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PSYCHOGERIATRIC
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MODULE 5

Non-pharmacological treatments

The IPA Complete Guides to
Behavioral and Psychological
Symptoms of Dementia



Specialists • Primary Care Physicians • Nurses

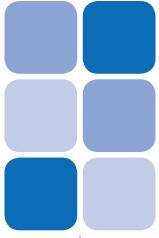


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Preface

The world's population is aging rapidly, and with it is coming a significant increase in the number of older people with dementia. This increase presents major challenges for the provision of healthcare generally and for dementia care in particular, for as more people have dementia, there will be more people exhibiting behavioral and psychological symptoms of dementia (BPSD).

BPSD exact a high price from both the patient and the caregiver in terms of the distress and disability they cause if left untreated. BPSD is recognizable, understandable and treatable. The recognition and appropriate management of BPSD are important factors in improving our care of dementia patients and their caregivers, and is central to the development of *The IPA Complete Guides to BPSD*.

The IPA Complete Guides to BPSD provide a comprehensive overview of the presentation and causes of BPSD, offering constructive guidance on treatment interventions, both pharmacologic and non-pharmacologic, along with information on caregiver education and support.

The IPA Complete Guides to BPSD – Specialists Guide was revised in 2015, based on the *BPSD Educational Pack* that was originally distributed in 1998 and updated in 2002 and in 2010. Further revisions in 2010 were based upon literature reviews by the contributors. *Module 8: Long-term care*, was added in 2012.

This guide draws on material presented at the consensus conferences of the International Psychogeriatric Association (IPA) Task Force on Behavioral Disturbances of Dementia (now the IPA Behavioral and Psychological Symptoms of Dementia Shared Interest Forum), held in the Spring of 1996, and the BPSD Update Conference in 1999.

Building on these significant forums, IPA has developed *The IPA Complete Guides to Behavioral and Psychological Symptoms of Dementia (BPSD)*. As described in detail in the following pages, this series of three resource guides – *Specialists Guide*, *Nurses Guide* and *Primary Care Physicians Guide* – specifically addresses issues that are central to each perspective of care for the geriatric mental health patient, recognizing that each professional has a unique role and opportunity to provide care and support to the patient and caregiver.

This guide, *The IPA Complete Guides to Behavioral and Psychological Symptoms of Dementia (BPSD) – Specialists Guide*, is the most comprehensive in the series, with eight modules of extensive information that is of great value to all those in the geriatric healthcare profession, including physicians, nurses, psychologists, occupational therapists, social workers and others.

We suggest that readers make use of the reference and recommended reading lists provided in this document. Also, we especially hope the material will contribute to the improved management of dementia patients with BPSD and reduce some of the stress experienced by their caregivers and families.

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The IPA Complete Guides to BPSD

The only resource you need for all the members of your team!

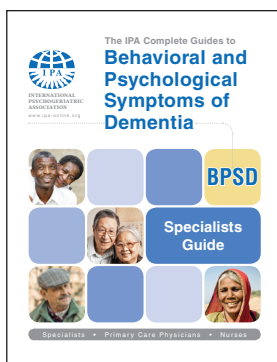
It is increasingly important that all professionals involved in the care and treatment of patients exhibiting signs of dementia have a thorough understanding of the *Behavioral and Psychological Symptoms of Dementia (BPSD)* and are provided with the best possible resources to guide them in developing effective courses of treatment.

It is for that need that the International Psychogeriatric Association (IPA) developed *The IPA Complete Guides to BPSD* which, although helpful to all geriatric healthcare providers, was prepared with a view toward the different perspectives of the many professions that encounter patients with BPSD.

To address your practice needs, *The IPA Complete Guides to BPSD* is designed to serve as a reference tool or as a training resource. When used for training, the individual guides of *The IPA Complete Guides to BPSD* series, as well as each module contained within *The IPA Complete Guides to BPSD – Specialists Guide*, can be used alone or together in a tailored approach to create your own customized program.

The IPA Complete Guides to BPSD is offered exclusively in electronic form. The advantages of a downloadable version include—

- Lower cost to you than a printed version
- Regular updating ensures you have the most recent information
- Easy to access and use anytime and anywhere you are around the world



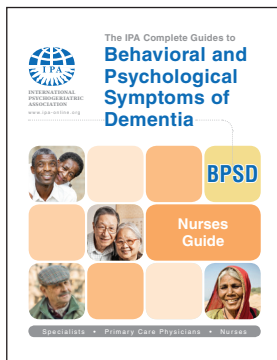
The IPA Complete Guides to BPSD – Specialists Guide is a comprehensive compilation of eight modules detailing the presentation and causes of BPSD, constructive guidance on pharmacological and non-pharmacological treatment interventions, and information on caregiver education and support. This is the most extensive in the *Guides* series, and while helpful for all geriatric healthcare professionals, it is especially instructive for geriatric mental healthcare specialists: physicians, nurses, psychologists, occupational therapists, social workers and others.

