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# The implementation of integrated emotion-oriented care: Did it actually change the attitude, skills and time spent of trained caregivers?

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## Abstract

**Background:** Successful implementation is a vital precondition for investigating the outcome of care innovation. This study concerned the evaluation of the implementation of integrated emotion-oriented care (IEOC) in psychogeriatric nursing home wards. The main question was whether the trained caregivers actually applied the knowledge and techniques of IEOC during their daily work.

**Methods:** The study was conducted within the framework of a randomized clinical trial into the effectiveness of IEOC in 16 wards. Preceding the experimental period, staff from 16 wards were educated and trained to work with a standardized care plan, resulting in a similar level of quality of

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care at the start of the trial. On the experimental wards IEOC was then implemented by training on the job in addition to training courses for personnel. To examine the implementation effectiveness, a self-report questionnaire, 'Emotion-oriented Skills in the Interaction with Elderly People with Dementia', was administered at baseline and after 7 months to a sample of caregivers from the experimental and the control wards. In addition, participant observation was conducted on four experimental and four control wards, and time spent by care personnel on different type of care tasks was registered.

**Results:** The implementation of IEOC resulted in increased emotion-oriented skills and more knowledge of the residents among the caregivers. Providing IEOC was not more time consuming for the caregivers than providing usual care.

**Conclusion:** This study shows that the implementation of IEOC was effective. It is recommended that in intervention studies the correct application of a new intervention or care approach is examined before jumping to conclusions about the effectiveness of the intervention or care approach itself.

### Keywords

implementation effectiveness, nursing skills, emotion oriented care, compliance

## Introduction

In our opinion the literature on implementation of care innovations and approaches does not make a clear enough distinction between implementation effectiveness and innovation effectiveness (Algase, 1999; Bates, Boote, & Beverley, 2004; Cohen-Mansfield, 2001; Finnema, Dröes, Ribbe, & van Tilburg, 2000; Halek & Bartholomeyczik, 2006; Klein & Sorra, 1996; Siders, 2004; van Linge, 1998). Implementation effectiveness refers to the degree to which the implementation of the innovation has been successful (see, for example, Greenwood, Terry, Arreaga-Mayer, & Finney, 1992; Hroschikoski et al., 2006; Kossman et al., 2006; Pearson, 2005). Innovation effectiveness indicates the (positive) effect of the application of a successfully implemented innovation. Although it is obvious that the effectiveness of an innovation depends on the effectiveness of its implementation, this fact has been neglected in intervention research so far.

The subject of this article is the effectiveness of the implementation of an innovative psychosocial care approach called 'integrated emotion-oriented care' (IEOC) in 24-hour residential psychogeriatric nursing home care. The implementation of this new care approach can be seen as a complex intervention. IEOC refers to the integrated person-centred application of elements of psychosocial methods and care approaches, such as Validation, Snoezelen and Reminiscence, in the daily nursing home care. In this study nursing caregivers were trained to apply IEOC (Finnema et al., 2000; van der Kooij, 2003) in the context of a large-scale randomized clinical trial (RCT) regarding the surplus value of IEOC as compared to usual care (Dröes et al., 2002; Finnema et al., 2005). This RCT, however, is not the subject of this paper, and its results are described elsewhere (De Lange, 2004; Finnema et al., 1998, 2005).

The core question in this implementation study was whether the caregivers of the experimental wards actually changed their way of working, that is, whether they actually started working in a more empathic and experience/emotion-oriented way. Secondly, we

questioned whether offering IEOC is more time consuming for care personnel than usual care.

## Method

### Sample and setting

The study was conducted on 16 psychogeriatric nursing home wards in 14 nursing homes across the Netherlands. After a call for participation and a round of visits, these wards were selected on the basis of their willingness to adopt the IEOC and the possibility of matching them to a ward similar in resident population and organization of care. Subsequently, an informed consent procedure was carried out: Written information about the study was sent to the main contact persons of the people with dementia on the selected wards who met the inclusion criteria for the RCT. They were asked to sign a written consent form if they agreed with the care innovation and the participation of the person with dementia in this study. All contact persons gave informed consent.

The study sample for measuring the effectiveness of the implementation consisted of 124 professional carers who worked on these wards (Finnema et al., 2005; see Table 1). All agreed to take part in the study after being informed about the study (informed consent).

