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THE EFFECTS OF EMOTION-ORIENTED APPROACHES IN THE CARE FOR PERSONS SUFFERING FROM DEMENTIA: A REVIEW OF THE LITERATURE

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SUMMARY

Objective. This article presents an overview of the results of intervention studies in various emotion-oriented approaches in the care for people suffering from dementia. Recommendations are made with regard to clinical practice and future research.

Data sources. We searched for references (1990–99) in several bibliographical databases, i.e. Medline, PsycLit, Embase, Sociofile and Current Contents. The terms 'dementia' and 'Alzheimer's disease' were linked separately to the search terms: emotion-oriented, validation (therapy), sensory integration/sensory stimulation/snoezelen, simulated presence therapy and reminiscence (therapy)/life-review. Based on references in the articles found, other publications were traced.

Study selection. We started from the 'emotion-oriented' approaches used in 24-hour care distinguished by the American Psychiatric Association (1997) i.e. validation, sensory stimulation/integration, simulated presence therapy and reminiscence. We selected research articles that describe intervention, design, measuring instruments and results.

Data extraction. The articles were analyzed with regard to research group, setting, design, effect variables, intervention, measuring instruments, statistical analyses and results.

Data synthesis. It is shown that mainly positive results (including increased social interaction and decrease of behavior problems) are achieved with these emotion-oriented approaches. Unfortunately many studies have methodological limitations and are done independently, which makes comparison difficult.

Conclusions. Despite the limited cogency of the studies we traced, the results are promising. Emotion-oriented care approaches offer the opportunity to tailor the care to the individual needs of dementing elderly and can be complemented with other psychosocial approaches (e.g. psychomotor therapy and music therapy) when necessary. The challenge for the care sector is to develop guidelines to determine which approach should be applied to whom and when. Scientific research can contribute by examining which emotion-oriented approaches, possibly in combination with each other or with psychosocial therapies, effect an increase in the well-being and improve functioning in which patients.

KEY WORDS—psychogeriatrics; emotion-oriented care

INTRODUCTION

Over the past decades various types of psychosocial treatment have been developed in the field of care for people with Alzheimer's disease (Woods, 1996). These treatments aim to reduce the psychosocial problems of people with dementia. Assessment of the effectiveness of the treatments is based partly on

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the degree in which they result in an improved well-being and a reduction of behavior problems. In the past years dementia-related behavior problems have been linked frequently with the way in which people with dementia cope with the consequences of their illness and experience them subjectively. More attention is given to the experiences and perceptions of the dementing person (Haupt and Kurz, 1990; Miesen, 1993; Cohen, 1991; Dröes, 1991, 1997a,b; Kiyak and Borson, 1992; Cotrell and Schulz, 1993; Cotrell and Lein, 1993; Bonder, 1994; Bahro *et al.*, 1995; Kolanowski and Whall, 1996; Kitwood, 1996, 1997; Moore, 1997). This has resulted in the development of so-called '*emotion-oriented*' approaches. The term 'emotion-oriented care' (in Dutch: belevingsgerichte zorg) was introduced in The Netherlands and Belgium by Verdult (1993). He based the concept on the principles of humanist psychology and was guided by the aim to make the care fit the feelings and emotional needs of people with dementia. Recently Dröes (1998) defined emotion-oriented care as care aimed at improving emotional and social functioning, and ultimately the quality of life, of persons suffering from dementia by supporting them in the process of coping with the cognitive, emotional and social consequences of the disease and by linking up with individual functional possibilities and the subjective experience of the person in question. Examples of emotion-oriented approaches are: validation, reminiscence and sensory integration. Apart from the 'emotion-oriented' approaches, the American Psychiatric Association (APA, 1997) also distinguishes 'behavior-oriented', 'cognition-oriented' and 'stimulation-oriented' approaches (see Table 1).

In The Netherlands the term 'emotion-oriented' approaches is often understood in a broader sense than the APA (1997) definition, since other psychosocial interventions, such as music therapy and movement therapy can also be offered in an emotion-oriented way here. Many applied emotion-oriented approaches are not yet based on a solid theoretical framework and studies of the effectiveness of these approaches have also been limited (Dröes, 1991, 1997a; Kruyver and Kerkstra, 1996; Midence and Cunliffe, 1996; Day, 1997). That is why the APA (1997) advocates more scientific research into the effect of emotion-oriented approaches in persons suffering from dementia.

This article aims to present an overview of the research into the effect of a number of emotion-oriented approaches in the care for people with dementia carried out so far. The examined emotion-oriented approaches are: validation, sensory stimulation/integration, simulated presence therapy and reminiscence. Types of care that, as far as we could determine, have not been subject to intervention studies, were excluded from the review. These include, for example, the so-called 'warm care' approach (Houweling, 1987) applied in The Netherlands, which is based on the principles of attachment theory (Bowlby, 1969, 1973, 1980; Miesen, 1992, 1993), and the 'gentle care' approach used in the United States and Canada (Jones and Wright, 1991). We selected those approaches that are viewed by the APA (1997) as emotion oriented, and that furthermore are applied in the *24-hour care* in an integrated way (and are therefore not offered separately as autonomous therapies at regular intervals). Based on the results, we present recommendations for clinical practice and for future research in this field. The effects achieved with emotion-oriented care approaches are compared with 'behavior-oriented', 'cognition-oriented' and 'stimulation-oriented' psychosocial therapies (APA, 1997) in the discussion.

RESEARCH METHOD

Search procedure

Our strategy consisted first of all of searching for references in various bibliographical data-

Table 1. Psychosocial treatments for persons with Alzheimer's disease (APA, 1997)

Emotion-oriented approaches	Behavior-oriented approaches	Cognition-oriented approaches	Stimulation-oriented approaches
Supportive psychotherapy Validation therapy Sensory integration Simulated presence therapy Reminiscence	Behavior therapy	Reality orientation Skills training	Activity therapy Recreation therapy (crafts, games, pets) Art therapy (music, dance, art)

bases, i.e. Medline, PsycLit, Embase, Sociofile and Current Contents. The terms 'dementia' and 'Alzheimer's disease' were coupled separately with the following search terms: emotion-oriented, validation (therapy), sensory integration/sensory stimulation/snoezelen/multi-sensory environment/multi-sensory enhancement, simulated presence therapy and reminiscence (therapy)/life-review. The snowball effect furthermore enabled us to retrieve other publications based on the references in the publications we found initially. Publications which could not be obtained via the Dutch library services, were obtained from the authors of these articles. The search procedure did not reveal information about unpublished intervention studies.