The Modules—

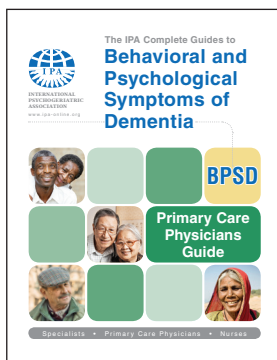
- Module 1 – An introduction to BPSD
- Module 2 – Clinical issues
- Module 3 – Etiology
- Module 4 – Role of family caregivers
- Module 5 – Non-pharmacological treatments
- Module 6 – Pharmacological management
- Module 7 – Cross-cultural and transnational considerations
- Module 8 – Long-term care

The IPA Complete Guides to BPSD

Each module includes an in-depth discussion and analysis of its subject area and concludes with a reference and recommended reading list. The content of *The IPA Complete Guides to BPSD – Specialists Guide* is designed to contribute to the improved management of dementia patients with BPSD and reduce some of the stresses experienced by caregivers and families of dementia patients.



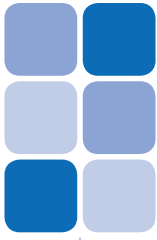
The IPA Complete Guides to BPSD – Nurses Guide is intended for use by nurses and other professionals involved in nursing care to aid in the study and management of patients with BPSD, and is not for use by patients and their caregivers. The *Nurses Guide* focuses on the unique aspects involved in nursing, including care approaches and nursing interventions specific to BPSD, and the need to provide support to formal and informal caregivers. This guide should be seen as a complement to *The IPA Complete Guides to BPSD – Specialists Guide*, a more in-depth resource with its many different modules intended for all those healthcare professionals who have specialized in geriatric mental healthcare.



The IPA Complete Guides to BPSD – Primary Care Physicians Guide was written for primary care physicians, as many times they are the first point of contact for patients and their caregivers. In that role, it is vital that physicians and their staff are familiar with clinical manifestations and management of BPSD. This *Guide* is a valuable resource for the identification and early diagnosis of dementia that is so critical for patients and their caregivers. It is intended as a complement for Primary Care Physicians to *The IPA Complete Guides to BPSD – Specialists Guide*.

The IPA Complete Guides to BPSD, individually and as a series, provide the needed insight to help with early diagnosis and care for the patient and caregiver. With a disease that affects not just the patient, but also the family and the greater community and social systems, *The IPA Complete Guides to BPSD* series helps support all geriatric healthcare providers with both broad and specific information and care guidelines.

The International Psychogeriatric Association is committed to advancing geriatric mental health around the world through the creation of comprehensive and practical resources like *The IPA Complete Guides to BPSD* series. If you have a need to use *The IPA Complete Guides to BPSD* series in a language other than English, please contact the IPA Secretariat at the address listed on the acknowledgements page of this document to arrange a translation.



Acknowledgments

The production of *The IPA Complete Guides to Behavioral and Psychological Symptoms of Dementia (BPSD) – Specialist’s Guide* has been made possible through the concerted effort of a number of experts in the field of dementia and associated behavioral and psychological symptoms.

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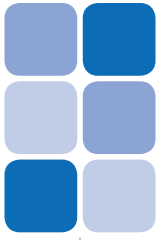
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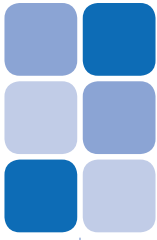
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About IPA

The **International Psychogeriatric Association (IPA)**, founded in 1982, is a unique and diverse professional healthcare community promoting better geriatric mental health—across disciplines, across borders, and across geriatric issues. Psychiatrists, scientists, neurologists, geriatricians, primary care physicians, epidemiologists, nurses, psychologists, occupational therapists, social workers, and many other healthcare professionals come to the IPA community from all over the globe to discuss, learn, share, and research information about behavioral and biological aspects of geriatric mental health. IPA promotes research and education, facilitates an international exchange of ideas on psychogeriatric issues, and fosters cross-cultural understanding of the latest developments in the field.

