezel care plans was proposed as an intervention in order to change set procedures. Although in the beginning, the writing of *snoezel* care plans was sometimes met with reluctance, in the end they proved to be useful.

Using the snoezel care plan, we have something to refer to, how to deliver the care.
We know a lot more about the resident now. (NH4, CG8, FM3)

At first, many caregivers felt embarrassed, because they did not consider the observations and the application of *snoezel* activities as 'real work'. Planning the observations, writing the *snoezel* care plan and other *snoezel* activities in the daily scheme seemed to be effective in allowing the *snoezel* method to become an integrated part of the normal care programme.

Snoezelen has to be regarded as work. In the beginning, they thought 'You are giving a hand massage and I'm working my fingers to the bone'.

Now, it's a normal part of the work. (NH5, CG1, I5) The snoezel bathroom is used by schedule, three times a day, in the morning, in the afternoon and in the evening.
(NH1,CG1, FM1)

In one ward, the *snoezel* care plans were not written by the caregivers themselves, which made them feel less involved. In some wards, the caregivers were actively supported by activity therapists in observing and writing the *snoezel* care plans, without being completely taken over. They felt comfortable with this system.

In addition, the increase in both formal and informal *reciprocal consultation* was seen as a tool to maintain and further improve the changes in procedure. Caregivers usually reported their experiences in using the *snoezel* care plans. As a result, they started to talk more about the problem behaviour of residents and were having more discussions about solutions.

We are talking more about the residents, our care is tuned to each other now. (NH2, CG3, FM3) There are more consultations between caregivers.

The idea that problems can be solved together. When you notice that someone is becoming more restless, you start to think immediately 'how are we going to solve this?'. (NH6, CG3, FM2)

Most wards decided to evaluate the care plans structurally. Some just with the team-members, others in multi-disciplinary consultations.

It's part of the multi-disciplinary consultation now, in the beginning it wasn't. (NH5, CG9, FM3)

4.2.2. *Facilitating interventions to change the organisational structure*

In four homes, the *study group* had regular meetings (approximately once a month) and functioned well. In the other two wards, the study group did not get off to a good start.

We could not find time for meetings of the study group. Or maybe, we didn't make time for them. Now, I think, we should have given it priority, it's just very important. (NH4, CG1, I4)

Four wards made organisational adaptations in the daily schedule, duty scheme or working style in order to support the implementation. One of the wards decided not to wash all the residents in the morning anymore, but to select some residents, who preferred to be washed in the evening. Another ward reported that they were no longer getting round to helping other teams during the morning care, as they were used to before.

With regard to the *snoezel* equipment, four wards received financial support (one via sponsoring) to invest in *snoezel* materials, a *snoezel* room (four wards) or a *snoezel* bathroom (three wards). In their opinion, the use of *snoezel* equipment had added value. They also paid attention to the furnishings and the fittings of the ward.

We created really nice and cosy sitting areas. (NH5, CG2, FM3)

You notice that there are a lot of changes on the ward. Everything is fitted and looks nice. You can talk with the residents about the aquarium in the hall and so on. That's the way you make contact with one another. (NH6, CG3, FM3)

4.2.3. Facilitating interventions to continue the implemented changes

Four nursing homes completed a long-term implementation plan, including time-plan and budget. Three of them plan to continue the implementation of *snoezelen* in other wards in the near future. One made a plan for more than a year for the structural training of new team-members.

4.2.4. Contextual obstacles

The caregivers identified several obstacles, mainly in the working environment, as shown in Table 3.

[TABLE 3]

Caregivers of all wards indicated, that in their experience, *workload* was an obstacle on some occasions. They reported that they had too little time, particularly in the first phase of the implementation process, when the observation of the residents took up a lot of time. As a result of this, none of the wards succeeded in completing the observations and the *snoezel* plans in time for the first follow-up meeting. The high level of absence of team-members, due to holidays or sickness, was also thought to have a negative effect.

Three wards went through a period of *understaffing*, caused by vacancies, which hindered implementation.

One ward reported a high turnover of staff (almost two thirds of the team-members).

Sometimes, there's a shortage of staff. Then, the old, task-oriented attitude shows up again. (NH3, CG4, FM2)

The two wards that did not receive financial support also reported a lack of support from central management. They missed an integrated policy and also mentioned the lack of interest and co-operation of central management.

