Dementia Care:
Long-Term Care Facilities' Environmental Design and
Quality-of-Life of Older Adults

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Learning Objectives

Participants will be able to:

1. Understand the cultural differences in long-term care (LTC) settings for older adults with dementia in two countries: United States of America (USA) and Japan

2. Familiarize with assessment scales of the physical environment and of quality of life of older adults residing in LTC facilities.

3. Differentiate the usefulness of the physical environmental assessment scales based on cultural differences in the USA & Japan.

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Care Setting

The current concept of LTC facility has shifted from a homogenous health care institution to that of person-centered care (PCC) although this concept is applied differently in the USA and Japan.

(Koren, 20010)

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Concept of Person Centered Care

USA:

William (Bill) Thomas, a physician, USA

Created the Eden Alternative and the Green House Project

JAPAN:

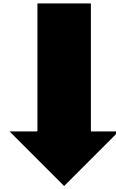Thomas Kitwood, a social psychology of professor at University of Bradford, UK

Developed in the late 1980s

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Significance of Physical Environment

As dementia progresses, older adults tend to find their quality of life (QOL) rooted in their environment

(Abrahamson, Clark, Perkins, & Arling, 2012)

Environment design of LTC facilities is an important aspect of dementia care for LTC residents.

(Anderiesen, Scherder, Goossens, & Sonneveld, 2014)

Aging & Dementia Care in the USA

- 1 in 7 Americans is $\geq$65 years of age
- 5.5 million Americans have dementia. Every 66 seconds, a person is diagnosed with dementia

<div align="right">(Alzheimer's Dementia 2017; He et al., 2015)</div>

- Dementia care
  - Assisted Living: varied occupancy, 6 -100s of seniors; providing assistance & support with activities of daily living
  - Green House Project: < 12 persons/ house; providing level of care in-between assisted living and skilled nursing facility
  - Skilled Nursing Facility (aka "Nursing Home"): providing total care

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Private Bathroom

Room consists of a bed, chair, night stand, corner table, A/C unit with thermostat control

Example of Assisted Living Facility, USA

Toilet is visible from the bed

Aging & Dementia Care in Japan

o 1 in 4 Japanese is $\geq$ 65 years old

o > 4.6 million living with dementia

o Dementia Care:

  ▪ Home: Culturally, older adults are cared by family members

  ▪ Group Care Unit (GCU):

    ❖ family not available

    ❖ 8-10 people per unit

    ❖ Home environment with communal area

    ❖ Assistance with ADLs

    ❖ Covered by National LTC insurance

    (Alzheimer's Association, 2018; Ministry of Internal Affairs and Communications Bureau of Statistics, 2017)

Japanese "Group Care Unit" Design

Communal area

Residents spend most of their time in this communal living/dining room. TV plays important role for their activities

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Unit entrances are aligned side by side

Standard size furnished room

GROUP CARE UNIT

This is the entryway/foyer to a group care unit's communal living room. The group care unit houses 10 seniors

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JAPAN GCU FACILITY

"Body wash" area
outside the soaking tub

Tilted mirror for
wheelchair users

Shared 1/2 bath
with grabbers

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Purpose of Study

To examine the relationship between LTC facilities' environmental design and daily activity patterns and QOL of their residents with dementia's (RWD).

Research Question

Does a facility with higher scores in physical environment attributes have a greater positive impact in the resident's QOL?

METHODS

1. Assess physical environment of long-term care facilities using four major environmental scales:

2. Assess quality of life of LTC residents using two QOL measures

3. Compare QOL results of LTC residents with those of LTC staff

Therapeutic Environment Screening Survey For Nursing Homes and Residential Care (TESS-NH/RC)

Aim: To assess physical environment of long-term care settings

Administration & scoring: Direct observation

o 31 questions to reflect 15 domains of physical environment (e.g., maintenance, lighting, privacy, outdoor areas, etc…)

o Likert scale 0, 1, or 2 – higher score better quality

o Score ranging from 0 – 30

Professional Environmental Assessment Protocol (PEAP)

Aim: A global quality-assessment measure for testing by trained professionals in dementia care units.