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Abbreviations in BPSD

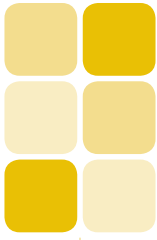
ABC	Antecedents Behavior Consequences
AD	Alzheimer's disease
ADAS-cog	Alzheimer's Disease Assessment Scale (cognitive portion)
ADCS	Alzheimer's Disease Cooperative Study
ADI	Alzheimer's Disease International
ADL	Activities of Daily Living
ADRC	Alzheimer's Disease Research Center
ALMA	Association Against Alzheimer's Disease and Related Disorders of Argentina
APOE	Apolipoprotein E
ARDSI	Alzheimer's and Related Disorders Society of India
BEHAVE-AD	Behavioral Pathologic Rating Scale for Alzheimer's disease
BPSD	Behavioral and Psychological Symptoms of Dementia
CAM	Confusion Assessment Method
CAMDEX	Cambridge Examination for Mental Disorders of the Elderly
CASI	Cognitive Abilities Screening Instrument
CATIE-AD	Clinical Antipsychotic Trials of clinical effectiveness—Alzheimer's disease
CBI	Caregiver Burden Inventory
CBT	Cognitive Behavioral Therapy
CDR	Clinical dementia rating
CERAD	Consortium to Establish a Registry for Alzheimer's Disease
CERAD-BRSD	Behavior Rating Scale for Dementia of the Consortium to Establish a Registry for Alzheimer's Disease
ChAT	Choline acyltransferase
CIDI	Composite International Diagnostic Interview
CIND	Cognitive Impaired Not Demented
CMAI	Cohen-Mansfield Agitation Inventory
COMT	Catechol-O-methyltransferase
CSDD	Cornell Scale for Depression in Dementia
CSID	Community Screening Instrument for Dementia
DAT	Dementia of Alzheimer's type
DBDS	Dementia Behavior Disturbance Scale
DLB	Dementia with Lewy bodies
DIS	Diagnostic Interview Schedule
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders (fourth edition)
ECT	Electroconvulsive therapy
EPS	Extrapyramidal side effects
FTD	Frontotemporal dementia



Abbreviations in BPSD *continued*

GABA	Gamma-aminobutyric-acid
GDS	Geriatric Depression Scale
GDS	Global Deterioration Scale
GMS	Geriatric Mental Status
GRACE	Genetics, responses, and cognitive enhancers
HPA	Hypothalamic-pituitary-adrenal
ICD-10	International Classification of Diseases (tenth revision)
IPA	International Psychogeriatric Association
LTC	Long term care
MCI	Mild cognitive impairment
MDS	Minimum Data Set
MHPG	3-methoxy-4-hydroxy-phenylglycol
MIMIC	Multiple Indicators Multiple Causes
MMSE	Mini-Mental State Examination
MPHW	Multi-purpose health workers
NIA	National Institute on Aging
NHBPS	Nursing Home Behavior Problem Scale
NINCDS-ADRDA	National Institute of the Neurological and Communicative Disorders and Stroke and the Alzheimer's Disease-Related Disorders Association*
NMDA	N-methyl d-aspartate
NOSIE	Nurses' Observation Scale for Inpatient Evaluation
NPI	Neuropsychiatric Inventory
NPI-D	Neuropsychiatric Inventory—Distress Subscale
NRS	Neurobehavior Rating Scale
PAS	Pittsburgh Agitation Scale
PD	Parkinson's disease
PDD	Parkinson's disease dementia
RAGE	Rating Scale for Aggression in the Elderly
REACH	Resources for Enhancing Alzheimer's Carer Health
RMBPC	Revised Memory Behavior Problem Checklist
RUDAS	Rowland Universal Dementia Assessment Scale
SCAG	Sandoz Clinical Assessment Geriatric Scale
SSRI	Selective serotonin reuptake inhibitors
TCA	Tricyclic antidepressants
VaD	Vascular dementia
WHO	World Health Organization
ZBI	Zarit Caregiver Burden Interview

* Now known as the Alzheimer's Association



MODULE 5: Non-pharmacological treatments

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Key messages

- There is now a substantial body of evidence supporting the use of non-pharmacological treatments of the behavioral and psychological symptoms of dementia (BPSD).
- Even when BPSD are caused by physical discomfort, major depression or psychosis, psychosocial interventions will prove helpful when offered in combination with analgesic, antidepressant or antipsychotic medications.
- Psychosocial approaches are indicated as first-line approaches to all emotional and behavioral disturbances in people with dementia.
- All of the psychosocial interventions described here work best when they are tailored to people's backgrounds, interests and capacity.
- Family and professional caregivers are key collaborators. It is important to provide them with necessary information and education and to support them as they test and refine their responses to challenging symptoms.
- The physical environment can help prevent or minimize BPSD by reducing distress, encouraging meaningful activity, maximizing independence and promoting safety.

Introduction

In Western countries, many people with serious, persistent BPSD live in nursing homes. Much of the information in this module is directed to medical, nursing and allied health clinicians who work in that setting but the principles expressed here apply equally well to the family carers of people with dementia who live in their own homes.

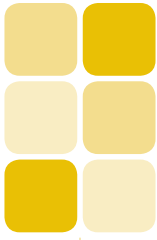
This module examines:

- Psychosocial models of BPSD
- Principles of dementia care
- Assessment methods
- Specific treatments
- Physical environment

Additional information on responses to BPSD can be found on the web sites listed at the end of this module.