An obstacle was formed by central management's lack of cooperation. The management failed to show interest and support. I can imagine that it's not easy to find new staff members, but they didn't even come to have a look, or ask 'how we were getting on'. I think this is very strange (. . .). So we did without financial support and management interest in the project. (NH4, CG1, I4)

The wards that did get financial support interpreted the financial investment as a sign of interest and cooperation. However, they still wanted personal appreciation from management, for instance in the form of visits, to see the new equipment and encourage the caregivers. Only one ward reported this kind of management appreciation.

Three wards mentioned that they also had to manage other important projects (implementation of a computerised care plan, preparation for move), which required a lot of input. The caregivers thought that too many innovations were being implemented simultaneously.

Now, I think it was too much. Especially with the introduction of INTERLECT (computer program JvW). I noticed that I lost enthusiasm myself, just because of the other things that had to be done. But I couldn't afford to fall behind at the start of INTERLECT. (NH5, CG1, I5)

In retrospect, some of the caregivers, especially the head nurses, felt that their expectations at the beginning of the project had been too high. They wanted to start too many things at once. This was considered to be an obstacle, until they adapted their expectations and set new, realistic goals.

4.3. Evaluation of the results: changes in the daily care

The interviews and follow-up meetings provided information about the changes that caregivers experienced as a result of the implementation of snoezelen.

4.3.1. Changes in caregivers

The caregivers reported that their attitude towards the residents had changed. A resident-oriented attitude is a basic condition in the application of snoezelen. Caregivers consider the switch from task-oriented care to resident-oriented care as the most important change at the individual level.

You know what makes somebody happy and what makes him or her unhappy. (NH6, CG4, FM1)

None of the residents are the same. Now, we are attending to what the residents like. Little belittle you really learn to understand what's important for a particular resident. (NH3, CG2, FM1)

In the last follow-up, all the caregivers mentioned that they had succeeded in laying the foundation for resident oriented care. Although the head nurses noticed that not every caregiver had the necessary qualities for the new working style, they felt that most of the team-members changed towards resident-oriented care.

In the daily care, you can see that not everybody is able to give real resident-oriented care. And that's not a matter of unwillingness. But the majority do succeed. (NH4, CG1, I4)

The aim of the implementation of snoezelen was to integrate multi-sensory stimulation in the daily care programme. Obviously, there were differences between the participating wards. Four wards invested in snoezel equipment and the caregivers started to use the materials, the snoezel bathroom or the snoezel room. They also started to apply snoezel activities during the day. Two wards, however, restricted themselves to the resident-oriented approach, which they only applied during daily care periods (morning care, meals, evening care).

On our ward, it's not the materials that are essential. (NH2, CG5, FM3)

We focused on our behaviour: What is the right approach for this resident? (NH4, CG1, FM3)

In some wards, caregivers noticed that the use of medication diminished, because the caregivers had improved their problem-solving ability and started to try other solutions first.

When a resident manifests behaviour problems, we talk about it first. Not immediately running to the medication, but first by discussing it: 'what can we do?'. (NH2, CG4, FM3)

In the past, we said 'this resident is restless, which medication can we give?'. Now, we report in the multidisciplinary consultation: 'we tried this, we tried

aromatherapy, we tried the music pillow; this seems to work and that doesn't work'.
(NH5, CG5, FM2)

4.3.2. *Changes in residents*

In the opinion of the caregivers, the implementation of snoezelen resulted in positive patient outcome. There were two primary changes in the residents. Caregivers noticed that it became easier to get through to the residents and that the residents in turn showed more response.

Residents who are very difficult to establish contact with can now be reached. (NH1, CG9, FM2)

When Mrs. E. attended our ward, she was much more apathetic than now, and that just happened by involving her all the time, a lot of eye-contact, a lot of talking to her. (NH4, CG5, FM2)

Furthermore, caregivers reported that, in their opinion, agitated, restless or aggressive residents became more quiet and satisfied.

It struck me that the residents quietened down. (NH3, CG5, FM2)

I see a significant change in the residents' behaviour. Now, we have a resident, who is transferred from another ward. There's a difference in behaviour now, I think, compared with the other ward. She's more satisfied and quieter, not so aggressive. (NH1, CG3, FM3)

The four wards that invested in snoezel equipment also reported positive changes in residents as a result of the use of snoezel materials and aromatherapy.