**Table 1.** Characteristics of the selected caregivers in the experimental (E) and the control (C) group at the start of the study. 'Completers' were those caregivers among whom implementation activity was examined, that is, among whom a baseline and final measurement were conducted (Dröes et al., 2002)

	E (n = 61)	C (n = 63)	Completers E (n = 46)	Completers C (n = 53)	Test	p
<b>Sex</b>						
Female	55 (90%)	52 (83%)	40 (87%)	46 (87%)	Chi <sup>2</sup> <sub>1</sub> = 0.001	0.98
Male	6 (10%)	11 (17%)	6 (13%)	7 (13%)		
Age (mean; sd)	30.23 (7.9)	30.49 (7.1)	30.8 (8.0)	30.2 (7.4)		
<b>Work experience</b>						
In years (mean; sd)	7.6 (5.2)	9.2 (5.5)	8.05 (5.6)	8.95 (5.6)	F <sub>3,92</sub> = 1.16	0.33
<b>Psychogeriatric experience (mean; sd)</b>						
	6.3 (5.0)	6.9 (4.1)	6.64 (5.6)	6.72 (4.1)		
<b>Education</b>						
Geriatric orderly	0 (0%)	1 (2%)	0 (0%)	1 (2%)	Chi <sup>2</sup> <sub>6</sub> = 6.88	0.33
Nursing assistants	57 (92%)	53 (84%)	43 (94%)	44 (84%)		
Daytime course	1 (2%)	5 (8%)	1 (2%)	6 (11%)		
Nurse	1 (2%)	3 (4.7%)	0 (0%)	1 (2%)		
Bachelor nurse	1 (2%)	1 (2%)	1 (2%)	1 (2%)		
<b>Education not concluded</b>	1 (2%)	0 (0%)	1 (2%)	0 (0%)		
<b>Position</b>						
Nurse's assistant	54 (89%)	53 (84%)	40 (87%)	44 (83%)	Chi <sup>2</sup> <sub>4</sub> = 2.85	0.58
Nurse	1 (1.5%)	2 (4.7%)	0 (0%)	1 (3%)		
Ward assistant	1 (1.5%)	1 (1.6%)	1 (2%)	1 (2%)		
Team leader	1 (1.5%)	4 (6.3%)	1 (2%)	3 (6%)		
Team coordinator	4 (6.5%)	3 (4.8%)	4 (9%)	3 (6%)		

The research population for the time-spent analysis consisted of the members of the care staff of the 16 participating wards who were on duty on the days the self-reported time registration was planned.

## Design

The study was conducted within a RCT that studied the effectiveness of IEOC among people with dementia and their caregivers (Finnema et al., 1998). Comparison of the selected wards with the psychogeriatric nursing homes in the Netherlands showed that the selected wards in general did not deviate from Dutch nursing home wards on nursing home characteristics or patient characteristics (Dröes et al., 2002; Pels & Keunen, 1997). Based on matching of the characteristics of nursing home wards and residents, the 16 participating wards were divided into eight pairs of two wards. The wards were assigned to the experimental group and the control group by lot. Over a period of nine months the residents of the experimental group received IEOC, whereas the residents of the control group received usual care. Comparability of the caregivers of the experiment and those of the control group was optimized by taking into account education, age and number of years of work experience in the psychogeriatric field when forming the groups.

The size of the group was calculated based on a power analysis. To perceive differences with an effect size of .5 and a power of 80%, 50 persons were needed per group. When  $N = 50$  and the effect size is .5, the statistical power is 80%. Taking into account a dropout between 10% and 15%, 60 nurses per group were recruited for the trial.

To enable the caregivers to apply IEOC, they were trained according to a standardized educational program (see implementation of interventions). The usual care group did not receive training in IEOC, but both the IEOC and usual care group were trained to fulfil a number of quality aspects according to the Dutch 'model care plan' (cyclical multidisciplinary care; Engbers-Kamps & van Sprundel, 1993). Both working according to the 'model care plan' and the implementation of IEOC were guided and supervised by implementation trainers.

To examine implementation effectiveness, we assessed the emotion-oriented interactive skills of the caregivers (see Table 1) who participated in the outcome study on the experimental and the control wards immediately before the start of implementation and after seven months. In addition to a baseline and final measurement, we conducted a retrospective baseline measurement to investigate whether the caregivers' internal judgment about their emotion-oriented interactive skills had changed. A retrospective measurement is necessary because caregivers tend to judge themselves positively; a change in their conscious expertise therefore only becomes visible if they are asked to judge themselves afterwards about their expertise prior to the learning process (Sprangers & Hoogstraten, 1986; see also van de Vliert, Huismans, Krijger, & van der Leeuw, 1986).