Understanding BPSD

While changes in brain structure and function certainly contribute to BPSD (See Module 3), psychological processes also play a part. People with dementia may feel great distress as a result of their condition and the responses of those around them are critical. Caregivers typically seek to provide what support is required in a calm, affirming and respectful manner. Sometimes, though, they respond inadvertently in ways that make distress worse. Three different models have been put forward to explain how this works:



- **Learning theory** states that behaviors are reinforced if they lead to people being given more attention. Yelling, for example, will increase in frequency if staff members attend to residents when they are noisy and ignore them when they are quiet (Teri et al., 1998). Paying more attention to people when they are quiet should therefore lead to a reduction in yelling.
- According to the **unmet needs theory**, so-called challenging behaviors stem from normal human needs for meaningful activity, emotional validation and social interaction (Cohen-Mansfield, 2001). Since people with advanced dementia cannot always voice these needs, or take action to address them, their carers must take the initiative. A need for physical movement and social engagement, for example, might be addressed by a carefully tailored exercise program.
- According to the **stress threshold model**, dementia reduces people's capacity to cope with stress, resulting in inappropriate behaviors when levels of stress are excessive (Hall and Buckwalter, 1987). Stress can be reduced to tolerable levels by attending to signs of tension and providing opportunities for relaxation.

In reality, most psychosocial treatments blend elements of all three models. For example, a music therapy session in a nursing home might lead to a reduction in BPSD by:

- Generating positive attention from staff members and co-residents while participating in the group, thereby reinforcing normal social behavior
- Meeting a resident's need for creative, enjoyable activity
- Providing an optimal level of stimulation

Other factors that increase stress and might therefore worsen BPSD, include:

- Poor vision or hearing
- Limited mobility
- Pain or physical discomfort
- Incontinence
- Lack of fluency in the local language

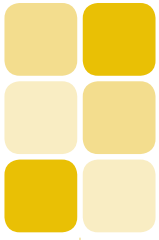
Underlying principles

Since BPSD are triggered in part by psychological forces, it follows that family and professional caregivers can interact with people with dementia in ways that prevent symptoms emerging, or at least reduce their frequency and severity. Based on the models described above, caregivers should aim to:

- Encourage socially appropriate behaviors
- Create opportunities for social interaction and meaningful activity
- Ensure that levels of stimulation are neither too high nor too low

To help reduce the impact of sensory handicap, functional incapacity and cultural isolation, caregivers can assist by:

- Correcting vision and hearing deficits by ensuring that spectacles and hearing aids are worn and adjusted correctly



- Promoting mobility via walking aids and regular exercise
- Relieving pain by means of regular analgesia, physical exercise and change of position
- Minimizing incontinence through regular toileting regimes and incontinence aids
- Using short, simple sentences and making word or icon cards for people who do not share the local language

If caregivers are to meet these various needs of people with dementia in a way that is truly therapeutic, they must have a detailed knowledge of each person's:

- Cultural and family background
- Personal life story
- Previous interests and skills
- Likes and dislikes (e.g., food, activities, personal care)
- Physical well-being

People with mild dementia can provide much of this information themselves. Family members will need to be questioned about the backgrounds of those with more severe levels of impairment.

The term “person-centered care” is used to describe a style of engaging with people with dementia that encapsulates all of the above points. There is evidence that behavioral symptoms are reduced when:

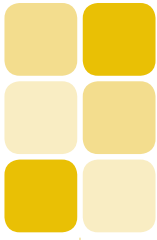
- Nursing home staff are trained in person-centered care (Chenoweth et al., 2009)
- Personal care is designed to maintain residents' abilities and to help them compensate for lost ones (Wells et al., 2000)
- Residents are bathed in their preferred way while carers speak to them calmly and minimize discomfort (Sloane et al., 2004)

Nursing home staff can rate their ability to deliver dementia-sensitive care using the Person-centered Care Assessment Tool (P-CAT) (Edvardsson et al., 2010). The tool allows staff to rate the professional, organisational and environmental factors that promote or impede a focus on residents' individuality and autonomy.

Assessment methods

When treating BPSD, success rates will be higher if a full assessment is made beforehand. To make sense of symptoms, and devise strategies to make their expression unnecessary, it is necessary to:

- Identify what symptom(s) most trouble the resident and present the greatest challenge to carers
- Describe each symptom in detail; note what exactly the resident does or says that is concerning
- Specify the Antecedents of Behaviors (the circumstances that spark them) and their Consequences (what makes them better or worse)—this is called the **ABC** approach



Caregivers often believe symptoms come ‘out of the blue’ but careful observation of the events immediately preceding them will usually identify trigger factors. Symptoms are rarely simple. Usually several factors are involved in triggering symptoms and the more caregivers understand their inter-relationship, the more likely it is that interventions will prove successful. The following examples use the **ABC** approach to understand symptoms:

- A resident is too confused to shower herself. She is incontinent of urine overnight and needs a shower each morning. When carers help her to undress and wash (**A**ntecedent), she hits them and pushes them away (**B**ehavior). Carers tend to leave her alone as a result (**C**onsequence). This relieves her agitation temporarily but her groin area is becoming abraded through neglect.
- When another resident is left alone for long periods in the morning (**A**ntecedent), he becomes anxious and irritable and asks repeatedly when his daughter will come to see him (**B**ehavior). Staff members respond to his questions (**C**onsequence). This helps only for a few minutes.

