

Environment & Communication Assessment Toolkit

FOR DEMENTIA CARE



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Role of Healthcare Professionals

- Work in collaboration with older adults to fill in the gaps of their abilities

Use preserved abilities

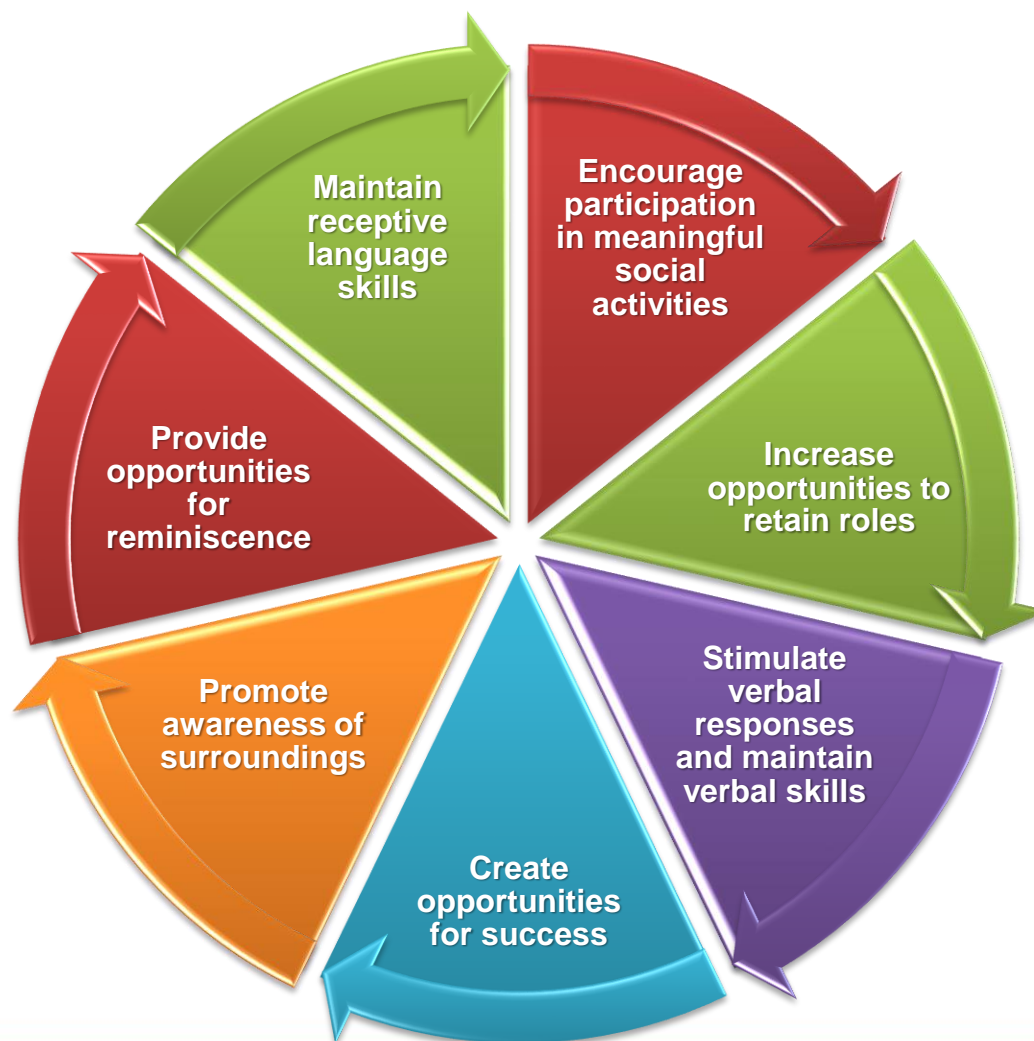
Modify the environment

Continually educate and support staff

Involve families



Goals for Supporting Communication



Communication Interventions



Behavioral Strategies for AD

Bayles & Kim, 2003

- Cues at retrieval same as info used to encode
- Involve client actively in encoding
- Elaborate info at encoding to require thinking beyond its basic attributes
- Use material that is logically related
- Link information to larger category
- Use motor movements at encoding
- Use real life stimuli
- Use written information