In addition, participant observation by independent (not blinded) researchers was carried out on four experimental and four control wards before the start of the experiment, after four months and after its conclusion (De Lange, 2004). Because of the RCT we were bound to select matched wards. The number of wards for this part of the research was limited because of the restricted time span of the study and the time-consuming method of participant observation. The wards were selected based on their geographic spread in the Netherlands and their variation in the residents' level of need of assistance and care.

To ensure that the quality of care on the experimental and control wards was comparable at the start, all wards were educated on working according to specific quality standards for nursing home care through on-the-job training (see the *Implementation of interventions* section). Before the start of the implementation of IEOC and after eight months we tested whether, on average, the experimental and the control wards could be compared on working according to these quality standards.

For the time-spending analysis the nursing staff on all wards registered, based on a standardized method (van der Kooij, Bos, Breugelmans, Frijters, & van der Speld, 1991), how they spent their time during one working day during all shifts, before the start of the intervention and again after eight months.

### ***Implementation of interventions***

Before the implementation, both IEOC and usual care were described in standardized terms.

IEOC was described in terms of content and methods that caregivers could use to make contact and to communicate empathically, verbally and non-verbally with people with dementia and to help them to find an emotional balance. General advice was given on how to attune to the experience world of people with dementia in different stages of the disease and during different care activities, such as washing, dressing, helping to eat, toileting, recreational activities and having a conversation, using elements of psychosocial methods, such as Validation, Snoezelen and Reminiscence (Finnema et al., 2005; van der Kooij, 2003).

Usual nursing home care was described as the nursing caregivers working according to a minimum set of quality aspects regarding registered personal information on the client, communication with the client system, the multidisciplinary care and treatment plan, communication between the disciplines and the care plan for each resident.

The standardized form of usual nursing home care was implemented as a general intervention on all wards during a six-month preparation period (to reach a similar level of quality care at the start of the trial) and the subsequent experimental period of nine months. The entire staff learned to work with an individual care plan on the basis of a so-called problem-driven Nursing Process (Persoon, van der Kooij, & Dröes, 1998). In this way both the experimental wards and the control wards were involved in a process of changing and learning. During the experimental period the standardized form of IEOC was implemented only on the experimental wards. A large group of caregivers and staff members from the different disciplines learned to apply IEOC on a basic level by means of training courses and on-the-job training; one in four of the people who had taken the basic course received a follow-up course where they learned to apply IEOC on the advanced level; for every 15 residents, one nursing caregiver was trained to be a coach-consultant. The coach-consultant acted as the 'change agent' within his/her team. Diagram 1 presents an overview of the implementation.

## **Instruments**

### ***Emotion-oriented skills***

We studied the emotion-oriented skills caregivers used when taking care of patients with dementia through the self-report questionnaire 'Emotion-oriented Skills in the Interaction

	Experimental group	Control group
Recruitment and selection	Writing to, visiting and selecting nursing homes Selection of nursing wards, matching and drawing lots Selection of professional carers	
Preparation and equalizing phase (6 months)	Training coach-consultants in integrated, emotion-oriented care + Training coach-consultants and staff in working according to  <b>Model care plan (NVVz*)</b> (usual care)	Training coach-consultants usual care - training staff in working according to  <b>Model care plan (NVVz*)</b> (usual care)
Implementation phase (9 months)	Follow-up training and guiding/supervision of coach-consultants, training staff in combined application of  <b>Model care plan (NVVz*)</b> + <b>Integrated, emotion-oriented care</b>	Follow-up training and guiding/supervision of coach-consultants and staff in working according to the  <b>Model care plan (NVVz*)</b> (usual care)

\*Dutch Association of Nursing home care

**Diagram 1.** The implementation processes in the experimental group and the control.

with Elderly People with Dementia' (ESID; van der Kooij, 2003). The ESID-questionnaire consists of three subscales:

- A. expertise, that is, emotion-oriented interaction techniques (22 items);
- B. knowledge with regard to personality and the life history of residents (10 items);
- C. working with a care plan (15 items).

To test its content validity, the ESID-questionnaire was presented to three independent experts for peer review. This did not result in any changes. We then calculated Cronbach's alpha as the measure for internal consistency. For the different subscales these were .91, .81 and .89. In the context of the implementation study the ESID was further examined for content validity, using the data gathered in the study. A Principal Components Analysis and a Confirmatory Factor Analysis confirmed the distinguished subscales (van der Kooij, 2003).