Mapping symptoms

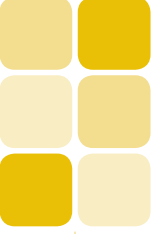
Mapping the frequency and severity of symptoms shows patterns in occurrence during the day, from one day to another, as well as changes before and after an intervention is introduced. It provides an objective rating of what is happening over time. Symptoms can be mapped in the following ways:

- Keeping a daily diary, using the carer’s own words
- Graphing a symptom on paper, marking if it is absent or present to a mild, moderate or severe degree on an hour by hour (or shift by shift) basis
- Using a rating scale. The two scales used most often in research studies are the following:
 - The Cohen-Mansfield Agitation Inventory—CAMI (Cohen-Mansfield, 1991) rates the frequency of 29 individual behaviors (e.g., hitting, calling out) in the previous two weeks. A shorter 14-item version is also available.
 - The Neuropsychiatric Inventory (NPI) rates the frequency and severity of a wider range of symptoms including delusions, hallucinations, agitation, apathy, and sleep disturbance in the previous one month (Cummings, 1997).

Treatment principles

When devising an approach to help a person with a behavioral or psychological symptom, experts recommend that carers should:

- Address one symptom at a time
- Follow the ABC approach
- Measure the symptom before and after making an intervention to confirm that it is effective
- Start with a small achievable goal and proceed step-by-step
- Apply the intervention consistently. Do not expect immediate change, improvement takes time

- 
- Continually evaluate and modify plans. Decide in advance what “success” means for this person
 - Think in advance of an alternative strategy if the first one fails

There is evidence that teaching family caregivers to follow these principles can prove just as effective as psychotropic medications in reducing agitation (Teri et al., 2000).

Further tips

It is important to respond sensitively and constructively when people with dementia feel anxious, frustrated or overwhelmed. Strategies that experts have often found to be successful include the following:

- Identifying situations that trigger distress and avoiding them whenever possible
- Recognizing that the person’s stress levels are rising and taking action to prevent them escalating further
- Approaching an anxious, agitated person from the front
- Speaking at eye level, and using a gentle, non-threatening posture and tone of voice
- Telling the person what is happening and why
- Defusing the situation once stress levels rise by changing activities, tempo or space
- Avoiding arguments whenever possible as they usually make things worse
- If all else fails, telling an untruth (e.g., “Your daughter will be here later”) as a means of relieving distress
- Avoiding physical restraint since it can lead to escalating levels of agitation

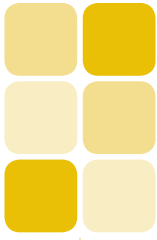
Ensuring safety

It is important for carers to have the knowledge, skills and resources to maintain the safety of all concerned—the person with dementia, the carers themselves and co-residents:

- A medication box helps carers check that essential medications are being taken correctly
- People at risk of wandering and becoming lost should carry a card or wear a bracelet with their address and telephone number
- Gas or electrical appliances may need to be disabled if people use them dangerously
- Carers must know what to do and how to get help urgently if a situation becomes dangerous
- If a significant risk is identified, strategies should be written in the care plan in an obvious place.

Individual treatments

This section describes psychosocial treatments of physical agitation, aggression and anxiety. Treatments of specific symptoms are discussed later. There are now hundreds of published reports of different non-pharmacological treatments of BPSD (Opie et al., 1999; Cohen-Mansfield, 2001; O’Connor et al., 2009a; O’Connor et al., 2009b).



In most studies, a treatment is compared with “usual care”. If it proves superior, it is promoted as having a special therapeutic effect. In reality, its benefits might simply reflect the personal attention that follows from participating in a scientific study. For reasons of space, the focus here is on evidence from well-designed trials in which a treatment reduced agitation or distress better than personal attention. Only a small number of published reports met this requirement (O’Connor et al., 2009a). The fact that a treatment does not qualify for inclusion in this brief outline (e.g. pet therapy) does not mean that it lacks value. A lack of evidence is not the same as a lack of effectiveness.

The material presented below focuses more on treatments of physical agitation than anxiety and depression, reflecting researchers’ interests.

Activity and recreation

Enjoyable, meaningful activities improve quality of life, mood and behavior. Activities can take the form of daily chores, hobbies or shared pastimes. Two studies have shown that:

- Activities offering art, rhythm and touch led to greater contentment and interest (Beck et al., 2002)
- Recreational activities elicited more pleasure and interest when they were matched to people’s previous interests (Kolanowski et al., 2005).

Aromatherapy

Lavender (*Lavendula angustifolia*) and lemon balm (*Melissa officinalis*) have both been tested as treatments for BPSD. Lavender oil is quickly absorbed through skin and respiration (Jäger, 1992) and acts on brain neurotransmitter systems in a similar way to sedative medications (Elisabetsky et al., 1995). When administered to mice, they become much less active for approximately an hour (Buchbauer et al., 1993). The evidence from controlled trials is mixed but two trials found that:

- Agitated behaviors reduced in frequency when 2% lavender oil was sprayed in a dementia care unit (Holmes et al., 2002)
- Massage on the face and arms with lemon balm led to a reduction in agitated behaviors (Ballard et al., 2002).