We got a lot of cuddly animals and observed the residents' reaction to them. Now, you see a lot of people walking with the cuddly toys, a lot more residents than I had expected. (NH5, CG3, FM1) I'm really surprised about the effects of aromatherapy. (NH3, CG6, FM1)

4.3.3. *Organisational changes*

At the ward level, the caregivers reported a change in the planning of the day, mainly in the 'use of the clock'. In the past, everything was done by the clock. Now, they ignore the time, which, in the opinion of the caregivers, had positive effects for both the residents and themselves.

When I compare the present with a half year ago, then I really see a difference. Before, everything had to go fast, fast, fast, turning people out of bed, etc. But now, we just have more time for each other. (NH3, CG5, FM1)

I'm new to this ward. It struck me when I started here that there were no clocks. (NH5, CG5, FM3)

In some wards, the time of the breaks changed or became flexible. In other wards, the caregivers no longer force themselves to be ready with the morning care before the break.

At a given moment, we asked the study group 'Isn't it possible to change the breaks?' Why should a bed patient have to be washed at 10.30 a.m.? Changing the breaks was a real taboo. But we succeeded and the team-members deserve a compliment for adapting to it very well. (NH3, CG1, I3)

The rush is gone. We don't have to get everybody out of bed before the coffee break.
We are more relaxed now, less stressed than before. (NH6, CG1, FM1)

By working in a more relaxed way during the morning care, one would expect a lack of time during the rest of the day. However, caregivers' experience was that they were still able to get their work finished. They mentioned that, when there was no battle during the morning care, the rest of the day progressed more smoothly.

For instance, Mrs. K. who, when woken up too early in the morning, became very ill tempered. We know now that she needs to sleep until 9.30 a.m. and has to wake up spontaneously. That is such a gain of time. When she's in a bad temper, it takes longer to get her dressed. (NH3, CG12, FM3)

It's strange, but although you are not working to the clock, everything is done when you go home. (NH4, CG4, FM3)

There were other changes that carried through to different moments of the day, but these changes varied from ward to ward. In three nursing homes, a breakfast project was started up, to enable the residents to smell different odours of cooking (e.g., bacon and eggs, pancakes, coffee). Two wards made a similar change in the organisation of the supper.

5. DISCUSSION

5.1. Major findings

The results of the present study show that the new '*snoezelen*' care model can be successfully implemented in daily care.

All participating wards reported changes at the caregiver level, the resident level and organisational changes. The combination of interventions at the caregiver level and interventions in the organisational structure seemed to be a particularly important indicator of success. Two wards lacked interventions at the organisational level and only mentioned limited changes at the caregiver level. They reported a change from task oriented care to resident-oriented care, but stayed behind with the integration of multi-sensory stimulation in 24-h care. The other four wards also reported additional changes at the caregiver level, such as the application of multi-sensory stimulation in the daily care or the performance of *snoezel* activities. Though the shift towards resident-oriented care can be considered as the basis of *snoezelen*, and therefore an important starting point, the integration of *snoezelen* into daily care is intended to be more than that. This study showed that the efforts and support of central management, including interest and support over time, are crucial for success. Caregivers need to get confirmed that the new care model is essential to improve the quality of care. Four wards received financial support and made policy with respect to continuing the implementation. The study group, proposed as a tool to monitor the implementation process, appeared to be of great value in the same four wards in identifying obstacles, developing strategies and evaluating the process, all considered to be important steps in the implementation cycle (Grol, 1997; Grol et al., 2000). As was the case with Schrijnemaekers et al. (2002), the study showed that fundamental organisational changes are needed to successfully implement a new care model.

Contrary to other studies (Holtkamp et al., 2001; Schrijnemaekers et al., 2002), caregivers not only experienced obstacles such as workload and understaffing, but also reported a range of facilitating interventions that were carried out at the caregiver level. Removing the clocks was one of these. The follow-up meetings, the use of *snoezel* care plans and the increase in mutual consultations were also identified as facilitating the implementation.