### *Quality standards for usual nursing home care*

In order to test the comparability of the usual care on the experimental and the control wards, we formulated minimum quality demands for usual nursing home care well before the start of the implementation. These minimum demands were based on a standardized form of systematic working that was developed in the Netherlands within the field of nursing home care, the so-called model care plan (Engbers-Kamps & van Sprundel, 1993). The quality test developed by us consisted of a total of 39 criteria, divided into seven categories (see Table 3). For each category we indicated in accordance with the model care plan what should be organized. There were no rules for how things should be organized. Each criterion could be scored 0, 1 or 2, so the maximum score was 78.

### *Self-report time registration*

The self-report time registration method we applied is a more detailed elaboration of a method developed in the US (Cooney & Fries, 1985; Frijters & van der Kooij, 1992; Schneider, Fries, Foley, Desmond, & Gormley, 1988; van der Kooij et al., 1991). Registration takes place on four categories: individual patient care, collective patient care, ward-related work and personal time. A manual for filling out the registration list was available for the professional carers. In the week before the first registration the staff received instruction and practiced filling in the forms for three hours. A normal weekday, that is to say, a Tuesday or a Thursday, with a normal number of staff present was chosen for the self-report time registration.

### *Qualitative data collection*

During the implementation study qualitative data were also collected by means of participant observation on four experimental and four control wards. These researchers were not involved in the training and the implementation process. A detailed description of the method and procedure is described elsewhere (De Lange, Kooij, & van der, Dröes, 2000; De Lange, Pronk, & Smaling, 1999; Dröes et al., 2002). Immediately preceding the experimental period, after four months, and after it was concluded, the researchers observed how the professional carers on these wards interacted with the nursing home residents with dementia. During these observations, observation schemes were used based on the research questions. After about one hour of observation the researchers retired from the ward to a silent room and made a report about what they had observed, for instance, about the applications of emotion-oriented skills. They distinguished between descriptions of what they had observed, interpretations of what they had observed, and methodological or theoretical remarks. The reports were analysed independently by two researchers according to grounded theory (Strauss & Corbin, 1990). Each observation period lasted nine days spread across three weeks. The observation was carried out on varying times of the day between 9:00 am and 11:00 pm. The situations observed were getting out of bed and getting dressed, going to the toilet, lunch or dinner, group activities by the activity therapist or professional carer in the living room and the emotion-oriented group or (on the control wards) a comparable group activity. They also observed how the professional carers functioned during the multidisciplinary consultation.

## **Procedure**

The ESID-questionnaire was filled out by the participating caregivers before and at the end of the experimental period. In addition to a baseline and final measurement, a so-called retrospective baseline measurement was conducted simultaneously with the final measurement (see Sprangers & Hoogstraten, 1986). The completed questionnaires were sent directly to the researchers: no names were added and nurses were identified based on code numbers of which the key was only known to the researchers and not to the implementation trainers.

At the end of the preparatory and the experimental periods, an independent nursing researcher tested on all wards (experimental and control wards) to what extent they



adhered to the principles of the model care plan using the minimum quality demands checklist (see the *Instruments* section).

On each ward a staff member was assigned who was responsible for the success of the time registration. In order to be able to examine the test–retest reliability of the time registration method, the self-report time registration was repeated at the end of the experimental period on five experimental and four control wards within a one-week time frame. Participant observation to check the application of IEOC took place prior to, halfway through and following the experimental period.

## Analysis

For both conditions (experimental/control) the average scores and the standard deviation in the baseline measurement, final measurement and retrospective baseline measurement were calculated for each subscale of the ESID.

To test the effectiveness of the implementation of IEOC, that is, the difference in emotion-oriented caring between the groups, we conducted a multivariate analysis of covariance on the data of the final measurement. The retrospective baseline measurement was included in the analysis as covariate.

The data from the quality test were analysed as follows. Firstly, all the scores on the separate categories of the quality test were converted into percentages for all wards. The highest possible score was set at 100%. Subsequently, we calculated for both conditions (experimental/control) the average percentages for each category, as well as the total average of the category. Finally, we checked the degree to which the wards in the two conditions differed on the total average.

The time measurement data were entered directly from the registration forms into a program developed in Excel specifically for this purpose. The data were then checked and aggregated on the ward level. The average percentages of time spent per ward, distributed across the four time categories, were entered into a new database, so we eventually had eight cases (wards) per condition and four data categories per case. The data were analysed on changes between baseline measurement and final measurement within the experimental group and the control group using a paired samples *t*-test.

The observation reports underwent qualitative analysis by assigning one or more key words to each text fragment. This coding was always done jointly by two researchers. A detailed description of the qualitative data analysis is described elsewhere (De Lange, 2004; De Lange et al., 1999; Dröes et al., 2002).