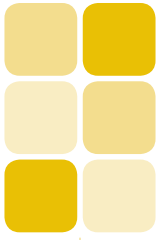
Family tape-recordings

The voice or image of a family member can have a calming effect on confused nursing home residents who quickly forget visits. One study found that a 15-minute audiotape made by a family member reduced agitated behaviors when played through headphones (Garland et al., 2007).

Music and sound

Music can engage interest and generate positive emotions. It also provides an opportunity for enjoyable social interaction. Research studies found that:

- Music that was carefully matched to people’s interests reduced agitated behaviors more than “off the shelf” relaxing classical music (Gerdner, 2000)



- Playing soothing audiotapes of a mountain stream or ocean waves reduced verbally disruptive behaviors (Burgio et al., 1996)
- Live music resulted in higher rates of arousal, engagement and well-being than pre-recorded music (Sherratt et al., 2004)
- Playing tapes of people's preferred music during baths reduced rates of verbal and physical aggression (Clark et al., 1998)

One-to-one interaction

Empathic, attentive contact with another person may be the key ingredient in many psychosocial interventions. In support of this view, one-to-one interaction with a therapist who sought to engage people in conversation, gentle exercise, a sensory kit or manual activities shaped by their interests and skills worked as well in reducing verbally disruptive behaviors as a family-made videotape (Cohen-Mansfield and Werner, 1997).

Physical activity

Physical activity lifts mood and has a calming effect in younger age groups. In a nursing home study, a daily, 30-minute active exercise program led to a greater improvement in mood than either a gentle walking group or a conversation group (Williams and Tappen, 2007).

Treatment of particular symptoms

Exit-seeking

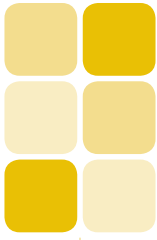
Some people with dementia try leave their home or a residential facility without heed to their safety. This presents a challenge to carers to minimize risk while still encouraging activity and independence. Evidence shows that:

- The number of locked doors in residential facilities should be kept to a minimum since locking doors makes it more likely that residents will try to leave (Namazi and Johnson, 1992)
- Attempts to leave residential units are reduced if exit doors do not have glass panels and if doors and door handles are obscured so as not to draw residents' attention (Dickinson et al., 1995)

Repeated questioning

Repeated questioning (e.g., "What time is my daughter coming?") can be stressful to caregivers. Suggested strategies include:

- Recognizing the worry that prompts the question (e.g., a fear of abandonment) and providing reassurance ("Your daughter phoned earlier. She's really concerned about you.")
- Giving comfort in a culturally-appropriate way (e.g., hand holding, neck massage)
- Starting an enjoyable activity



People with mild to moderate dementia who ask a question repeatedly (e.g., “What day is it”?) can be taught to look at a card in their pocket that has the answer written on it. Once the behavior is learned, the intervals between instructions are spaced further and further apart. This technique is called spaced retrieval (Malone et al., 2007).

Sleep disturbance

Dementia is sometimes accompanied by a profound disturbance of the daily sleep-wake cycle resulting in broken or limited sleep. Sleeping tablets sometimes have limited effectiveness.

There is evidence that a sleep hygiene program slightly reduces the length of time spent awake at night and greatly reduces the amount of time spent sleeping by day (Alessi et al., 2005). A sleep hygiene program includes the following steps:

- Encouraging activity during the day
- Having a set, personalized bedtime routine
- Keeping nighttime noise and light to a minimum
- Avoiding unnecessary nighttime interruptions

There is no strong evidence that bright light therapy assists with sleep-wake disturbances (Forbes et al., 2004).

Physical environment

A calm, supportive physical environment helps to prevent or minimize BPSD by the following means:

- Ensuring that help is readily available
- Encouraging independence while preserving safety
- Promoting meaningful activity and social engagement

Experts advise that these goals are best achieved by providing:

- Small, home-like residential units
- Ready access to staff members
- A range of shared areas with varied ambience
- Single bedrooms for most people
- Clearly marked access to conveniently situated bathrooms
- Adequate lighting
- A calm environment free of loud music and television
- Access to safe walking paths and gardens
- Maintenance of personal identity, background and culture through use of photographs, mementoes, furnishings and reading materials

Each residential facility is unique and it is difficult to prove that a single design feature has a distinct effect on residents’ mood, activity levels and independence. Even so, there is evidence that:

- Home-like environments with single bedrooms are linked to lower rates of anxiety and aggression (Zeisel et al., 2003)

- Residential facilities that offer privacy, a home-like setting, visual and tactile stimulation, and outdoor areas have lower rates of agitation and other symptoms (Bicket et al., 2010)
- Residents spend more time in settings enriched with pleasing sounds, smells and photographs (Cohen-Mansfield and Werner, 1998)

Fleming and Purandare (2010) give an overview of the relationship between the physical environment and the mental well-being of people with dementia.