Selection criteria for examined literature

For this review, we selected articles that report on *intervention studies* regarding emotion-oriented care approaches from 1990 to 1999, and other reviews. Furthermore, the articles had to be in English, French, German or Dutch. As stated before, we started from the emotion-oriented approaches distinguished by the APA (1997) (see Table 1) which can be integrated in daily care (24-hour institutional care as well as day care and the care offered in people's own homes). As this latter criterion does not apply to supportive psychotherapy, this emotion-oriented therapy was excluded from the review. To place the results for this rather limited period in a broader context, we also investigated what effects were achieved with the emotion-oriented approaches before the period in question. To this end we used the study carried out by Dröes (1991, 1997b) on this subject for the period 1970–90.

Apart from making a selection from the diversity of psychosocial treatments, we also selected on diagnosis. Only the articles, whose research group consisted of people with dementia, or more specifically Alzheimer's disease, were included. Finally, the last criterion was how the research was reported: at the very least the article had to describe the intervention, design, measuring instruments and results. Because the number of controlled studies was limited, we used a broad definition of the term intervention study: in addition to controlled studies, we also selected quasi-experimental and qualitative studies. Studies were labeled qualitative when they focused primarily on the nature of the effects more than on the size of the effects and when the data were collected and analyzed without the use of standardized measurement tools (e.g. the analyses of written records, sound or video recordings). In some of the studies different emotion-oriented approaches have been compared with each other. These studies will be reviewed each time they bear relevance to the subject at hand.

Analyses

The articles were analyzed with regard to size and composition of the research population, setting, design, effect variables, content of the intervention, measuring instruments, statistical analyses and results (see Tables 2–5). Content and background of the selected emotion-oriented care approaches are described briefly. More detailed descriptions can be found elsewhere.

RESULTS

Validation

Validation is a way of communicating, developed as an approach for persons suffering from dementia, in which recognition and validation of emotions from an empathic attitude is central. The basis of validation is the assumption that all behaviors have a meaning. Validation was developed by Naomi Feil (1967, 1984, 1989, 1992) who distinguishes three aspects: (1) a means of categorizing behaviors of confused elderly in four separate progressive stages; (2) a method for verbal and non-verbal communication; and (3) a theory on disorientation in elderly people who have led a relatively normal life until the age of 70 or 80 (Feil, 1992). Typical of the validation method is that the carer has to focus on the emotional content of what is being said, attempting to recognize and confirm emotions, restore the person's self-esteem and understand the person in the context of the reality they perceive themselves to be in at that moment. As the dementia progresses, verbal communication becomes more difficult and needs to be replaced by non-verbal validation techniques such as 'mirroring' and touch (Achterberg *et al.*, 1997).

Validation is applied extensively in the United States. In Canada, Norway, Australia and The Netherlands, elements from this approach are also applied increasingly (Feil, 1992). According to Feil, validation results in a reduction in negative affect (crying, punching, hitting) and an increase in positive affect (laughing, talking, helping others).

The effect of validation specifically in elderly people with Alzheimer's disease was not investigated until 1990 (Dröes, 1991). However, the intervention studies that examined a broader group of dementing elderly persons show that participation in a validation group may result in an improvement in ADL-functions and an increase in verbal and non-verbal expression during group meetings (Fritz, 1986; Peoples, 1982; Babins *et al*., 1988). No effect was found on the degree of confusion (Peoples, 1982), cognitive functioning, ethics and social functioning (Robb *et al*., 1986). Negative effects were increased attention-demanding behavior (Robb *et al*., 1986) and irritation (Babins *et al*., 1988).

For the period following 1990, we have traced five completed studies and one study in progress. In England, Morton and Bleathman (1991) compared the effect of validation groups with the effect of reminiscence groups in moderately demented residents of a residential home. In two of the three persons, who participated during the entire research period, verbal interaction increased during the validation groups and decreased during the reminiscence groups. The opposite happened in the other participant. Analysis of sound recordings showed that the participants interacted more during meetings of the validation group, and expressed their feelings in an unexpected way, considering the severity of the cognitive impairments (Bleathman and Morton, 1992). However, the small sample size of the study and the lack of a control group limit the possibility to generalize the results of the study.

Comparison of the effect of reality orientation and validation on the cognition, functional status and degree of depression of confused residents from a Veteran's Administration Medical Center's nursing home care unit in the United States by Scanland and Emershaw (1993) showed no difference in any of the variables. However, they state that the group processes were disrupted by physical illnesses and behavior problems (agitation, depression) of patients. Furthermore, their study was limited by: 'the specific time frame the therapy was structured in by one person, as opposed to an ongoing 24-hour therapy by all staff, the lack of controlling for diagnoses and dementia subtypes because of sample size, the lack of controlling for medications and the lack of a randomized sample'.

On the other hand, in her study of the effect of validation on cognition, mood and social contact of dementing residents of Dutch residential homes ($n = 19$), Nooren-Staal *et al*. (1995) found a slight improvement, especially in cognitive behavior. In addition, the nursing assistants became more aware of the influence of their own behavior on the behavior of the residents. However, the researchers indicated that contamination, social desirability and enthusiasm of the staff might have affected the results.

Toseland *et al*. (1997) also found some positive results in their study of the effect of validation groups in dementing nursing home residents in the United States. They examined the short-term and long-term effects of validation on behavior problems, physical restraints, psychopharmacological drugs, social interaction and psychosocial well-being. At the start of the study, after 3 months and after 1 year, participants in the validation group were compared with a 'social contact group' and a control group that received usual care. After a period of 1 year, the validation group participants were physically less aggressive and less depressed than the social contact group participants and the group that received usual care. Verbally aggressive behavior was reduced significantly in both the validation group participants and the social group participants. However, the validation group showed no effect on the use of physical restraints or psychopharmacological drugs. Furthermore, physical non-aggressive problematic behavior such as repetitive movements, aimless walking back-and-forth and hiding objects, decreased less than in the social group and the control group. However, as the authors state, the positive changes in the behavior of the participants of the validation group were only reported by the nursing staff and were not confirmed by the non-participant observers or by the Minimum Data Set (MDS) and the patients' medical records.

The only study conducted outside a group therapy setting to date is the study by Fine and Rouse-Bane (1995) in the United States. They followed the recommendations of Babins *et al*. (1988) and examined, in a quasi-experimental study without a control group, the effect of the application of specific validation techniques in each stage of disorientation of the resident. The staff were trained to recognize four stages of disorientation as distinguished by Feil, and the related communication techniques. After 5 months, an increase in the correct application of communication techniques in the different stages of disorientation of the residents was observed. If the appropriate communication techniques were

applied, behavior problems decreased by 73%. In addition, the prescribed dose of psychopharmacological drugs was reduced in 25% of the residents. One major drawback of this study is that no independent observation of interactions between residents and staff took place.