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Environmental Interventions

- Improve communication during ADLs
- Improve communication between resident and staff
- Support development of meaningful relationships



Environmental Cues

- Help clients know what to expect
- Put the client in the situation that will trigger the right pattern
- Use colors and textures to provide information
- Reduce distracting stimulation



Communication Disorders In Long Term Care Communities

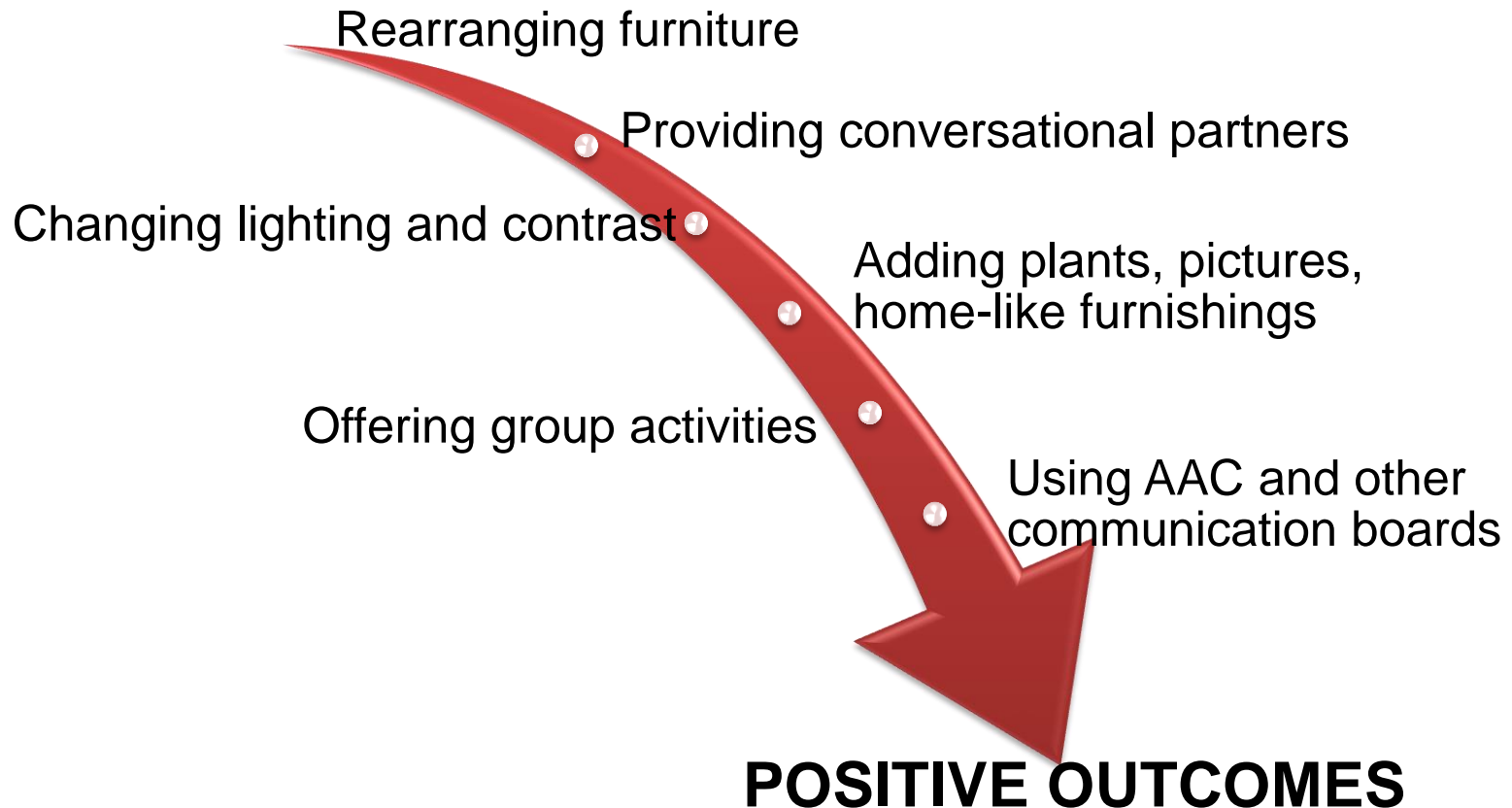
- Misunderstood, unrecognized
- Create difficulties between caregivers and care recipients, resulting in
 - dependence
 - excess disability
 - stress among care providers¹
- Leads to reduced participation in social activities and increased social withdrawal²