Nursing home staff members can rate the quality of their physical environment (e.g., its opportunities for social interaction, levels of stimulation and provision for wandering) using the Environmental Audit Tool (Fleming, 2011).

Conclusions

- Many of the benefits of psychosocial treatments stem more from the person who delivers the treatment than from the treatment itself. This is not a problem. Any activity that is enjoyable, healthy and culturally appropriate is to be encouraged.
- The treatments outlined above do appear to have some additional specific benefits. These benefits tend to fade quite quickly once the treatment stops. Once again, this need not be a problem. Few symptoms are present continuously throughout the day. Some are present just at particular times (e.g., “sundowning”). Others arise just in particular circumstances (e.g., personal care). It makes sense, therefore, to target treatments at these times.
- There is good evidence that treatments work best when tailored to people’s interests and skills. For those with advanced dementia, this information must be sought from a family member.

References and recommended reading

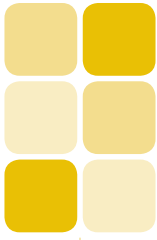
Alessi, C.A., Martin, J.L., Webber, A.P., Kim, E.C., Harker, J.O., Josephson, K.R. Randomized, controlled trial of a nonpharmacological intervention to improve sleep/wake patterns in nursing home residents. *Journal of the American Geriatrics Society* 2005; 53: 803–810.

Ballard, C.G., O’Brien, J.T., Reichelt, K., Perry, E.K. Aromatherapy as a safe and effective treatment for the management of agitation in severe dementia: the results of a double-blind, placebo-controlled trial with Melissa. *Journal of Clinical Psychiatry* 2002; 63: 553–558.

Beck, C.K., Vogelpohl, T.S., Rasin, J.H., Uriri, J.T., O’Sullivan, P., Walls, R., Phillips, R., Baldwin, B. Effects of behavioral interventions on disruptive behavior and affect in demented nursing home residents. *Nursing Research* 2002; 51: 219–228.

Buchbauer, G., Jirovetz, L., Jager, W., Plank, C., Dietrich, H. Fragrance compounds and essential oils with sedative properties. *Journal of Pharmaceutical Sciences* 1993; 82: 660–664.

Burgio, L., Scilley, K., Hardin, J.M., Hsu, C., Yancey, J. Environmental “white noise”: an intervention for verbally agitated nursing home residents. *Journal of Gerontology* 1996; 51: P364–P373.



Clark, M.E., Lipe, A.W., Bilbrey, M. Use of music to decrease aggressive behaviors in people with dementia. *Journal of Gerontological Nursing* 1998; 24: 10–17.

Cohen-Mansfield, J. Instruction manual for the Cohen-Mansfield Agitation Inventory (CMAI). Access: http://www.dementia-assessment.com.au/symptoms/CMAI_Manual.pdf

Cohen-Mansfield, J. Nonpharmacologic interventions for inappropriate behaviors in dementia: a review, summary, and critique. *American Journal of Geriatric Psychiatry* 2001; 9: 361–381.

Cohen-Mansfield, J., Werner, P., Management of verbally disruptive behaviours in nursing home residents. *Journal of Gerontology* 1997; 52A: M369–M377.

Cohen-Mansfield, J., Werner, P. The effects of an enhanced environment on nursing home residents who pace. *Gerontologist* 1998; 38: 199–208.

Cummings, J.L. The Neuropsychiatric Inventory: assessing psychopathology in dementia patients. *Neurology* 1997; 48: S10–S16.

Dickinson, J.I., McLain, J., Marshall-Baker, A. The effects of visual barriers on exiting behavior in a dementia care unit. *Gerontologist* 1995; 35: 127–130.

Edvardsson, D., Fetherstonhaugh, D., Nay, R., Gibson, S. Development and initial testing of the Person-Centered Care Assessment Tool (P-CAT). *International Psychogeriatrics* 2010; 22: 101–108.

Elisabetsky, E., Marschner, J., Souza, D.O. Effects of linalool on glutamatergic system in the rat cerebral cortex. *Neurochemical Research* 1995; 20: 461–465.

Fleming, R. An environmental audit tool suitable for use in homelike facilities for people with dementia. *Australasian Journal on Ageing* 2011; 30: 108–112.

Fleming, R., Purandare, N. Long-term care for people with dementia: environmental design guidelines. *International Psychogeriatrics* 2010; 22: 1084–1096.

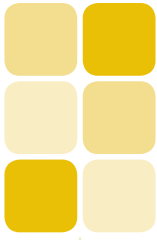
Forbes, D., Morgan, D.G., Bangma, J., Peacock, S., Adamson, J. Light therapy for managing sleep, behaviour and mood disturbances in dementia. *Cochrane Database of Systematic Reviews* 2004: doi: 10.1002/14651858.CD003946.pub2.