Currently, Finnema *et al.* (1998) are conducting a randomized clinical trial into the effect of integrated emotion-oriented care versus usual care for demented elderly ($n = 146$) and nursing assistants ($n = 99$) in 16 Dutch nursing homes. Integrated emotion-oriented care as applied in this study is based mainly on the validation approach, but also utilizes insights from other treatment approaches in psychogeriatrics, such as reminiscence and snoezelen. Outcome measures for the demented elderly are behavior and mood as related to the residents' adaptation to their illness and institutionalization. The outcome measure for the nursing assistants is general health, which is operationalized in the following variables: stress-experience, stress-reactions, feelings of competence and illness. The study consists of a quantitative part, a qualitative part and cost-effectiveness analyses. Results will be available by the end of 1999.

The results of the different studies into the effect of validation are promising. Unfortunately, most of the studies have methodological limitations, for example, the lack of objective observers, the lack of a control group and small sample sizes. This implies that the cogency of the studies is limited (Schrijnemaekers *et al.*, 1995). Furthermore, the results of the studies are difficult to compare. The studies not only differ in the way in which validation was applied (e.g. integrated in 24-hour care or weekly meetings), but also in the research method, the population under study, the effect variables and measuring instruments.

Snoezelen/sensory integration

Snoezelen is an individually oriented activity during which various sensory perceptions and experiences of the demented elderly are stimulated. This generally takes place in a special room, using light, sound, smells and tangible materials (Baker *et al.*, 1997). In daily care, aspects of snoezelen are used in the living room, at the bedside and in the bathroom (Achterberg *et al.*, 1997). The aim is to create an atmosphere of trust and relaxation. It is also a means of making contact and an attempt to increase and maintain the well-being of the demented elderly. An empathic attitude of the carers during snoezelen is essential: the carers have to be focused on sharing and entering into the experiences of the demented person (Achterberg *et al.*, 1997). There is no appeal to intellectual abilities. This is supposed to make snoezelen an appropriate tool to communicate with very severely demented persons (Holtkamp *et al.*, 1997). Snoezelen and comparable approaches such as sensory activation, multi-sensory environments, multi-sensory enhancement, sensory stimulation and sensory integration, are increasingly applied in the care for people with severe to very severe dementia. However, so far little research has been done to study the effect of these approaches (Holtkamp *et al.*, 1997; Spaull and Leach, 1998). In the period up to 1990, Norberg *et al.* (1986) studied the effect of sensomotor stimulation (music, touching and objects) on two severely demented bedridden SDAT-patients in Sweden. This study showed that massage and utensils stimulated watching, while the heart rate increased significantly when melodies (different melodies for each patient) were played. In one of the patients breathing slowed down when listening to some melodies.

For the period after 1990, we traced five studies into the effect of snoezelen on persons with dementia and two studies in which sensory stimulation was part of the intervention.

In England Moffat *et al.* (1993) examined the effects of snoezelen in dementing elderly persons in the nursing home ($n = 6$) and in a day hospital ($n = 6$). During the snoezel sessions the people were happier and expressed interest. At the same time feelings of anxiety and sorrow decreased. The patients appeared to enjoy the snoezel sessions. However, these effects disappeared within 10 minutes after the session was concluded. Returning to the ward could even generate agitation in the patient (Benson, 1994). The nursing assistants felt that their relationship with the patients improved during the snoezelen project. However, because of the study's small sample size, the lack of a control group and of objective non-participant observers the possibility to generalize the results is limited. Following Moffat *et al.* (1993), Baker *et al.* (1997) examined the effect of snoezelen on behavior, mood and cognition of British patients with dementia attending a day hospital ($n = 31$). In a randomized experimental study, the effects of snoezel sessions were compared to

Table 2. Intervention studies validation

Author	Setting and sample	Design	Effect variables	Intervention	Measuring instruments	Result
Morton and Bleathman (1991)	England Moderately demented residents of a residential home ($n = 5$)	Single case studies	1. Communication 2. Mood 3. Behavior	10 weeks baseline; 20 weeks 1 × per week validation; 10 weeks 1 × per week reminiscence	1. Holden Communication Scale 2. MACC Behavioral Adjustment Scale 3. CAPE Behavioral Rating Scale	No differences in measuring instruments Observation: validation ↑ interaction, reminiscence ↓ interaction
Bleathman and Morton (1992)	As above	As above	Communication, quantity and quality	As above	Qualitative analysis sound recordings	During validation ↑ interaction and ↑ depth in interaction
Nooren-Staall *et al.* (1995)	The Netherlands Residents of residential home with dementia manifestations ($n = 19$) and their nursing assistants ($n = 15$)	*Resident* Time-series design *Nursing assistant* Non-equivalent control group design Baseline, effect measurement after training course and after 4 months	*Resident* Cognition, mood social contact *Nursing assistant* Attitude and behavior towards residents	Basic validation training course four meetings, then application in practice	*Resident* BPS *Nursing assistant* Questionnaire Verpoort	*Resident* Slight ↑ cognitive behavior *Nursing assistant* ↑ Awareness influence own behavior on resident
Scanland and Emershaw (1993)	United States Confused residents (MMSE < 25) > 60 years from Veteran's Administration Medical Center's nursing home care unit ($n = 34$)	Non-equivalent control group design Pre-test/post-test measurement	1. Mental status 2. Functional status 3. Level of depression	RO and validation group 4 months 5 × per week 30-min. therapy, control group no sessions	1. MMSE 2. Katz Index of ADL Evaluation Form 3. Modified Beck Depression Inventory	No difference in pre-test and post-test measurement RO—validation and control group
Toseland *et al.* (1997)	United States Mildly to severely demented nursing home residents with behavior problems (aggression, motor restlessness) ($n = 88$)	Single blind study design Baseline and effect measurement after 3 months and 1 year	1. Psychosocial functioning 2. Agitation 3. Positive (non) verbal and non interactive behavior 4. Psychopharmacological drugs and physical restraints	Social and validation groups 52 weeks 4 × per week 30 min therapy Usual care: usual activities	1. MOSES and MDS + 2. CMAI 3. GIPB	Validation group less aggressive and depressed No difference in use of drugs and physical restraints Validation less effective in reducing physical non-aggressive problem behavior