Administration & scoring: Direct observation

o 8 attributes

o 5-point Likert scale

Professional Environmental Assessment Protocol - Japanese Version 3 (PEAP-JV3)

Aim: A global quality-assessment measure for testing by trained professionals in dementia care units.

Administration & scoring: Direct observation

PEAP-JV3: culturally specific for Japanese aspects and support independence of residents with dementia.

o Same 8 attributes as PEAP but different numbers of questions

o 5-point Likert scale

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Environmental Assessment Tool – Higher Care (EAT- HC)

Aim: Developed in Australia to support a contemporary care unit for dementia.

Administration & scoring: Direct observation

o 77 items, 10 domains

o Dichotomous scale (Yes/No)

To Assess Residents' QOL: Dementia Care Mapping (DCM)

"Dementia Care Mapping™" is designed to empower staff teams to engage in evidence-based critical reflection in order to improve the quality of care for people living with dementia." (University of Bradford, 2015)

o Assess QOL by observing RWD

o Record activities in communal areas every 5 min., minimum of 2 hours.

o Coding activities A-Z

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Quality of Life- Alzheimer's Disease (QOL-AD)

Administer same questions to both RWD (interview + observation) and their caregivers (survey questionnaires)

Correlate results between RWD (subjective) and their caregivers (objective)

Results: Environment

	USA				JAPAN			
	PEAP	PEAP-JV3	EAT	TESS	PEAP	PEAP-JV3	EAT	TESS
	%	%	%	%	%	%	%	%
Maximize Awareness & Orientation	62.5	47.5	68.2	40	40	50	0	30
Support Functional Abilities	82.6	88.2	25	100	50.5	68.6	56.3	25
Regulation & Quality of Stimulation	93.8	88.2	56.7	74.4	75	46.7	33.3	53.8
Maximize Safety & Security	88.6	84	78.6	100	45.7	40	22.7	100
Continue of the Self	80	87.1	100	100	43.5	58	25	25
Opportunity for Personal Control	81.4	94.5	84.6	75	34.7	28.3	----	0

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Results: Environment

	USA				JAPAN			
	PEAP	PEAP – JV3	EAT	TESS	PEAP	PEAP – JV3	EAT	TESS
	%	%	%	%	%	%	%	%
Provision of Privacy	100	100	-----	100	45	48	-----	20
Facilitation of Social Contact	89.1	85	-----	40	29.1	30.8	0	60
# of People	-----	-----	0	-----	-----	-----	100	-----
Scale of Facility	-----	-----	100	-----	-----	-----	100	-----
Vision/Purpose	-----	-----	80	-----	-----	-----	60	-----
Maintenance	-----	-----	-----	100	-----	-----	-----	100
Outdoor Areas	-----	-----	-----	100	-----	-----	-----	20
Total Score (%)	83.10 %	85.90 %	65.80 %	82.90 %	45.30 %	46.40 %	44.10 %	43.40 %