As the progress of the implementation process, particularly the establishment of procedural change, requires a lot of management skills from the head nurses, coaching the head nurse would appear to be essential to establish the continuation of the implementation process. Coaching by the head nurses' supervisor (the care manager) appeared to be significant, as did assistance in providing feedback to the caregivers, for example by an independent qualified professional. The experience of the importance of coaching strategies is in accordance with recent literature about the implementation

processes. Grol and Grimshaw (1999) mentioned that, in general, reviewing performance, providing feedback to caregivers, giving practical tools and providing incentives or sanctions, maybe suitable coaching strategies for change. In addition, Burgio et al. (2000) stated that the receptiveness of CNAs in dementia care to learn new skills must be continued by establishing staff motivation systems, such as behavioural supervision (e.g., specific feedback suggesting practical ways of maximising skills). These interventions proved to successfully motivate the CNAs and ensure the maintenance of the skills. Holtkamp (2003) also recommended more supervision and support for the nursing staff during the intervention period. Hence, constant attention to the different levels of management was identified as an important implementation strategy to motivate nurses and other care staff to apply complicated interventions. In the present study, the combination of coaching strategies at different levels, for CNAs as well as to head nurses, seemed indeed to be most effective. Coaching for CNAs was given in all wards. However, the coaching of head nurses needed, again, the support of the central management and was only offered in two of the six wards.

The implementation period started with training in 'snoezelen for caregivers'. In Schrijnemaekers' research, the training was regarded by caregivers as a confirmation of their current practice; however, the caregivers in this study assessed the training positively with respect to the improvement of knowledge and skills and the realisation of an intention to change. When compared with the evaluation of a training programme on the communication skills of nurses in oncology, caregivers in our study gave a more positive assessment of all the items (Kruijver, 2001). It would appear that the training programme reached its goal.

Nevertheless, more than half of the participants reported expected obstacles to the implementation of the new care model. Perceived workload, specifically lack of time, indeed hindered the implementation in all participating wards. As mentioned previously, the shortage of staff and a lack of management support appeared to be an obstacle in some of the wards. Delayed and adjusted implementation was also reported by Holtkamp et al. (2001), who found comparable difficulties in obtaining qualified staff, due to understaffing or a high turnover of staff.

The implementation model shows that these contextual problems, that are not always easy to solve, influence the implementation process. When facing facilitating interventions at both the caregivers' and the organisational level, it is still possible to be successful. However, there has to be a balance: If there are too many obstructive factors they should be dealt with first, before starting the implementation.

In conclusion, according to the caregivers, the implementation succeeded in all participating wards, though two wards lagged behind with the integration of multi-sensory stimulation in 24-h care. Most of the caregivers noticed changes at the resident level. They observed that there was more contact with the residents, the level of residents' response increased and the residents were more settled. With regard to organisational changes, the release of the 'use of the clock' was especially nominated as a major, positive change. It appeared to be necessary to create 'staff-centred work environments', as described by Kitwood (1997), to be able to deliver resident-oriented or person-centred care. The type of environment that proved to be needed in our study reflects many of the characteristics of Kitwood's 'type B' environment. In type B settings the manager's role is more one of enabling and facilitating than of controlling, and this involves giving a great deal of feedback to staff. The whole staff group (manager, senior care team and care assistants) thrives on cooperation and sharing. There is a strong commitment to minimising the differential of power. The organisation is highly skilled in interpersonal matters and has well-developed communication pathways. Type B settings are sensible to what staff members are experiencing and feeling. Each staff member can bring matters in the open, knowing that they will not be criticised, but given the support that they need. Each resident can be known in his or her uniqueness, through a skilled combination of empathy and personal knowledge (Kitwood, 1997).

5.2. Recommendations for practice

Based on this study, the most important prerequisites for the successful introduction of *snoezelen* in psychogeriatric care are:

- To determine the policy of the central management, prior to the start of implementation, including the assessment of possible obstacles; proposals to solve or to minimise the

obstacles and the fulfilling of conditions such as funding, facilities and personnel needs. The preparation takes about 9 months (Dröes et al., 1999).