Fine and Rouse-Bane (1995)	United States Residents dementia unit Pre-training ($n = 13$) Post-training ($n = 22$)	Quasi-experimental time series design	Behavior problems Psychopharmacological drugs	Validation intervention in behavior problem Link validation technique to disorientation stage residents	Evaluation effectiveness application validation (effective = absence or ↓ behavior problem) Measuring instrument not mentioned	*Nursing assistant* ↑ Link validation technique to disorientation stage *Patient* ↓ Behavior problems when validation and disorientation stage are linked up ↓ dose psychopharmacological drugs
Finnema *et al.* (1998)	The Netherlands Demented residents (>64 years) of psychogeriatric nursing homes ($n = 146$) and their nursing assistants ($n = 99$)	Randomized clinical trial	*Resident* Behavior and mood problems, positive behavior and affect related to the adaptation to illness and institutionalization *Nursing assistant* General mental and physical health *Both groups* Cost-effectiveness analyses	7-month intervention period. The experimental group is offered usual care + integrated emotion-oriented care, based mainly on validation. In the meantime, the control group is offered usual care without the emotion-oriented approach	*Resident* GRGS GIP Cornell Scale for depression in dementia CMAI PGCMS BOP *Nursing assistant* GHQ-28 Dutch work satisfaction scale Dutch organization and stress scale Participant observation	Results will be available by the end of 1999

Holden Communication Scale (Holden and Woods, 1982), MACC Behavioral Adjustment Scale (Ellsworth, 1966), CAPE Behavioral Rating Scale (Pattie and Gilleard, 1979), CAPE 12-item Information/Orientation Scale (Pattie and Gilleard, 1979), BPS (Loveren-Huyben *et al.*, 1988), MMSE (Folstein *et al.*, 1975), Katz Index of ADL Evaluation Form (Kane and Kane, 1981), Modified Beck Depression Inventory (Beck *et al.*, 1961), MOSES (Pruchno *et al.*, 1988), CMAI (Cohen-Mansfield *et al.*, 1989), GIPB (Toseland *et al.*, 1997), MDS + (Morris *et al.*, 1990), GRGS (Cornbleth, 1978), GIP (Verstraten and van Eekelen, 1987), Cornell Scale for depression in dementia (Alexopoulos *et al.*, 1988), PGCMS (Lawton, 1975), BOP (van der Kam *et al.*, 1971), GHQ-28 (Goldberg and Hillier, 1979), Dutch work satisfaction scale (Boumans, 1990), Dutch organization and stress scale (Bergers *et al.*, 1986).

activity sessions. An improvement in behavior and mood were found in both the snoezel group and the activity group. However, the dementing elderly in the snoezel group also exhibited a reduction in non-social behavior at home. In the snoezel group verbal communication and memory recall also improved more during the sessions than in the activity group. However, at the start of the study the participants of the experimental group already had a higher level of cognitive functioning. This probably biased the results.

Holtkamp *et al.* (1997) (Kragt *et al.*, 1997) also found that snoezelen had positive effects. In a randomized crossover trial, they examined the effect on behavior problems in Dutch psychogeriatric nursing home residents in an advanced stage of dementia. During the snoezel sessions, the residents exhibited less apathetic, restless and pointless repetitive behavior and less impaired awareness. However, the authors indicate that the observers were not blind to the intervention. This possibly biased their judgements of the behavior of the residents (Holtkamp *et al.*, 1997).

A decrease in problematic behavior (unadjusted and provocative behavior) was also found by Spaull and Leach (1998). They studied the effect of individual snoezel sessions on male residents of a psychiatric ward with Alzheimer's disease ($n = 2$) and vascular dementia ($n = 2$) in England. Apart from a decrease in problematic behavior, there was also an increase in interaction, interest and active watching during the snoezel sessions. The reduction in provocative behavior and the effect on active watching were still present 10 minutes after the session. No significant differences were found before and after the sessions in the well-being of the residents.

Less positive results were found in the studies in which sensory stimulation was part of a group intervention consisting of various successive items. In Canada, Robichaud *et al.* (1994) found no significant changes in the behavior of persons with dementia ($n = 40$) who were admitted to three different institutions for long-term care. In a randomized clinical trial, they studied the effect of a sensory integration program, consisting of, among other things, reality orientation, sensory stimulation and cognitive stimulation. Changes in the frequency of disruptive behavior and execution of ADL-activities in the experimental group did not differ significantly from the control group that participated in the usual activities that were organized in the institution.

In the United States, Arno and Frank (1994) examined the effect of weekly group meetings, during which sensory stimulation was applied, and physical exercises accompanied by music and other structured activities were conducted such as: reminiscence, games and walking. During the meetings the participating dementing residents (all women) of a psychiatric ward ($n = 8$) appeared more content. Social interaction also increased. However, the changes were not consistent, changed each week and did not last. There were no changes in behavior of the participants when they returned to the ward.

The effects of snoezelen on mood and behavior of demented elderly are for the greater part positive. However, the methodological flaws of the studies (e.g. the lack of a homogeneous sample, small sample sizes and the lack of a control group) call into question the value of the results. Moreover, due to reasons comparable to the validation studies, the studies into the effect of snoezelen are also difficult to compare with each other.

Simulated presence therapy

Simulated presence therapy (SPT), first described by Woods and Ashley (1995) is based on the principle that the primary, most central source of stability for the patient with Alzheimer's disease is often a relative who took care of the patient before institutionalization. SPT aims to simulate the presence of this relative. This is done by making a personal cassette tape on which a telephone conversation is simulated; the relative talks to the patient and there are blank spaces for the patient's part in the conversation. Positive experiences from the patient's life, shared memories, friends and family are addressed. The purpose of SPT is to create an environment for the patient that reflects his best experiences. The assumption is that behavior problems can be reduced in this way. As far as we know only Woods and Ashley (1995) have studied the effect of SPT on behavior problems of dementing nursing home residents in the United States. Three types of behavior problems were distinguished: social isolation, agitation and (verbal or physical) aggression. Of the 27 patients participating, 22 reacted positively to listening to a cassette tape recorded by a relative. Only one resident reacted negatively to SPT (increase of agitation). The remaining four residents did not respond to SPT. SPT proved most effective with regard to social isolation (84%) and