1. Steeman et al., 1997; Williamson & Schulz, 1993

2. Potkins, 2003



Research on the Communication Environment



Assessing Communication

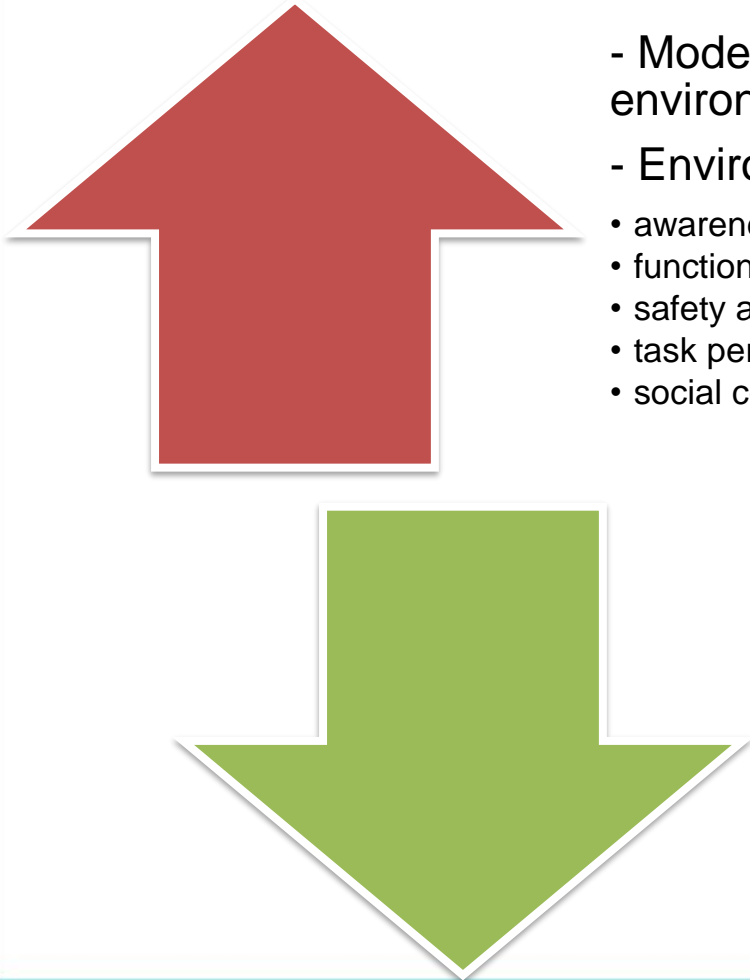
Existing instruments used by SLPs in residential care communities

- Communicative behaviors
- Memory, orientation, attention, etc.
- ADLs, IADLs
- Social behaviors and mental health

None of these instruments include assessment of environmental barriers and facilitators



Assessing the Environment

- 
- Models only describe or categorize potential environmental factors
 - Environmental assessment instruments address:
 - awareness and orientation;
 - functional abilities stimulation;
 - safety and security; privacy; personal control;
 - task performance
 - social contact

None of these instruments include significant measures of communication-relevant environmental factors



Environment & Communication Assessment Toolkit for Dementia Care

- Developed Over Three Years
- Tested with Over 200 Clients with Dementia by over 95 Speech-Language Pathologists, Nurses, Occupational and Physical Therapists
- Funded by the National Institute on Deafness and Other Communication Disorders



Phase I

- Developed resources and demonstrated feasibility of the *Toolkit* for evaluating bedrooms and bathrooms in long-term care settings.
- 30 speech-language pathologists tested the *Communication Toolkit* with clients with dementia.
- Results demonstrated a 100% increase in the number of environmental interventions that the speech-language pathologists recommended for clients.



Phase II

- The Toolkit resource guide and assessment instruments were expanded and evaluated with a larger group of therapists
- The assessment was developed to evaluate the public spaces of long-term care facilities: circulation spaces, dining room, restroom, and leisure activity areas.
- 63 speech-language pathologists, occupational therapists, physical therapists, and nurses tested the Communication Toolkit for six months.