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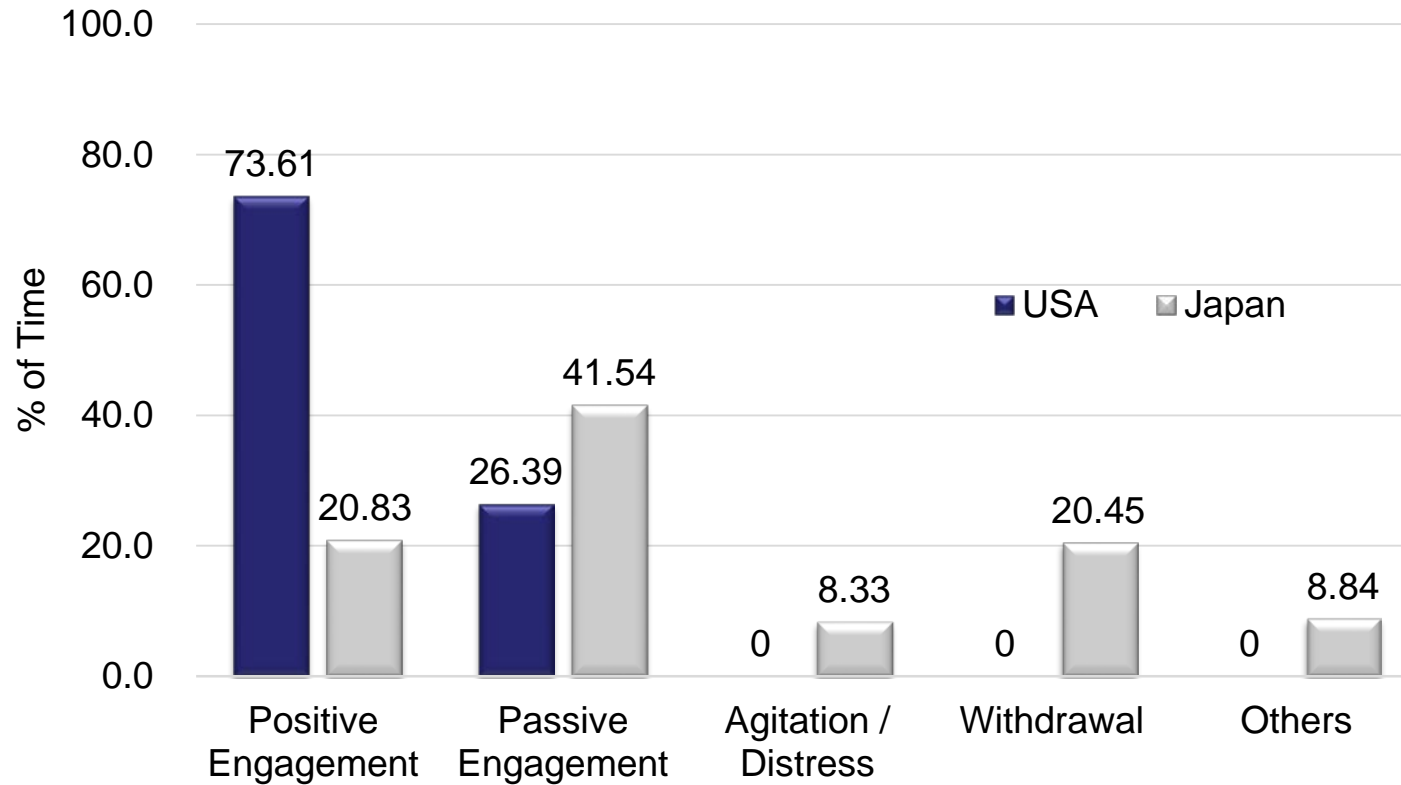# USEFULNESS OF Environmental Scales

Percentage of questions not applicable to the long-term settings due to cultural differences in USA vs. Japan

	PEAP		PEAP JV3		EAT		TESS	
USA	18/149	12.1%	12/111	10.8%	0/75	0%	0/31	0%
Japan	20/149	13.4%	16/111	14.4%	20/75	26.7%	0/31	0%