## Results

### *ESID*-subscales

The groups did not differ significantly on the ESID scales at baseline or final measurement. Correction of the final measurement scores for the retrospective baseline scores (by means of a multivariate covariance analysis) showed that the professional carers in the experimental group had scored significantly higher than the professional carers in the control group on two subscales, namely on the expertise scale ( $F(1, 91) = 11.47, p = 0.001, d = 0.8$ ) and on the scale knowledge of the residents ( $F(1, 91) = 7.43, p = 0.008, d = 0.7$ ). The scores on working with a care plan and reporting in a care plan did not differ significantly ( $F(1, 91) = 1.23, p = 0.27, d = 0.2$  and  $F(1, 91) = 0.15, p = 0.70, d = 0.1$  respectively).

**Table 2.** Average scores of professional carers in the experimental group (E) and control (C) group on the retrospective baseline and final measurements and results of the multivariate analysis of covariance (MANCOVA) on the final measurement in which the retrospective baseline measurement was included in the analysis as a covariate

ESID-subscale	Retrospective Baseline measurement		Final measurement		Adjusted means of the final measurement		MANCOVA		
	mE	mC	mE	mC	AdjmE	AdjmC	F(1,91)	p	d <sup>***</sup>
B Expertise (18-90)	68.93	77.27	74.89	77.79	78.12	74.56	11.47	0.001*	0.8
C Knowledge of patient (8-40)	26.43	22.73	22.89	22.27	21.54	23.62	7.43	0.008*	0.7
D1 Working with care plan (11-55)	34.43	42.40	42.11	44.38	43.94	42.55	1.23	0.27	0.2
D2 Reporting Care plan (4-20)	12.35	14.38	14.48	15.04	14.86	14.66	0.15	0.70	0.1

\* $p < 0.05$  (E = experimental group, C = control group) \*\*criteria effect sizes according to Cohen (1977):  $d = 0.2$  is a small effect;  $d = 0.5$  is a medium effect,  $d > 0.8$  is large effect.

ESID: Emotion-oriented Skills in the Interaction with Elderly People with Dementia.

This means that the intervention has resulted in the caregivers in the experimental group indicating they have started using more emotion-oriented nursing skills than the professional carers in the control group. The ESID shows a specific increase in expertise in the field of interactive emotion-oriented interaction skills and also in knowledge about the residents.

### Participant observation

Results from the participant observation also show that during the course of the experimental period the professional carers on the experimental wards have started working in a relatively more emotion-oriented way. Their attitude was more empathic: they would enter the emotional world of the resident more often, would ask them more frequently what they wanted, were more sensitive to what residents said, showed more involvement and created a pleasant atmosphere at mealtimes (see also De Lange, 2004). This effect of the training was clearest among the people who had been trained as coach-consultants or who had taken the advanced training course. There were professional carers in the control group who also exhibited an empathic attitude at the final measurement, but these were already more empathic at the baseline measurement.

In addition to the change in attitude, more use was made of emotion-oriented interaction techniques on the experimental wards: professional carers addressed the residents on an individual level, had more non-verbal contact, got residents involved with each other, gave residents a role and responded to emotions. The professional carers on the experimental wards also responded frequently to feelings of sadness among the residents, comforted them and subsequently managed to distract them with something the residents enjoyed. On the control wards the professional carers generally tried to cheer up or distract the residents with a cup of coffee without responding to their emotions (De Lange, 2004; Dröes et al., 2002).

More than on the control wards, staff on the experimental wards used the available knowledge about the residents, such as information on habits, family circumstances and

**Table 3.** Results of quality test model care plan at the time of baseline and final measurements

Quality test category	Baseline measurement		Final measurement	
	mE (n = 8)	mC (n = 8)	mE (n = 8)	mC (n = 8)
A. History taking	82	81	88	81
B. Communication with client system	31	16	33	37
C. Multidisciplinary consultation	78	77	78	83
D. Care and treatment plan	55	70	68	81
E. Interdisciplinary Communication	37	41	41	39
F. Care plan	44	49	57	68
G. Communication professional carers	46	45	43	43
<b>Mean</b>	53	54	58	62

life history, over the course of the experimental period. Considerable differences were observed in how the professional carers functioned during the multidisciplinary consultation. However, only six of those professional carers took part in the multidisciplinary consultation at the times of the baseline and final measurements, which meant that direct comparison was possible only incidentally.