Impact

- The number of environmental modifications used with clients 2 and 5 months after training was greater.
- Average number of modifications recommended by clinicians increased from 9.87 to 11.63 after the initial treatment at 2 months and 13.45 after 5 months.
- The cost of environmental modifications was less than \$100.



Design Guidelines and Strategies

Optimize cognitive aspects of the environment

- Personalize spaces and materials
- Maximize cues



Getting Dressed

Useful Sequencing Cues

Getting Dressed



Put on underwear.



Put on shirt.



Put on pants.



Put on socks.



Put on shoes.

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Controlling Ambient Conditions



Memory Books

- Written and picture cues, in the form of Memory Wallets or Memory Books, can aid in the retrieval of personal information necessary to maintain conversations between persons with AD and their caregivers (Bourgeois, 1990).



Memory Books

- Reduce the frequency of ambiguous and repetitive verbalizations
- Increase turn-taking and topic maintenance
- Reduce partner prompting and conversational dominance
 - Bourgeois, 1993; Hoerster, Hickey, & Bourgeois, 2001



Personalize Spaces



Design Guidelines and Strategies

- Optimize visual aspects of the environment
 - Enhance lighting
 - Enhance visual organization
 - Maximize sightline
 - Maximize contrast
 - Minimize glare



Using the Environment to Improve Intake (Brush, 2001)

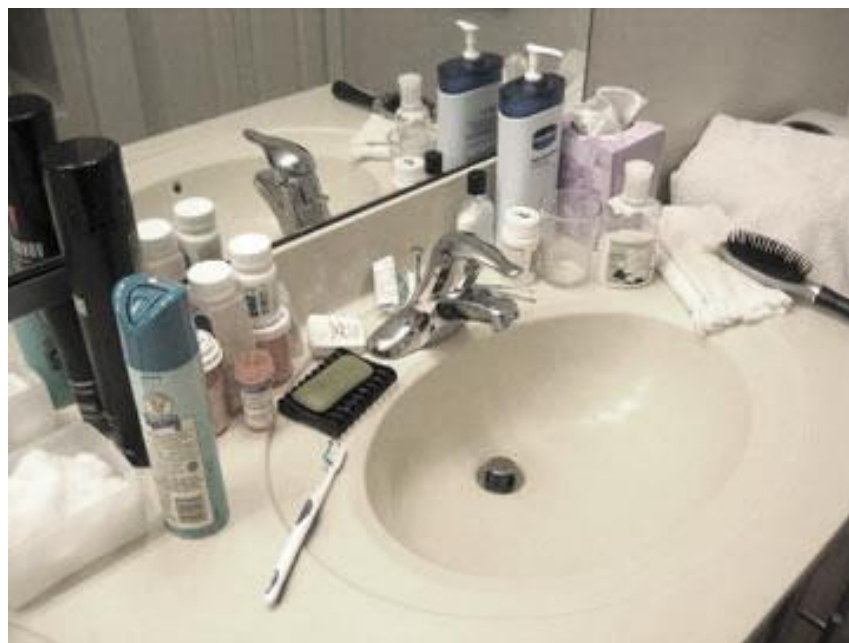
- Examined the impact of increased lighting and table setting contrast on intake for people with dementia.
 - 25 residents (1 nursing home, 1 assisted living facility)
 - All with a physician diagnosis of dementia



Dining



Enhance Visual Organization



Color Contrast

- Helps to distinguish between different types of objects
- Healthy older person requires 3x as much contrast as younger person
- Increase contrast to help see better
 - light floor, dark table, light plate
 - contrasting colored edge on surfaces