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Results: QOL
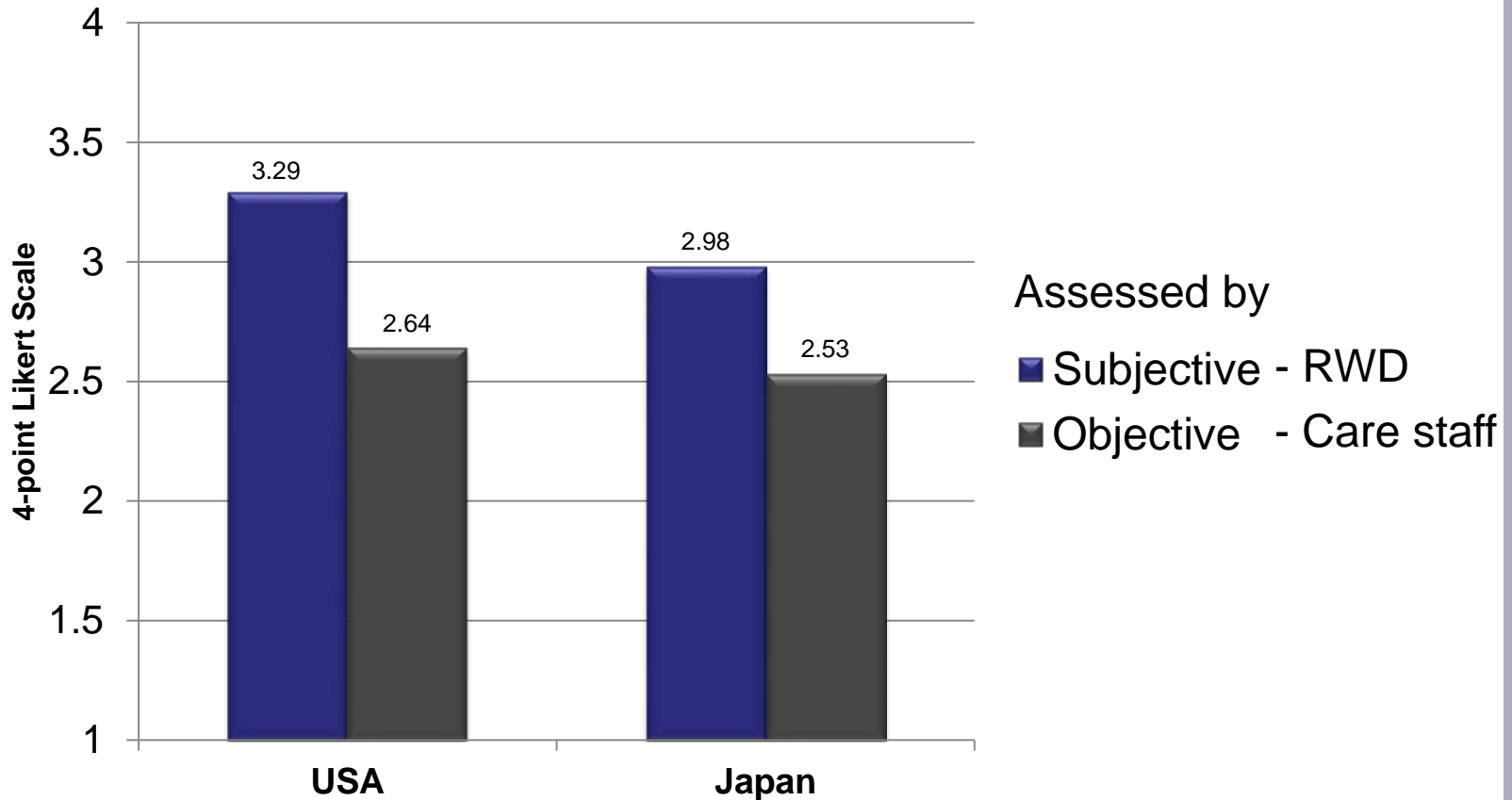# DCM: Group Behavior Category Profile

Observation was performed from 9:40 am to 11:40am in communal areas of both facilities.