### *Quality test: usual care*

The results of the quality test at the time of the baseline measurement (Table 3) show that on average the wards did not differ on the total score for quality of usual care at the group level. The results show that on average the experimental and the control wards were also fairly similar on the group level with respect to the total score for quality of usual care at the end of the experimental period. Some, or even considerable, progress was observed on nearly all elements. Relatively large differences between the groups at the time of the baseline measurement on communication with the client system, and the care and treatment plan, have decreased considerably at the time of the final measurement. The improvement of the life history taking in the experimental group is also remarkable, whereas the control group showed no change. This obviously seems to be related to the implementation of IEOC.

### *Effects on time spending*

Comparison of the repeated measurements at the time of the final measurement, conducted to check the test–retest reliability, revealed no significant differences in how the professional carers spend their time. Table 4 reflects how time was spent over a period of 24 hours at the start and the end of the experimental period in four categories: individual patient care (IPC); collective patient care (CPC); ward-related work (WW); and personal time (PT). At the baseline measurement no significant differences between the groups were found on any of the categories. At the final measurement we only found a difference in individual patient care on the *t*-test ( $t = 1.91$ ,  $df = 14$ ,  $p \leq 0.05$ ): Within the control group there was a reduction in IPC, from 38.21% to 32.25%.

**Table 4.** Results of the *t*-test for paired observations (*t*) on the different categories of time spent within the experimental group and the control group at the time of the baseline and final measurements

Category Time spent	<i>m</i> <sub>1</sub> (sd)	<i>m</i> <sub>2</sub> (sd)	<i>t</i>	<i>p</i>
<i>Experimental group</i>				
IPC	38.22 (6.37)	38.67 (9.03)	-0.12	0.91
CPC	37.13 (5.92)	33.37 (9.44)	0.94	0.38
WW	18.11 (5.35)	22.53 (12.79)	-0.81	0.44
PT	6.54 (1.29)	5.43 (1.59)	1.49	0.18
<i>Control group</i>				
IPC	38.21 (8.45)	32.35 (4.66)	1.91	0.049*
CPC	34.95 (8.91)	38.30 (7.71)	-0.87	0.21
WW	20.50 (5.21)	23.73 (7.72)	-1.36	0.11
PT	6.34 (1.70)	5.56 (2.67)	0.85	0.21

IPC individual patient care, CPC: collective patient care, WW: ward-related work, PT: personal time, \*: statistically significant.

## Conclusions

With regard to the utilization of emotion-oriented skills, we may conclude that the educational and training program in emotion-oriented care has led to the desired learning result. Significant improvement was found on two aspects: 'expertise' and 'knowledge of the resident'. Improvements were also made in working according to a care plan and reporting about the care plan, but these were not significantly better than the changes observed in the control group. This was not an unexpected result, as both groups were trained in these skills in the general intervention that was also offered. Participant observation not only confirms the results of the ESID-questionnaire with regard to 'expertise' and 'knowledge about resident', but also qualifies them, in the sense that the learning result was most visible in professional carers who had taken the advanced training course or the coach-consultant's course. The results of the ESID-questionnaire also show that it is advisable to carry out a retrospective baseline measurement in addition to the baseline and final measurements. The quality test showed that on average and on a group level the wards were comparable on the general quality of usual care and the use of the problem-driven care plan at the start and conclusion of the experimental period.

Providing emotion-oriented care was not more time consuming than giving usual care. On the control wards the professional carers gradually spend less time on individual patient care, but it is not clear what caused this.

## Discussion

This study into the effectiveness of the implementation of emotion-oriented care has demonstrated that emotion-oriented care can be effectively implemented on nursing home wards. The intervention has resulted in the caregivers in the experimental group more frequently using emotion-oriented care skills than the caregivers in the control group. This effect was reached despite the fact that at the start of the project we knew little

about how to implement this care innovation effectively. A study of the literature on implementation of combinations of emotion-oriented approaches did not provide many clues on how to carry out a successful implementation. Our study shows, that only basic training is less effective than advanced training.

The implementation was hindered because it was embedded in a RCT into the effects of the innovation, that is, the degree to which the wellbeing of residents with dementia increased. This had several consequences: To test the inter-rater reliability of the data collection on the wellbeing of residents with dementia in the RCT a number of professional caregivers changed places with independent professional caregivers from another ward for several weeks. Naturally, for the implementation of IEOC these circumstances put pressure on the stability within the teams. The duration of the study, eight months between baseline and final measurement, necessary because of the vulnerability of the patient population in combination with the aim for sufficient statistical power, was actually too short from the perspective of implementation effectiveness (cf. Pearson, 2005). In the combination of the RCT and implementation study as described here, there was an added difficulty for the caregivers: learning to work according to the model care plan. This general intervention, more than anticipated, resulted in change processes even during the preparation phase. These change processes required more of an effort from the professional carers in the experimental group during the preparation period than from the professional carers in the control group (Persoon et al., 1998). With regard to the implementation of IEOC this meant that the carers on the experimental wards, not yet recovered from one innovation, had to prepare themselves for the next step: working according to the knowledge and skills of emotion-oriented care. Taking these research hindrances into account, one may conclude that the implementation of emotion-oriented care probably will be even more effective in a natural setting when these hindrances are absent.