Maximize Contrast



Controlling Ambient Conditions

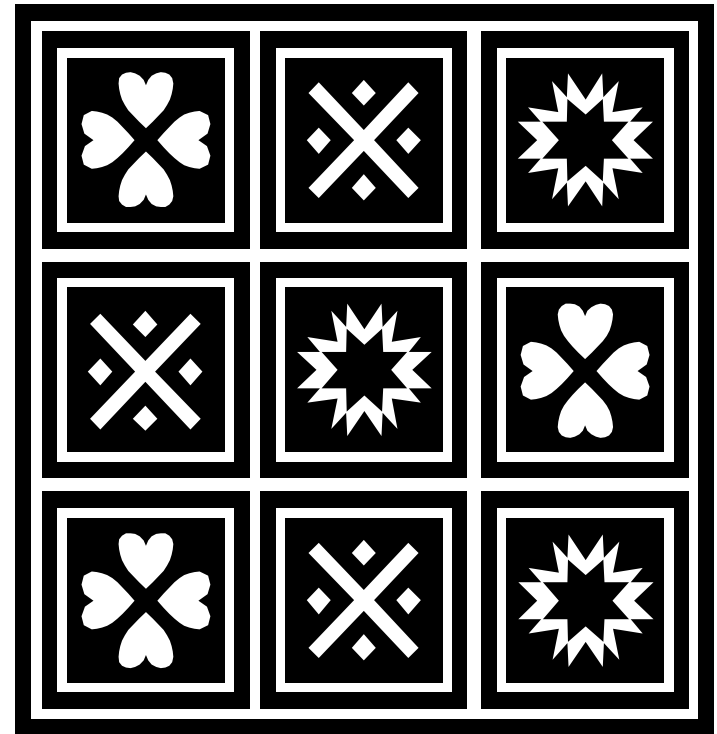


Minimize Glare



Design Guidelines and Strategies

- Optimize auditory aspects of the environment
 - Minimize background noise
 - Minimize reverberation



Helpful Resources

- www.lrc.rpi.edu
- www.ideasconsultinginc.com
- www.ideasinstitute.org
- Brush, J., Calkins, M., Bruce, C., & Sanford, J. (2011) *Environment and Communication Assessment Toolkit for Dementia Care*. Health Professions Press.
- Brush, J.A., Threats, T., & Calkins, M. (2003). Perceived functioning of a nursing home resident. *Journal of Communication Disorders*, 26 (5), 379-394.
- Calkins, M., & Brush, J. (2003). Designing for dining. *Alzheimer's Care Quarterly*, 4 (1), 73-76.
- Brush, J. A., Meehan, R. A., & Calkins, M. P. (2002). Using the environment to improve intake in people with dementia. *Alzheimer's Care Quarterly*, 3 (4), 330-338.
- IDEAS Institute (2002). IDEAS for a Better Visit. J. Brush (Ed.), IDEAS Institute: Author.
- Bourgeois, M. (2007) *Memory Books and Other Graphic Cuing Systems: Practical Communication and Memory Aids for Adults with Dementia*. Health Professions Press.



E1. Circulation (Bathroom)

Light Level ____fc		
Sound Level ____dB		
PE 1.0	Is the door or doorway visible and easily distinguished from the surroundings?	YES NO
PE 1.1	Is the door handle visible and easily distinguished from the door?	YES NO

E2. Toilet

Light Level ____fc		
Sound Level ____dB		
PE 2.0	Is the toilet visible and easily distinguished from the surroundings?	YES NO
PE 2.1	Are grab bars easily distinguished from surroundings?	YES NO
PE 2.2	Is the toilet paper visible and easily distinguished from surroundings?	YES NO
PE 2.3	Is the flush handle visible and easily distinguished from toilet?	YES NO
PE 2.4	Are there appropriate cue cards or pictures to assist with task completion?	YES NO



E3. Bathtub / Shower

Light Level ____ fc

Sound Level ____ dB

PE 3.0	Is the bathtub / shower easily distinguished from the surroundings?	YES	NO
PE 3.1	Are the faucet handles visible and easily distinguished from the surroundings?	YES	NO
PE 3.2	Are the hot / cold indicators visible and easy to understand?	YES	NO
PE 3.3	Are the soap, towels and other cleansing items visible and recognizable?	YES	NO
PE 3.4	Are there appropriate cue cards or pictures to assist with task completion?	YES	NO
PE 3.5	Are there items around the tub / shower area that could be distracting?	YES	NO



E4. Signage

Light Level ____ fc Sound Level ____ dB		Restroom	Sink	Clothes Storage	Lighting Controls	Room Temperature Controls
PE 4.0	Is there any signage to indicate the location of the room?	Y N	Y N	Y N	Y N	Y N
PE 4.1	Is the signage visible and easily distinguished from the surroundings?	Y N	Y N	Y N	Y N	Y N
PE 4.2	Is the text / graphic of appropriate size and contrast?	Y N	Y N	Y N	Y N	Y N
PE 4.3	Is the language easy to understand?	Y N	Y N	Y N	Y N	Y N
PE 4.4	Does the signage surface have too much glare?	Y N	Y N	Y N	Y N	Y N