Table 3. Intervention studies sensory stimulation/snoezelen

Author	Setting and sample	Design	Effect variables	Intervention	Measuring instruments	Result
Moffat *et al.* (1993)	England Female visitors day hospital ($n = 6$) with dementia and mild to severe cognitive impairments and male residents continuing care ward ($n = 6$) with senile dementia and moderate to severe cognitive impairments	Multiple baseline design across subjects	*Patient* 1. Behavior (co-operative, confusion, interaction, interest, energy, joy) 2. Active vs withdrawn or disturbed behavior and mood disorders *Family caregivers* 1. Mood 2. Stress	Baseline 3, 4 or 5 weeks followed by 4 weeks 3 hours snoezelen per week	1. Behavioral scale 2. Behavior and mood disturbance scale Record of comments about snoezelen *Family caregivers*: 1. Relatives mood scale 2. Relatives stress scale	*Patient* ↑ Happiness and interest ↓ Sadness, agitation and anxiety *Family caregivers*: ↑ Mood in follow-up period
Baker *et al.* (1997)	England SDAT and MID patients who attend day hospital, 2 × per week ($n = 31$)	Randomized controlled trial	1. Behavior 2. Mood 3. Cognition	4 weeks eight snoezel sessions or eight activity sessions	1. REHAB Interact 2. BMD-scale 3. BRS, MMSE, CAS	↑ Behavior and mood ↓ Non-social behavior at home During snoezelen ↑ Verbal communication and memory recall
Holtkamp *et al.* (1997)	The Netherlands Nursing home residents in high to very high need for assistance and care ($n = 16$)	Randomized crossover trial	Behavior problems	4 days run-in, 3 days snoezelen or stay in living room, 4 days wash-out, 3 days in living room or snoezelen	GIP based on video records	In snoezel room: ↓ Apathy, restlessness, pointless repetitive behavior and impaired awareness
Spaull and Leach (1998)	England Male residents psychiatric continuing care ward ($n = 4$) with severe cognitive and functional disabilities ($n = 4$), restless behavior ($n = 3$) and communication problems ($n = 3$) Diagnosis: AD ($n = 2$) and MID ($n = 2$)	Multiple single case design Measurement before, during and 10 min after session	1. Behavior 2. Adaptive functioning 3. Well-being	4 weeks 3 × snoezelen per week	1. MBR-Scale based on video-recordings 2. Short form Adaptive Behavior Scale 3. Dementia care mapping	During session ↑ interaction, interest and active looking, ↓ Unadjusted and provocative behavior 10 min after session effect on active looking and ↓ provocative behavior No difference in well-being

Table 3. continues on next page

Table 3. Continued

Author	Setting and sample	Design	Effect variables	Intervention	Measuring instruments	Result
Robichaud *et al.* (1994)	Canada Dementing residents long-term care hospital, psychogeriatric and somatic/psychogeriatric nursing home >59 years with one or more types of disruptive behavior ($n = 40$)	Randomized controlled trial	1. Social behavior 2. ADL-activities	10 weeks sensory integration vs usual leisure activities 3 × per week (30–45 min per session)	1. RMBPC 2. PSBADL	No significant effect on behavior
Arno and Frank (1994)	United States Dementing residents ($n = 8$) of a psychiatric hospital with varying degrees of need for care/assistance	Qualitative research	Identity Functional possibilities Social skills	9 weeks 1½ hours per week combined sensory integration program	Evaluation schedule	During sessions inconsistent ↑ satisfaction, social interaction and group cohesion ↓ Anxiety After session no effect on ward

Behavior scale (Bender and Morris, 1991), Behavior and mood disturbance scale (Greene *et al.*, 1982), Relatives mood and stress scale (Greene *et al.*, 1983), REHAB (Baker and Hall, 1983), BMD-scale (Greene *et al.*, 1982), BRS (Pattie and Gilleard, 1979), MMSE (Folstein *et al.*, 1975), CAS (Pattie and Gilleard, 1979), GIP (Verstraten and Van Eekelen, 1987) RMBPC (Teri *et al.*, 1992), PSBADL (Laberge and Gauthier, 1990), Modified Behavior Rating Scale (MBR-scale) (Spaull and Leach, 1998), Short form Adaptive Behavior Scale (Nihira *et al.*, 1974), Dementia Care Mapping (Kitwood and Bredin, 1994).

agitation (78%). Aggressive behavior occurred in only two residents: SPT resulted in an improvement of the behavior in one resident, and no change in the other. The results of the subsequently performed pilot study were also positive. The behavior of the residents improved significantly during SPT. It is unknown how long the effects lasted and to what extent the results were influenced by the fact that the nurses who performed the observations were not objective evaluators.

Also in the United States, Lund *et al.* (1995) developed *video-respite* for dementing persons and their caregivers. Video-respite utilizes videotapes made specifically for the dementing persons. Initially these tapes were made by relatives for individual dementing persons living at home to relieve the central caregivers. The idea is that the central caregivers have some time to themselves during the period that the dementing person watches the tape (video-respite). As making a personal tape for each dementing person proved very time-consuming and relatives were not always able or willing to co-operate in making the tape, general videotapes were made for dementing persons. These tapes are recorded by an actor/actress who speaks to the dementing person in a calm and friendly tone, tells short stories, recites poetry, makes jokes, sing songs and asks inviting questions about specific subjects like: favorite activities, music and Christmas. The dementing person is encouraged to join in the singing, and make simple body movements. To make the videotapes pleasant, stimulating and inviting, the producers use, among other things, animals, small children, musical instruments, utensils, pictures and other known objects. To ensure that the tapes link up with the different backgrounds of the dementing persons there are separate tapes for men, women, people from Afro-American, Jewish and Hispanic backgrounds (Lund *et al.*, 1995).

As yet, there has been no comparative research into the difference in effectiveness between the individual and the general videotapes for dementing patients. Research into the effect of the general 'favorite things' video in the home situation showed that the majority of the participating persons ($n = 31$) clearly showed that they enjoyed watching the videotape by means of verbal reactions, regular smiling and nodding. Utilizing the videotape 'favorite things' and a 'music videotape' in an intramural setting (10 special care units) with individual residents with behavior problems, resulted in a reduction of aggressive behavior, agitation, wandering, repeating questions and complaining behavior in the residents. At present, the effect of individual versus group application of the videotapes is being compared and the relationship between the level of dementia and the effectiveness of the videotapes is being examined.

Simulated presence therapy and video respite are relatively new and promising approaches in the care for persons with dementia. However, these approaches have not yet been sufficiently examined to allow firm conclusions.

Reminiscence

The purpose of reminiscence is to improve intrapersonal and interpersonal functioning by means of reliving, structuring, integrating and exchanging memories (Bremers and Engel, 1989, in Dröes, 1991, p. 118). Several aids can be used, including: photographs, songs, scrapbooks and old objects. Since Butler (1963) first described reminiscence and life-review, both interventions are applied in geriatrics in different ways (Rentz, 1995). Despite both terms being used interchangeably in the literature, there are differences (Haight and Burnside, 1993). Reminiscence, for example, can be applied in a group setting or individually. The main point can be the enjoyment people get from the act of reminiscing itself, but it can also improve self-esteem and the sense of identity by recalling memories in a non-conflicting and informal way (Dröes, 1991). Life-review therapy, on the other hand, is only applied individually to solve intrapsychic conflicts from the past so as to achieve ego-integrity, the central goal of the final stage of life as formulated by Erikson (1963). Woods (1996, p. 586) suggests that life-review therapy in this form, because of the cognitive skills required to cope with painful memories, is more suitable for elderly people without cognitive disabilities. Reminiscence would be the more suitable therapy for people with dementia.