The study as presented here shows that it is possible to investigate the effectiveness of the implementation of a care innovation in groups of nursing home wards. This is an important finding, because the pursuit of 'evidence-based practice' requires randomized controlled research in relatively large research populations of residents or clients. Knowledge of implementation effectiveness obviously is a precondition for being able to make statements about the effectiveness of the innovation. Therefore, besides innovation effectiveness the question whether the implementation has led to an actual change in behaviour and expertise must be a subject of scientific research. If not, no conclusions can be drawn with respect to the effectiveness of the intervention. We therefore recommend continuation of the development of research methods to advance and establish implementation effectiveness, also in the case of interactive emotion-oriented innovations in the care for people with dementia. If we seriously want to empower nurses and caregivers, we must do this in the most effective way.

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## Conflict of Interest

None declared.

## References

- Algase, D. L. (1999). Wandering in dementia. *Annual Review of Nursing Research*, 17, 185–217.
- Bates, J., Boote, J., & Beverley, C. (2004). Psychosocial interventions for people with a milder dementia illness: a systematic review. *Journal of Advanced Nursing*, 45, 644–658.
- Cohen, J. (1977). *Statistical power analysis for the behavioral sciences*. Academic Press, New York/London.
- Cohen-Mansfield, J. (2001). Nonpharmacologic interventions for inappropriate behaviours in dementia: a review, summary and critique. *International Psychogeriatrics*, 12, 373–380.
- Cooney, L. M., & Fries, B. E. (1985). Resource utilization groups. A patient classification system for long term care. *Medical Care*, 23, 110–122.
- De Lange, J. (2004). *Omgaan met dementie. Het effect van geïntegreerde belevingsgerichte zorg op adaptatie en coping van mensen met dementie in verpleeghuizen; een kwalitatief onderzoek binnen een gerandomiseerd experiment*. Proefschrift. Utrecht, The Netherlands: Trimbos-instituut.
- De Lange, J., Pronk, M., & Smaling, A. (1999). *Participerende observaties in verpleegkundig onderzoek*. Verpleegkunde, Nederlands-Vlaams wetenschappelijk tijdschrift voor Verpleegkundigen 4, 326-336.
- De Lange, J., van der Kooij, C. H., & Dröes, R. M. (2000). Belevingsgericht werken met ouderen. De klok rond. In M. T. Vink, & A. E. M. Hoosemans (Eds.), *Gevoelens zijn tijdloos; belevingsgerichte interventies bij ouderen*. Houten, The Netherlands: Bohn, Stafleu, van Loghum.
- Dröes, R. M., Finnema, E. J., de Lange, J., van der Kooij C. H., Smit, F., Ettema, T.P., et al. (2002). *Geïntegreerde belevingsgerichte zorg versus gangbare zorg voor dementerende ouderen in het verpleeghuis*. Eindrapport. Afdeling Psychiatrie, Faculteit der Geneeskunde, Vrije Universiteit, Amsterdam, October 2002.
- Engbers-Kamps, H. J. M., & van Sprundel, C. (1993). *Model-zorgplan verpleeghuiszorg*. Utrecht: Nederlandse Vereniging voor Verpleeghuiszorg.
- Finnema, E. J., Dröes, R. M., Ettema, T. P., Ooms, M., Ader, H., Ribbe, M. W., et al. (2005). The effect of integrated emotion-oriented care versus usual care on elderly persons with dementia in the nursing home and on professional carers; a randomized clinical trial. *International Journal of Geriatric Psychiatry*, 20, 330–343.
- Finnema, E. J., Dröes, R. M., van der Kooij, C. H., de Lange, J., Rigter, H., Montfort, A. P. W. P., et al. (1998). The design of a large-scale experimental design into the effect of emotion-oriented care on demented elderly and professional carers in nursing homes. *Archives of Gerontology and Geriatrics*, 36-37(Suppl 6), 193–200.
- Finnema, E. J., Dröes, R. M., Ribbe, M. W., & van Tilburg, W. (2000). The effects of emotion-oriented approaches in the care for persons suffering from dementia: A review of the literature. *International Journal of Geriatric Psychiatry*, 15, 141–161.
- Frijters, D. H. M., & van der Kooij, C. H. (1992). *Secundaire analyses van onderzoek naar zorgzwaarte in verpleeghuizen*. Unpublished. Utrecht: Nzi/SIG by order of Nederlandse Vereniging voor Verpleeghuiszorg (NVVZ).
- Greenwood, C. R., Terry, B., Arreaga-Mayer, C., & Finney, R. (1992). The classwide peer tutoring program: implementation factors moderating students' achievement. *Journal of Applied Behavioral Analysis*, 25, 101–116.