- To carefully determine the start of the implementation, avoiding:
 - the implementation of several innovations at the same timing;
 - starting with an unstable team.
- Training for the complete team by a qualified professional trainer, who not only aims to improve knowledge and skills, but also to achieve the intention to change among caregivers.
- The trainers' involvement during follow-up meetings.
- Structural evaluations of the implementation process, leading to adaptation or development of new strategies.
- Support of the head nurse at different levels:
 - by the supervisor to control the progress and to coach the continuation of the process;
 - by an independent qualified person, to support the head nurse in coaching the staff.
- Support of the CNAs by giving regular feedback or supervision. Kitwood (1997) advises an hour of supervision per month for all employees in dementia care.
- Structural interest and support of the central management.
- A long-term implementation plan, including a time schedule, budget, structural training of new team members and structural evaluation to establish the continuation of the project.

5.3. Implications for research

Nursing homes, policymakers and researchers pay a great deal both in time and money to develop, implement and study interventions. In the absence of an accurate assessment of implementation problems, conclusions about outcome measures are difficult to interpret. This study gives detailed information about facilitating and hindering factors. The results made us curious to know whether the caregivers' opinions, given in follow-up meetings and interviews, will be reflected in daily practice. A more thorough study's needed to determine whether residents' and caregivers' behaviour has indeed changed in a positive way.

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REFERENCES

- Alzheimer Nederland, 2002. Dementie in Nederland: aantallen patiënten [Dementia in the Netherlands: Number of Patients]. Alzheimer informatief. Alzheimer Nederland, Bunnik.
- Bensing, J., 2000. Bridging the gap. The separate worlds of evidence-based medicine and patient-centered medicine. *Patient Education and Counseling* 39 (1), 17–25.
- Burgio, L.D., Allen-Burge, R., Roth, D.L., Bourgeois, M.S., Dijkstra, K., Gerstle, J., Jackson, E., Bankester, L., 2000. Come talk with me: improving communication between enrolled nurses and nursing home residents during care routines. *The Gerontologist* 41 (4), 449–460.
- Burgio, L., Corcoran, M., Lichstein, K.L., Nichols, L., Czaja, S., Gallagher-Thompson, D., Bourgeois, M., Stevens, A., Ory, M., Schulz, R., 2001. Judging outcomes in psychosocial interventions for dementia caregivers: the problem of treatment implementation. *The Gerontologist* 41 (4), 481–489.
- Chung, J.C.C., Lai, C.K.Y., Chung, P.M.B., French, H.P., 2002. Snoezelen for Dementia (Cochrane Review). In: *The Cochrane Library*, Issue 4. Update Software, Oxford.
- Dröes, R.M., Finnema, E.J., De Lange, J., van Kooij, C.H., Smit, F., Ettema, T.P., Persoon, A., Pronk, M., Meertens, R., Ooms, M.E., Smaling, A., Rigter, H., van Tilburg, W., 1999. Geïntegreerde belevingsgerichte zorg versus gangbare zorg voor dementerende ouderen in het verpleeghuis