Research regarding the effect of reminiscence in elderly people with dementia is still in the early stages (Dröes, 1991; Gagnon, 1996; Woods and McKiernan, 1995; Woods, 1996). The findings of studies conducted up to 1990 are mainly positive with regard to social interaction (Kiernat, 1979; Gardella, 1985; Orten *et al.*, 1989), interest (Kiernat, 1979) and cognitive functioning (Gardella, 1985; Baines *et al.*, 1987). Reminiscence does not result in positive behavior changes in all persons with dementia. Baines *et al.* (1987), for

Table 4. Intervention studies simulated presence therapy and video-respite

Author	Setting and sample	Design	Effect variables	Intervention	Measuring instrument	Result
Woods and Ashley (1995)	United States Moderately to moderately-severely cognitively impaired residents of four nursing homes with problem behavior ($n = 27$)	Qualitative research	Social isolation agitation aggression (verbal or physical)	SPT at time when residents exhibit problem behavior	Observation by nursing staff of improvement, no change or worsening of problem behavior	22 residents responded positively, 4 residents did not change and in 1 resident problem behavior increased during SPT
Woods and Ashley (1995)	United States Moderately cognitively impaired nursing home residents with DAT, problem behaviors and the capacity for verbal interaction ($n = 9$)	Pre-test–post-test quasi-experimental design 2 months observation period	Social isolation agitation aggression (verbal or physical)	Daily SPT (morning and late afternoon) at time when resident exhibits problem behavior	Target behavior form Disruptive Behavior Rating Scale (disruptive and affect scale)	Significant improvement behavior: ↓ problem behavior in 388 (91%) of the 425 problem behaviors
Lund *et al.* (1995)	United States Alzheimer's patients who live at home with moderate to severe cognitive disabilities ($n = 31$)	Pre-test–post-test quasi-experimental design 1 month observation period	Attention for videotape Enjoyment watching	Comparison attention for general videotape for dementing people with attention for existing tv program	Based on video recording observation direct eye contact, remain seated, (non) verbal reactions to questions from actor on videotape	84% remain seated during videotape for dementing persons vs 56% for existing tv program >50% dementing persons highest possible score on interest and participation in dementia-video vs 0% for existing tv program
Lund *et al.* (1995)	United States Demented residents of 10 special care units	Qualitative research	Reactions residents to video Use of videotapes by staff	1 month use of two videotapes (favorite things and making music) with individual residents at moments of problem behavior and in group	Observations by unit staff	↓ Wandering, complaining, asking repetitive questions, regression and agitation

example, only found changes in cognitive functioning and behavior in participants who had responded well to a month of reality orientation prior to the reminiscence; Berghorn and Schäfer (1987) concluded that positive effects occur predominantly in residents who have not adjusted their values and standards to those of the institution. For these residents reminiscence might serve as compensation, because by talking about the past attention is given to their values and standards. Goldwasser *et al*. (1987) found no changes either in behavior or in cognitive functioning.

The results of the post-1990 studies we traced also vary in nature. For example, based on the conflicting results of their comparative study on the effects of reminiscence and validation on British demented residents of a residential home, Morton and Bleathman (1991) suggest that the approaches have different effects in different people.

Research in England by Head *et al*. (1990) shows that the results of reminiscence are context specific. They compared the effects of reminiscence groups with other group activities in two different settings: a day center for dementing residents of a geriatric hospital ($n = 4$) and a specialized day care facility for people with cognitive disabilities who live at home ($n = 6$). In the day center of the geriatric hospital the participants of the reminiscence group contributed significantly more to the group than the other group. No difference between reminiscence and the alternative group activity was observed among the participants in the day care center for people living at home. However, this day care already offered a more stimulating environment as compared to the activity center of the large geriatric hospital. Furthermore, there was more 'competition' between reminiscence and the alternative group activity in the day care group, because the participants were actively involved in the alternative group activity more often than the participants of the geriatric hospital.

McKiernan and Yardley (Woods and McKiernan, 1995) suspected that reminiscence might also be a useful and stimulating activity for people with severe cognitive disabilities. They studied the effect of reminiscence on British dementing patients with severe disabilities and communication problems from different settings, ie a residential ward of a psychiatric hospital ($n = 6$), a residential ward of a community hospital ($n = 6$) and a community day hospital ($n = 6$). For all groups, the involvement of the patients in their environment was significantly higher during the reminiscence group sessions than when they were on the ward or on days that there was no reminiscence session. The study had no control group.

Gibson (1994) described the effect of reminiscence groups consisting of 6–10 persons in four residential homes and two day-centers in England. The 25 groups included some that consisted completely of people with dementia and people without any cognitive disabilities. In total the groups met for 159 90-minute sessions over a period of 10 months. In the mixed reminiscence groups, the dementing participants were cheerful. They exhibited almost none of the problem behavior they did express outside the group. Some participants experienced an improved appetite and less agitation and restlessness outside the reminiscence sessions. In the reminiscence groups consisting exclusively of dementing participants there was more communication between group leaders and participants than between the participants. The author indicates that it was not possible to determine whether these gains persisted over time. Gibson (1994) also found positive results in individual reminiscence therapy, i.e. a decrease in aggressive and demanding behavior and an increase in social behavior. She conducted this qualitative study among five nursing home residents with dementia and behavior problems. The individual reminiscence therapy used knowledge about the residents' life history, for example by making trips to places that were significant or well known to the resident, or by undertaking favorite activities. However, the qualitative research method and the individually tailored reminiscence applied in this study make it difficult to generalize the observed positive results.

Namazi and Hayes (1994) found a minimal positive effect ($p < 0.09$) on cognitive functioning in their study into the effect of sensory stimuli reminiscence on American female nursing home residents with dementia of the Alzheimer type ($n = 15$). The residents were divided into three groups: an experimental group attending 12 sessions of reminiscence with sensory stimuli, a control group attending 12 chatting sessions oriented toward present and future events and another control group not participating in any events. Besides the modest positive effect on cognitive functioning, a negative effect manifested in the reminiscence group was the increase (not significant) of aberrant behaviors. The generalizability of the results is limited because of the

sample size. Tabourne (1991, 1995) studied the effect of structured reminiscence in nursing home residents with SDAT and other cognitive impairments in the United States. Based on a pre–post-test experimental design the effect on the degree of disorientation, social interaction, life-review and self-esteem of the residents ($n = 32$) was assessed (Tabourne, 1995). In the experimental group, social interaction and orientation in time, person and environment increased significantly. The participants furthermore remained more strongly involved in activities during the reminiscence group than the participants in the control group. There was also a significant difference in feelings of self-esteem, accepting the past and present and expectations for the future. One limitation of the study is the problematic measurement of one of the variables i.e. self-esteem. As the author states: '(...) The instrument was not previously tested with this population and provided results inconsistent with the observations and data collected by the therapists and the nursing staff'.