DCM: Group ME Value Profile
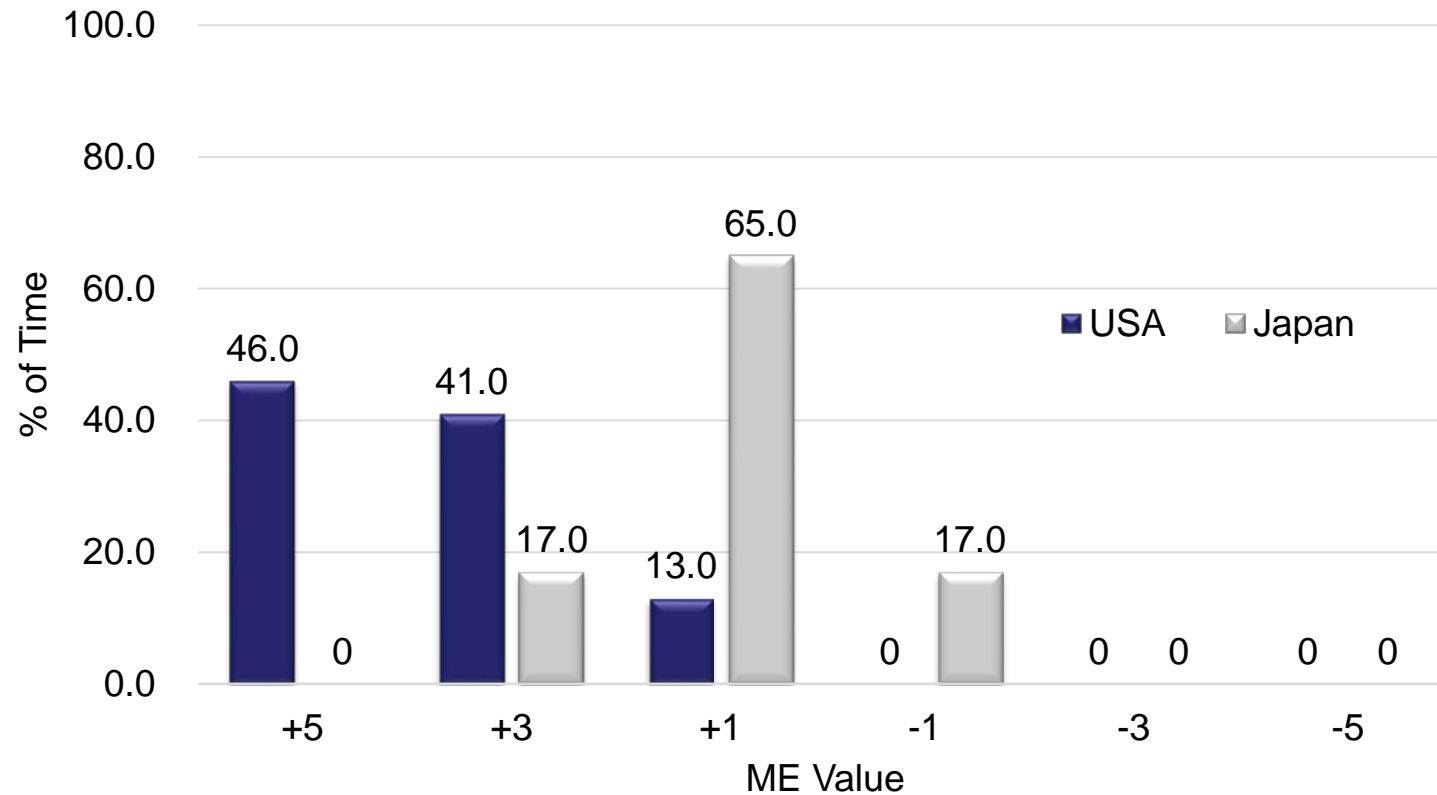
Mood and Engagement (ME) value (or wellbeing value): Higher values reflect better mood in facial expression, body language, posture and engaging in activities.

Results: QOL-AD Scores

There were differences of .65 in USA and .45 in Japan between residents and their direct care staff

Conclusions: Environment

- ✓ For USA Assisted Living, EAT and TESS more appropriate.

- ✓ For Japan GCU facility, TESS is appropriate and to a lesser extent, EAT. when questions about outside spaces are omitted.

- ✓ 10% -15% of the questions in PEAP and PEAP JV3 don't apply to AL and GCU facilities.

Conclusions: Quality of Life

Perceived QOL scores by residents in USA & Japan were higher than those reported by their facility care staff.

- ✓ In the USA, residents at AL facilities move from room-room associated with different activities keeping them active and energetic.

- ✓ Higher ME values were reflected in AL facility through daily activity programs and socializing with volunteers. The space for socialization and extra chairs for visitors are important to enhance residents' QOL.

- ✓ In Japan, residents in GCU spend most of their time in the living/dining room, 20% "withdrawal (being disengaged / sleeping)" time were noted, which implies that the facilities physical environment affects QOL in the residents.

Recommendations

✓ It is very important to provide an easy accessible social area to facilitate social contact. This is one of the most important ways to enhance residents' ME values.

✓ This is the first study that assessed physical environment and the residents' QOL in the same facility. More studies are needed to determine the depth of the relationship between physical environment and residents' QOL in order to improve residents' QOL.

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Thank You

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