- [Integrated Emotion-oriented Care versus Usual Care to Demented Elderly in the Nursing Home]. Free University, Amsterdam.
- Finnema, E.J., 2000. *Emotion-oriented Care in Dementia. A Psychosocial Approach*. Free University, Amsterdam.
- Francke, A.L., Garssen, B., Huijjer Abu-Saad, H., 1995. Determinants of changes in nurses' behaviour after continuing education: A literature review. *Journal of Advanced Nursing* 21 (2), 371–377.
- Grol, R.T.P.M., 1997. Beliefs and evidence in changing clinical practice. *British Medical Journal* 315 (7105), 418–421.
- Grol, R., Grimshaw, J., 1999. Evidence-based implementation of evidence-based medicine. *Journal on Quality Improvement* 25 (10), 503–512.
- Grol, R.T.P.M., van Everdingen, J.J.E., Casparie, A.F., 2000. *Invoering van richtlijnen en veranderingen. Een handleiding voor de medische, paramedische en verpleegkundige praktijk [Implementation of Guide-lines and Changes. A Manual for Medical, Paramedical and Nursing Practice]*. Elsevier/De Tijdstroom, Maarsen.
- Holtkamp, C.C.M., Kerkstra, A., Ooms, M.E., van Campen, C., Ribbe, M.W., 2001. Effects of the implementation of the Resident Assessment Instrument on gaps between perceived needs and nursing care supply for nursing home residents in the Netherlands. *International Journal of Nursing Studies* 38 (6), 619–628.
- Holtkamp, C.C.M., 2003. *Effects of the Resident Assessment Instrument on Quality of Care and Quality of Life in Nursing Homes*. NIVEL, Utrecht.
- Kitwood, T., 1997. *Dementia Reconsidered: the Person Comes First*. Open University Press, Buckingham.
- Kok, W., Peter, J., Choufour, J., 2000. *Snoezelen*. Bernardus Expertisecentrum/Fontis, Amsterdam.
- Kruijver, I.P.M., 2001. *Communication between Nurses and Admitted Cancer Patients: the Evaluation of a Communication Training Program*. NIVEL, Utrecht.
- Lancioni, G.E., Cuvo, A.J., O'Reilly, M.F., 2002. Snoezelen: an overview of research with people with developmental disabilities and dementia. *Disability and Rehabilitation* 24 (4), 175–184.
- Noorden, A., 1999. *Complementaire zorg, het magische element in de zorg [Complementary care, the magical element in the care]*. *Magie en Verpleging*, NU'91, 23–26.
- Phillips, L.R., van Ort, S., 1995. Issues in conducting intervention research in long-term care settings. *Nursing Outlook* 43 (6), 249–253.
- Schers, H., Wensing, M., Huijsmans, Z., van Tulder, M., Grol, R., 2001. Implementation barriers for general practice guidelines on low back pain. *Spine* 26 (15), 348–353.
- Schrijnemaekers, V.J.J., van Rossum, E., van Heusden, M.J.T., Widdershoven, G.A.M., 2002. Compliance in a randomized controlled trial: the implementation of emotion-oriented care in psycho-geriatric facilities. *Journal of Advanced Nursing* 39 (2), 182–189.
- Theunissen, N.C.M., te Pas, S.M.E., Friele, R.D., 2003. *Evaluatie Implementatiemonitor ZonMw. Onderzoek naar de relatie tussen implementatieplannen en hun uitkomsten [Evaluation of the model for Implementation of Change in Health Care. A Study into the Relationship between Implementation Plans and their Results]*. NIVEL, Utrecht.

TABLES BOXES AND FIGURES

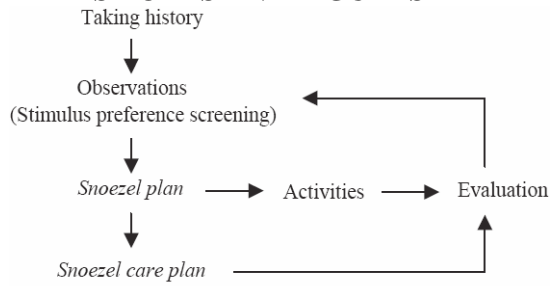


Fig. 2. Methodology to integrate *snoezelen* into daily care.

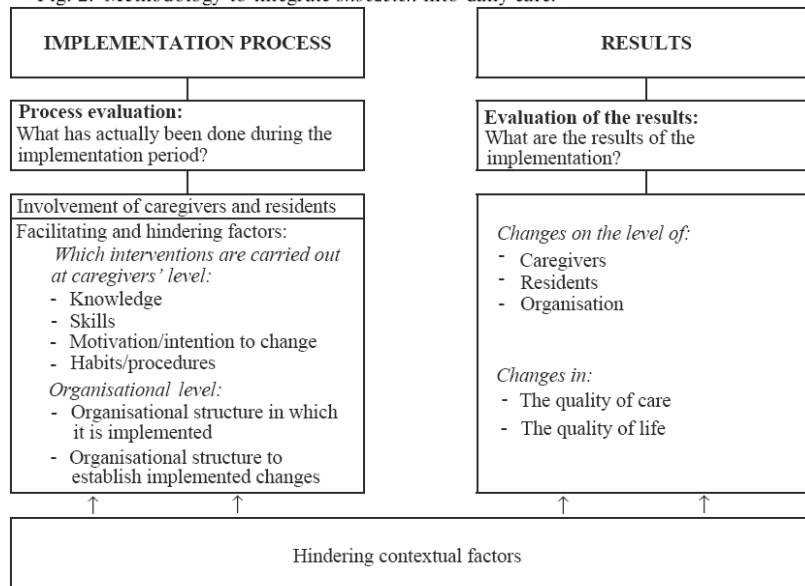


Fig. 1. Research model.