The described studies into the effect of reminiscence on people with dementia mainly achieve positive results. Unfortunately, similar to the results of the other emotion-oriented approaches described, generalization of the results of the different reminiscence studies is difficult. This is partly due to the methodological limitations of the studies and partly due to the different (specific) ways in which reminiscence was applied and its effect on persons with dementia was studied.

CONCLUSIONS AND DISCUSSION

This article described the results of intervention studies with regard to emotion-oriented approaches in 24-hour care on persons suffering from dementia. We traced 23 studies, most of them with a quasi-experimental or qualitative design. Only four randomized clinical trials were found. This is probably due to the many practical and complex methodological problems one runs up against in experimental research in this field such as: the loss of subjects due to death or transfer to other wards, the lack of appropriate measurement instruments, comorbidity of the patients and the degenerative process of Alzheimer's disease. Most of the studies described were conducted in the United States and England. Just a few were set up in other countries, i.e. The Netherlands (3), Sweden (1 before 1990) and Canada (1). All approaches, with the exception of snoezelen, which was developed in The Netherlands, originate from the United States and England. Therefore, it is likely that in these countries they are used more commonly as psychosocial approaches in the care for persons with dementia than in other countries. Probably this explains the uneven distribution of studies into the effect of emotion-oriented approaches across countries.

The intervention studies conducted after 1990 show that validation, snoezelen and reminiscence have all been studied equally over the past years and that these approaches generally achieve positive results. *Simulated presence therapy* and *video-respite* also appear to be effective in the treatment of behavior problems in dementing persons. However, these approaches have not yet been sufficiently examined to allow firm conclusions. The effect of *validation* groups was studied in mildly to severely dementing residents of residential homes and nursing homes. Among other things validation resulted in improved ADL-functions and cognitive functioning, increased verbal and non-verbal expression and a decrease in aggressive and depressed behavior. Application of validation techniques in 24-hour care adapted specifically to the various stages of disorientation also resulted in a reduction in behavior problems.

Snoezelen also proves to lead to positive changes in behavior, both in persons with a mild dementia and in moderately to very severely demented persons. Findings included an increase in verbal and non-verbal interactions, interest and active watching, and mood and memory recall. In addition, impaired awareness and problematic behavior (non-social behavior, unadjusted and provocative behavior, apathetic, restless and pointless repetitive behavior) decreased. No changes were found in studies in which sensory stimulation was only a part of a composite group intervention with various activities (Robichaud *et al*., 1994; Arno and Frank, 1994).

In the studies we found *reminiscence* leads to comparable results: improved interest, interaction, social behavior, mood and cognitive functioning, as well as a decrease in behavior problems (including aggression, agitation, restlessness). Reminiscence furthermore showed an increase in feelings of self-esteem, acceptance of past, present and future expectations of persons with dementia. Even in persons with very severe cognitive disabilities reminiscence can lead to positive results (i.e. increased involvement of patients with their environment).

Table 5. Intervention studies reminiscence

Author	Setting and sample	Design	Effect variables	Intervention	Measuring instrument	Result
Head *et al.* (1990)	England (A) Day care for dementing persons living at home ($n = 6$) (B) Day center for demented residents of geriatric hospital ($n = 4$)	Quasi-experimental research	Number of verbal remarks and person to whom participant turns	6 weeks 1 × per week 1 hour reminiscence and 1 × per week 1 hour other group activities	Questionnaire National Consumer Study: involvement score and engagement score based on videorecordings	Group A no difference between reminiscence and alternative group activities Group B significant ↑ contribution participants during reminiscence compared to alternative group activities
Morton and Bleathman (1991)	England Dementing residents of institution ($n = 5$)	Single case studies	1. Communication 2. Mood 3. Behavior	10 weeks baseline, 20 weeks 1 × per week validation, 10 weeks 1 × per week reminiscence	1. Observation verbal communication Holden Communication Scale 2. MACC Behavioral Adjustment Scale 3. CAPE Behavioral Rating Scale	After validation observed ↑ interaction and ↓ during reminiscence no significant differences on measuring instruments
McKiernan and Yardley (1996) In, Woods and McKiernan (1995)	England Dementing persons with severe disabilities and communication problems from a residential ward in psychiatric hospitals ($n = 6$), a residential ward in a community hospital ($n = 6$) and a community day hospital ($n = 6$)	Qualitative research	Involvement	Involvement during reminiscence vs involvement on the ward on days of no reminiscence session	Observation measuring instruments unknown	Involvement in group process higher during reminiscence session than on ward
Gibson (1994)	England Four residential homes and two day centers: 25 groups of 6–10 persons, partly without cognitive disabilities, partly with dementia	Qualitative research 10-month observation period	Mood Problem behavior Communication Program attendance Interactions Emotional climate Content of the reminiscences	Mixed groups and groups of only demented persons weekly receiving reminiscence in 90-min sessions over a period of 10 months	Observation by project assistants making detailed written records and using sound recordings, semi-structured interviews with staff members	In mixed groups: participants with dementia cheerful, during session participants exhibited almost none of the problem behavior exhibited outside the group. Outside session: ↑ appetite and ↓ agitation and restlessness

Table 5 continues on next page

Table 5. Continued

Author	Setting and sample	Design	Effect variables	Intervention	Measuring Instrument	Result
Gibson (1994)	England Most troubled and troubling demented nursing home residents ($n = 5$)	Single case studies 10-month observation period	Behavior problems	Individual reminiscence therapy, making trips and favorite activities	Evaluation by analysis of written and verbal repots and periodic meetings of staff	↓ Aggressive and attention-seeking behavior ↑ Social behavior
Namazi and Hayes (1994)	United States Female nursing home residents with SDAT ($n = 15$) aged 75–87 years	Quasi-experimental pre–post test	1. Cognitive functioning 2. Blood pressure 3. Behavior before, during and after group sessions (agitation, sitting, standing, walking, reading, eating, drinking, smiling, singing, exercising)	Experimental group weekly receiving reminiscence with sensory stimuli vs a control group weekly attending a chatting session and a control group receiving no intervention over a period of 12 weeks	1. MMSE 2. Behavioral observations for a total of 90 min each day of the study period, using a 40-item behavioral checklist	↑ Cognitive functioning ↑ Aberrant behaviors
Tabourne (1995)	United States Residents of two nursing homes with SDAT or other cognitive and affective impairments ($n = 32$)	Quasi-experimental pre–post test	1. Self-esteem 2. Disorientation 3. Social interaction 4. Life review process	12 weeks 2 × per week structured life-review vs week 1 and week 12 life-review and week 2—11 activities without reminiscence	1. SEQ-3 2. Observational sheet 3. Checklist general behaviors 4. Sociograms	↓ Disorientation ↑ Social interaction and movement through life-review process No difference in self-esteem

Holden Communication Scale (Holden and Woods, 1982), MACC Behavioral Adjustment Scale (Ellsworth, 1966), CAPE Behavioral Rating Scale (Pattie and Gilleard, 1979), SEQ-3 (Hofmeister, 1988).