E5. Sink / Grooming Area

Light Level ____ fc		
Sound Level ____ dB		
PE 5.0	Is the sink visible and easily distinguished from surroundings?	YES NO
PE 5.1	Are the faucet handles easily distinguished from the sink?	YES NO
PE 5.2	Are the hot / cold indicators visible and easy to understand?	YES NO
PE 5.3	Are the grooming items visible and recognizable?	YES NO
PE 5.4	Is the mirror located where client will easily see him / herself?	YES NO
PE 5.5	Are there appropriate cue cards or pictures to assist with task completion?	YES NO
PE 5.6	Are there items around the sink / grooming area that could be distracting?	YES NO

E6. Clothes Storage

Light Level ____ fc		
Sound Level ____ dB		
PE 6.0	Are the doors / drawers for clothes storage visible and easily distinguished from the surroundings?	YES NO
PE 6.1	Are the handles visible and easily distinguished from the door / drawer?	YES NO
PE 6.2	Are the clothes visible in the clothes storage?	YES NO
PE 6.3	Are there appropriate cue cards or pictures to assist with task completion?	YES NO
PE 6.4	Are there items around the clothes storage that could be distracting?	YES NO



E7. Time / Location Cues

Light Level ____ fc Sound Level ____ dB		
PE 7.0	Is a clock visible and easily distinguished from the surroundings?	YES NO
PE 7.1	Are the numbers on the clock of appropriate size and contrast?	YES NO
PE 7.2	Is there other orientation information (<i>e.g., calendar, agenda, client's name, room number, name of facility</i>) that is visible and easily distinguished from the surroundings?	YES NO
PE 7.3	Is the orientation information of appropriate size and contrast?	YES NO
PE 7.4	Is the orientation information easy to understand?	YES NO
PE 7.5	Are there personal orientation items that help the client identify his / her room?	YES NO
PE 7.6	Is the bed easy for the client to identify as his / her own?	YES NO

E8. Controls for Ambient Conditions

Light Level ____ fc Sound Level ____ dB		
PE 8.0	Are the light controls visible and easily distinguished from surroundings?	YES NO
PE 8.1	Are the mechanisms to operate windows or window treatments visible and easily distinguished from surroundings?	YES NO
PE 8.2	Is the heating / cooling control unit visible and easily distinguished from the surroundings?	YES NO
PE 8.3	Are the controls of appropriate size and contrast?	YES NO
PE 8.4	Are the controls easy to understand?	YES NO



E9. TVs, Radios, and Telephones

Light Level ____ fc		
Sound Level ____ dB		
PE 9.0	Is the TV / radio / telephone visible and easily distinguished from the surroundings?	YES NO
PE 9.1	Are the controls for the TV / radio / telephone of appropriate size and contrast?	YES NO
PE 9.2	Are the controls easy to understand?	YES NO
PE 9.3	Is the TV / radio / telephone loud enough?	YES NO
PE 9.4	Is the call bell easily distinguished from the surroundings?	YES NO
PE 9.5	Is the call bell positioned for easy access?	YES NO

E10. Conversation Area

Light Level ____ fc		
Sound Level ____ dB		
PE 10.0	Are there at least 2 seats that are close enough to each other or the bed for socializing?	YES NO
PE 10.1	Are there materials such as photos, magazines or other personal items to facilitate socializing?	YES NO
PE 10.2	Is there a side table next to the seats or bed?	YES NO



E11. Display of Personal Items

Light Level ____ fc

Sound Level ____ dB

PE 11.0	Are personal items visible and easily distinguished from the surroundings?	YES	NO
PE 11.1	Are the items movable so the client can move them to the seating area or bed?	YES	NO

Social Environment

	Do staff members ensure that clients' personal devices are on and working properly?	YES	NO
	Do staff members refer to / point out environmental cues?	YES	NO
	Do staff members adjust ambient settings to ensure that sound and lighting conditions are optimal?	YES	NO