- Halek, M., & Bartholomeyczik, S. (2006). *Verstehen und Handeln. Forschungsergebnisse zur Pflege von menschen mit Demenz und herausforderndem Verhalten*. Hannover, Germany: Schlüters Verlagsgesellschaft.
- Hrosickoski, M. C., Solberg, L. I., Sperl-Hillen, J. M., Harper, P. G., McGrail, M. P., & Crabtree, B. F. (2006). Challenges of change: A Qualitative study of chronic care model implementation. *Annals of Family Medicine*, 4, 317–326.
- Klein, K. J., & Sorra, J. S. (1996). The challenge of innovation implementation. *Academy of Managing Review*, 21, 1055–1080.
- Kossmann, S., Casper, G. R., Severtson, D. J., Grenier, A., Or, C., Carayon, P., et al. (2006). Designing study nurses' training to enhance research integrity: A macroergonomic approach. In: *Proceedings of the American Medical Informatics Association Annual Symposium*, pp. 439–443.
- Pearson, M. L. (2005). Assessing the implementation of the chronic care model in quality improvement collaboratives. *Health Services Research*, 40, 978–996.
- Pels, M., & Keunen, S. (1997). *Representativiteit van verpleeghuizen en hun bewoners in het kader van het onderzoek "Verbetering van Kwaliteit van Zorg en Validation"*. Onderzoekstageverslag. Amsterdam, The Netherlands: Vrije Universiteit, Faculteit der Bewegingswetenschappen, Vakgroep Bewegingsagogiek.
- Persoon, A., van der Kooij, C. H., & Dröes, R. M. (1998). *Implementatie van het werken volgens de uitgangspunten van het Model-zorgplan*. Verslag van een invoeringstraject. Nijmegen, The Netherlands: Bureau Persoon; Apeldoorn, The Netherlands: IMOZ; Amsterdam, The Netherlands: Vrije Universiteit, faculteit Geneeskunde, vakgroep psychiatrie.
- Schneider, D. P., Fries, B. E., Foley, W. J., Desmond, M., & Gormley, W. J. (1988). Case mix for nursing home payment; resource utilization groups, version II. *Health Care Financing Review*, 9, Annual Supplement, 39-50.
- Siders, C. (2004). Evidence for implementing nonpharmacological interventions for wandering. *Rehabilitation Nursing*, 29, 195–206.
- Sprangers, M., & Hoogstraten, J. (1986). Gespreksvaardigheidstraining en de retrospectieve voormeting. In J van Grumbkow, D van Kreveld, & P. Stringer (Eds.), *Toegepaste sociale psychologie* (Vol 2, pp. 50–60). Lisse, The Netherlands: Swets & Zeitlinger BV.
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research; Grounded theory procedures and techniques*. London: Sage.
- van de Vliert, E., Huismans, S. E., Krijger, N. L., & van der Leeuw, R. (1986). Evaluatieonderzoek naar veranderingen in denkkader. In J. van Grumbkow, D van Kreveld, & P. Stringer (Eds.), *Toegepaste sociale psychologie* (Vol 2, pp. 49–59). Lisse, The Netherlands: Swets & Zeitlinger BV.
- van der Kooij, C. H. (2003). *Gewoon Lief Zijn? Het maieutisch zorgconcept en het invoeren van geïntegreerde belevingsgerichte zorg op psychogeriatrische verpleeghuisafdelingen*. Proefschrift. Utrecht, The Netherlands: Lemma.
- van der Kooij, C. H., Bos, C. L., Breugelmans, L. J. G., Frijters, D. H., & van der Speld, G. D. J. (1991). *Zorgzwaarte verpleeghuizen*. Report. Utrecht, The Netherlands: Nationaal Ziekenhuisinstituut.
- van Linge, R. (1998). *Innoveren in de gezondheidszorg. Theorie, praktijk en onderzoek*. Maarssen, The Netherlands: Elsevier/De Tijdstroom.

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