Box 1
 Outline of the content of training in 'Snoezelen for caregivers'.

<p>Day 1 Introduction Inventory of individual learning goals and reluctance Definition of <i>snoezelen</i> and explanation of the concept of <i>snoezelen</i> History of <i>snoezelen</i> in mentally handicapped care and psycho-geriatrics Video '<i>snoezelen</i> with nursing home residents' suffering from dementia with video exercise Sense organs/useful materials for sensory stimulation/which materials are present in the organisation</p> <p>Day 2 Resident-oriented care Video with video commissions Demands of the ward/demands of CNAs/effects of <i>snoezelen</i> The application of <i>snoezelen</i></p> <ul style="list-style-type: none"> ● systematic observation of resident responses to <i>snoezelen</i> (10 × 1 h) ● use of a form for <i>snoezelen</i> observation ● how to draw up an individual <i>snoezel</i> plan, based on the observations ● how to put the <i>snoezel</i> plan in an integrated <i>snoezel</i> care plan <p>Case histories Options on own ward</p> <p>Day 3 Massage/therapeutic touch (adaptation) Aroma therapy Practice aroma therapy</p> <p>Day 4 <i>Snoezelen</i> and attitude Discussing case history homework (<i>snoezel</i> care plan of own resident) Installation of study group Evaluation</p>

Table 1
 Caregivers' opinion about the professional competence of the trainer, the atmosphere during the training sessions, the support from the working environment and the intention to change (n = 66)

	Not/hardly (1-2) (%)	Rather (3) (%)	Considerable (4) (%)	A lot (5) (%)
<i>Caregivers' satisfaction with teachers'</i>				
Professional competence				
With regard to <i>snoezelen</i>	—	—	13.6	86.4
Conveying theory and skills	—	—	30.3	69.7
Giving room for discussion	—	—	21.2	78.8
Giving feedback	—	—	34.8	65.2
<i>Caregivers' opinion about the training atmosphere</i>				
To feel comfortable with the teacher	—	1.5	37.9	60.6
To feel comfortable with the participants (team members)	1.5	6.1	33.3	59.1
<i>Caregivers' opinion about support from the working environment</i>				
Perceived support from head nurse	3.1	9.2	40.0	47.7
Perceived support from colleagues	—	4.5	48.5	47.0
<i>The extent to which caregivers</i>				
Feel encouraged to perform what they have learned in practice	—	4.5	42.4	53.0
Intend to perform what they have learned in future	—	3.0	40.9	56.1

Table 2
 Caregivers' opinion about facilitating factors during the implementation process

Facilitating factors	Nursing home (H)					
	H1	H2	H3	H4	H5	H6
Caregivers' level						
<i>Interventions to change habits/procedures</i>						
Training 'snoezelen' for caregivers'	+	+	+	+	+	+
Follow-up meetings	+	+	+	+	+	+
Training 'feedback by team-members'				+		
Coaching to caregivers by head nurse		+	+	+		+
Feedback to caregivers by independent, qualified person					+	+
Coaching to head nurse by care manager				+	+	+
Support by activity therapist(s)	+		+		+	+
Writing of <i>snoezel care plans</i> by CNAs	+	+	+	+		+
Use of <i>snoezel care plans</i>	+	+	+	+	+	+
Mutual consultations (informal)	+	+	+	+	+	+
Structural evaluations of the care plans (formal)	+	+	+		+	+
Organisational level						
<i>Interventions in structure</i>						
Study group 'snoezelen'	+		+		+	+
Adaptations in day schedule/planning	+		+	+		+
<i>Snoezel</i> bathroom	+				+	+
<i>Snoezel</i> room	+		+		+	+
Fitting up the ward	+		+		+	+
<i>Structure to continue implemented changes</i>						
Implementation plan (long-term)	+		+		+	+
Structural training of new team members						+
Continuation in other wards			+		+	+

Table 3
 Caregivers' opinion about contextual factors that hindered the implementation of *snoezelen*

Hindering factors	Nursing home (H)					
	H1	H2	H3	H4	H5	H6
Perceived workload	x	x	x	x	x	x
Lack of staff	x	x		x		
Lack of management support/financial support		x		x		
Other innovative projects/changes simultaneously			x	x	x	
Expectations too high		x	x	x	x	
Dissatisfaction within team-members					x	