As yet little is known about how long the effects last. In general, the effects of validation and reminiscence are observed both during and outside the group sessions, which would indicate a continued effect in daily life. However, studies of the effect of snoezelen revealed that the behavior changes that occur during the group sessions are generally of a short duration (Arno and Frank, 1994; Benson, 1994; Spaull and Leach, 1998).

Unfortunately, based on pre-determined analysis criteria, ie size and composition of the research population, design, intervention, effect variables, measuring instruments, applied statistical analyses and description of the results, the studies we found generally prove to contain a range of methodological limitations. For example, we frequently found: lack of a control group (e.g. Morton and Bleathman, 1991; Moffat *et al*., 1993; Nooren-Staal *et al*., 1995); experimental and control groups cannot be compared on crucial aspects, such as degree of cognitive disability (e.g. Baker *et al*., 1997); lack of validated measuring instruments and objective evaluators (e.g. Nooren-Staal *et al*., 1995; Fine and Rouse-Bane, 1995; Woods and Ashley, 1995; Holtkamp *et al*., 1997) and research population insufficiently large (e.g. Head *et al*., 1990; Morton and Bleathman, 1991; Spaull and Leach, 1998). Also, the interventions, effect variables and/or employed measuring instruments vary per study, which makes it difficult to compare results. The studies are generally quite autonomous and new studies are initiated without taking into account the results of earlier research, not counting a few exceptions (Fine and Rouse-Bane, 1995; Baker *et al*., 1997; Tabourne, 1995). The majority of the studies were conducted among mixed patient groups with different types of dementia. The diagnosis of the participants is frequently unclear.

These methodological limitations make it difficult to summarize the evidence base for any of the emotion-oriented care approaches. In conclusion one might state that the studies we traced have limited cogency with regard to the effect of emotion-oriented care approaches on persons with dementia in general and Alzheimer's disease in particular. Nevertheless, the results described are promising, both in group and in individual application. Furthermore the nursing assistants express enthusiasm about the application of emotion-oriented care approaches in various studies (Nooren-Staal *et al*., 1995; Moffat *et al*., 1993; Gibson, 1994).

In our opinion, emotion-oriented care approaches in 24-hour care cannot always replace behavioral, cognitive and stimulation-oriented therapies such as behavior modification, reality orientation, activity groups, psychomotor group therapy and music therapy (see Dröes, 1997a). In the past, these types of psychosocial therapies have yielded successful results comparable to the positive effects of emotion-oriented care approaches. An example of a result that was not described in the emotion-oriented care approaches, unlike psychomotor therapy, is a lessening of night-time restlessness in mildly to moderately demented nursing home residents (Dröes, 1991, 1997b; Namazi *et al*., 1995). In addition, behavior modification has proved effective in a number of specific behaviors related to: self-care, appropriate eating behavior, reduction in screaming, incontinence and an improvement in the sleep/wake rhythm (Dröes, 1997a). Depending on the problems of the individual dementing person the therapies listed can be used as supplementary therapies within emotion-oriented care, provided of course that this is done in a way that does not conflict with the emotion-oriented care.

Based on the different intervention studies of psychosocial methods it is unclear whether there are any specific effects. Comparative research among homogeneous groups of patients with specific symptoms, for example, dementing persons with aggressive or anxious behavior, would be needed to determine specific effects. However, the variation of effects on different functional aspects that are achieved with the psychosocial approaches, generate the suspicion that these effects are no direct consequence of the different methods, but rather that they develop indirectly through an increased sense of general well-being and a reduction in stress in these elderly patients. This restoration of balance may lead to specific behavioral changes in each individual. The current principle for the treatment of persons with dementia is therefore to relate as much as possible to the individual needs and circumstances of the dementing elderly, and to tune the environment to the functional abilities of the dementing person. Emotion-oriented approaches offer an opportunity to do this. For example, validation offers empathic communication techniques to validate the feelings of the dementing person and support him in coping with the consequences of his illness, especially for patients with a moderate to moderately severe type of dementia. Reminiscence and simulated presence

therapy attempt to link up with the experiences and perceptions of mildly to severely dementing persons by recalling memories. Through sensory stimulation that does not appeal to cognitive abilities, snoezelen is one of the few approaches that is suitable for reaching severely to very severely dementing persons whose possibilities for verbal communication are limited. In addition, snoezelen can be applied to persons with less severe types of dementia. The great challenge for the care sector is to develop guidelines to determine which approach should be recommended for whom and when. Scientific research can contribute by examining which emotion-oriented approaches, possibly in combination with each other or with other psychosocial therapies, result in an increase in the well-being and improved functioning in which patients. Therefore, in spite of the methodological problems connected with intervention research in the psychogeriatric field, new studies, preferably randomized controlled trials, must be set up. For that, the development of appropriate standardized measuring instruments (valid, reliable and sensitive) is essential. The studies described in this review all used different measurement tools for identical variables (see also Day, 1997), making comparison almost impossible. Researchers should use more uniform instruments so that outcomes can be compared. Another major methodological problem of the studies conducted so far is the lack of independent observers. To overcome this, it would be helpful for researchers to use naive judges' ratings of videotaped behavior in standard situations such as eating, dressing, group activities etc. or instead use direct behavior observational ratings by independent, naive observers (e.g. staff members from other wards working temporarily on the wards of the intervention study) that are more immune to bias than the observational ratings by the regular personnel. Anticipating the drop out of subjects implies that one has to start the study with a sample that is larger (e.g. 40% in a 1-year experiment) than normally required to obtain sufficient statistical power to detect a medium to large effect size. The consequence is that these projects are relatively labour- and cost-intensive.

The difficulties one has to overcome in conducting research into the effect of psychosocial approaches in psychogeriatrics are numerous. However, only when researchers anticipate as much as possible the major methodological problems and start from the foundation already provided by the results of previous studies, can scientific research really contribute to the development and improvement of the care for persons with dementia.

KEY POINTS

'The effects of emotion-oriented approaches in the care for persons suffering from dementia: a review of the literature'

- Emotion-oriented approaches have positive effects on social behavior problems of persons with dementia
- Improvement of quality of care for persons with dementia can be reached by applying emotion-oriented approaches
- Future research should focus on the examination of which emotion-oriented approaches effect an increase in the well-being of which patients

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