Garland, K., Beer, E., Eppingstall, B., O'Connor, D.W. A comparison of two treatments of agitated behavior in nursing home residents with dementia: simulated presence and preferred music. *American Journal of Geriatric Psychiatry* 2007; 15: 514–521.

Gerdner, L.A. Effects of individualized versus classical “relaxation” music on the frequency of agitation in elderly persons with Alzheimer’s disease and related disorders. *International Psychogeriatrics* 2000; 12: 49–65.

Holmes, C., Hopkins, V., Hensford, C., MacLaughlin, V., Wilkinson, D., Roseninge, H. Lavender oil as a treatment for agitated behaviour in severe dementia: a placebo controlled study. *International Journal of Geriatric Psychiatry* 2002; 17: 305–308.

Jäger, W., Buchbauer, G., Jorovetz, L., Fritzer, M. Percutaneous absorption of lavender oil from a massage oil. *Journal of the Society of Cosmetic Chemists* 1992; 43: 49–54.



- Kolanowski, A.M., Litaker, M., Buettner, L. Efficacy of theory-based activities for behavioral symptoms of dementia. *Nursing Research* 2005; 54: 219–228.
- Malone, M.L., Skrajner, M.J., Camp, C.J., Neundorfer, M., Gorzelle, G.J. Research in practice II: Spaced retrieval, a memory intervention. *Alzheimer's Care Quarterly* 2007; 8: 65–74.
- Namazi, K.H., Johnson, B.D. Pertinent autonomy for residents with dementias: modification of the physical environment to enhance independence. *American Journal of Alzheimer's Disease and Research* 1992; 1: 16–21.
- O'Connor, D.W., Ames, D., Gardner, B., King, M. Psychosocial treatments of behavior symptoms in dementia: a systematic review of reports meeting quality standards. *International Psychogeriatrics* 2009a; 21: 225–240.
- O'Connor, D.W., Ames, D., Gardner, B., King, M. Psychosocial treatments of psychological symptoms in dementia: a systematic review of reports meeting quality standards. *International Psychogeriatrics* 2009b; 21: 241–251.
- Opie, J., Rosewarne, R., O'Connor, D.W. The efficacy of psychosocial approaches to behaviour disorders in dementia: a systematic literature review. *Australian and New Zealand Journal of Psychiatry* 1999; 33: 789–799.
- Sherratt, K., Thornton, A., Hatton, C. Emotional and behavioural responses to music in people with dementia: an observational study. *Aging and Mental Health* 2004; 8: 233–241.
- Sloane, P.D., Hoeffler, B., Mitchell, C.M., McKenzie, D.A., Barrick, A.L., Rader, J., Stewart, B.J., Talerico, K.A., Rasin, J.H., Zink, R.C., Koch, G.G. Effect of person-centered showering and the towel bath on bathing-associated aggression, agitation, and discomfort in nursing home residents with dementia: a randomized, controlled trial. *Journal of the American Geriatrics Society* 2004; 52: 1795–1804.
- Teri, L., Logsdon, R.G., Peskind, E., Raskind, M., Weiner, M.F., Tractenberg, R.E., Foster, N.L., Schneider, L.S., Sano, M., Whitehouse, P., Tariot, P., Mellow, A.M., Auchus, A.P., Grundman, M., Thomas, R.G., Schafer, K., Thal, L.J. Treatment of agitation in AD: a randomized, placebo-controlled clinical trial. *Neurology* 2000; 55: 1271–1278.
- Wells, D.L., Dawson, P., Sidani, S., Craig, D., Pringle, D. Effects of an abilities-focused program of morning care on residents who have dementia and on caregivers. *Journal of the American Geriatrics Society* 2000; 48: 442–449.
- Williams, C.L., Tappen, R.M. Effect of exercise on mood in nursing home residents with Alzheimer's disease. *American Journal of Alzheimer's Disease and Other Dementias* 2007; 22: 389–397.
- Zeisel, J., Silverstein, N.M., Hyde, J., Levkoff, S., Lawton, M.P., Holmes, W. Environmental correlates to behavioral health outcomes in Alzheimer's special care units. *Gerontologist* 2003; 43: 697–711.



Other resources

The following resources are suitable for family and professional caregivers:

Dementia Gateway

Access: <http://www.scie.org.uk/publications/dementia/index.asp>

The British Social Care Institute for Excellence provides online modules on dementia care. Topics include communication, activities, nutrition and the physical environment. With respect to challenging behaviors, there is detailed information on constructive responses to aggression, repetitive questions, disorientation and refusal of help.

Alzheimer's Australia

Access: <http://www.fightdementia.org.au/understanding-dementia/help-sheets-and-update-sheets.aspx>

Alzheimer's Australia publishes online fact sheets on a range of challenging behaviors including wandering, sundowning, aggression, agitation and disinhibited behaviors. Each two-page fact sheet addresses the causes of behaviors, prevention and recommended responses.



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