

The Degree of Bedroom Personalization in Institutional and Homelike Settings for Persons with Dementia: A Quantitative Investigation

Anderson W. Chuck,¹ Doris L. Milke,² and Charles H.M. Beck³

RÉSUMÉ

Le but de cette étude était de fournir une mesure empirique de la personnalisation des chambres à coucher et une caractérisation descriptive des types d'éléments que l'on trouve dans un espace personnalisé. L'étude a comparé l'étendue de la personnalisation de trois types de chambres qui se distinguaient du point de vue de leur atmosphère familiale (pièce privée familiale; pièce privée institutionnelle et salle institutionnelle). Une mesure du degré relatif de personnalisation a été obtenue en consignait le nombre d'objets personnels dans chaque pièce et en divisant le nombre d'objets dans la pièce par la surface verticale et horizontale disponible dans la pièce. L'étude a révélé que le degré de personnalisation était sensiblement supérieur dans les pièces privées d'atmosphère familiale que dans les pièces privées institutionnelles et les salles institutionnelles. Cette étude est la première à démontrer que la personnalisation de la chambre d'un résident peut être quantifiée, et elle ouvre la voie à l'étude des facteurs qui contribuent aux effets (par exemple, les règlements des lieux, l'attitude de la famille et du personnel) ainsi qu'à des études empiriques sur les conséquences présumées (par exemple, la satisfaction des résidents et l'amélioration du fonctionnement).

ABSTRACT

The purpose of this study was to provide an empirical measure of bedroom personalization and a descriptive characterization of the types of items included in a personalized space. The study compared the extent of personalization in three types of bedrooms, varying as to their homelike quality (private-homelike, private-institutional, and ward-institutional). A measure of the relative degree of personalization was obtained by recording the number of personal items for each room and dividing the number of items per room by each room's available vertical and horizontal surface area. The degree of personalization was found to be significantly greater in private-homelike rooms than in private-institutional or ward-institutional rooms. This study provides the first demonstration that personalization of a resident's bedroom can be quantified and opens the way for studies of factors contributing to the effect (e.g., facility regulations, family, and staff attitudes) and empirical studies of presumed consequences (e.g., resident satisfaction and improved functioning).

1 Department of Public Health Sciences, University of Alberta

2 The CAPITAL CARE Group, Edmonton, AB

3 Department of Psychology, University of Alberta

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Requests for offprints should be sent to: / Les demandes de tirés-à-part doivent être adressées à :

Anderson W. Chuck

Department of Public Health Sciences, University of Alberta

11131-35 Ave., Edmonton, AB T6J 3M6

(achuck@ualberta.ca)

Introduction

There is a trend to shifting from the traditional or "institutional" nursing home environment to more "homelike" residential settings for people with Alzheimer's disease and other dementias. While there has been no consensus on the meaning of *homelike*, most accepted definitions suggest that *home* or *homelikeness* can be understood not only in terms of architectural features (e.g., size and space) but also in terms of cultural, social, and psychosocial qualities (Namazi, Eckert, Rosner, & Lyon, 1991; Lawrence, 1987).

The architectural features of such places include ranch-style, single-storey buildings, with accessible gardens, large windows, country-style kitchens, pleasant seating areas, and private rooms (Hoglund, 1995; American Institute of Architects, 1992). The goal, however, is not merely to appear more residential but to be a real home for residents. Even in very large centres, where it can be difficult to establish a homelike atmosphere, strategies are applied to create this effect (Cohen & Weisman, 1991) and care providers are encouraged to do this by adopting homelike décor and furnishings (Cohen & Weisman, 1991; Schwarz, 1996).

Within long-term care (LTC) settings, a homelike environment is being pursued for several reasons. First, satisfaction of residents with LTC centres is positively correlated with the amount of room personalization (Kruzich, Clinton, & Kelber, 1992). Second, people with Alzheimer's disease and other dementias comprise the majority of residents in LTC centres (Canadian Study of Health and Aging Working Group, 1994) and homelike environments have been associated with improved functional behaviour and improved cognitive ability in mentally impaired adults (Carey & Thompson, 1980). Restoration of personal control is essential for good physical and psychological health (White & Janson, 1986) and furnishings that maximize the resident's familiarity with the environment are helpful in maintaining autonomy (Cohen & Day, 1993).

Third, by allowing residents to bring their own "cherished" belongings, a more familiar, more personal environment is created, not only helping residents to maintain full functional capabilities (Cohen & Day, 1993) but, more importantly, providing them with a sense of stability, continuity, and identity through the symbolic reconstruction of their lives (Sherman, 1991; Namazi et al., 1991). Various cognitive processes are believed to improve with personalization because personal possessions can stimulate memory and conversation (Hiatt, 1990). Thus, the quality of life for residents with dementia is assumed

to improve when bedrooms are designed in a way that encourages personalization (Cohen & Weisman, 1991). Fourth and finally, the quality of care for dementia sufferers may be improved by bedroom personalization. For instance, Millard and Smith (1981) found that people, including staff, perceived residents in the absence of personal belongings in a negative way, suggesting that residents with a high degree of bedroom personalization may receive improved care.

Given these reports indicating the importance of personalization of bedrooms for the well being of residents, it is of concern that no studies have provided empirical measures of the relative degree of personalization of different LTC settings or characterized the type of items used to personalize the space. While personalization is merely one of many components contributing to a homelike atmosphere, quantifying the degree of personalization is important because it can provide the valuable insights that lead to more effective strategies for improving homelikeness and the quality of life for LTC residents. Accordingly, the purpose of the present article is to provide both an objective, empirical (quantitative) measure of personalization and a descriptive characterization of the types of items included in a personalized space.

Methods

Setting

This study was conducted in the dementia units of three LTC centres in the city of Edmonton, Alberta. Three types of rooms were selected for study: a private-homelike type of room – single bedrooms in the homelike units of a residential centre for Alzheimer care; a private-institutional type of room – single bedrooms in the institutional units of a large LTC centre; and a ward-institutional type of room – four bed-wards in the institutional units of an older LTC centre. The Therapeutic Environment Screening Scale (TESS-2+) (Weisman, Calkins, Sloane, & Zimmerman, 1995) was used to categorize the three types of rooms.

The residential centre was McConnell Place North (MPN), built in 1995 as the first Canadian centre specially designed for Alzheimer care. It was modelled on the award-winning Woodside Place, located near Pittsburgh (Hoglund, 1995; American Institute of Architects, 1992). The other two centres were CAPITAL CARE Dickinsfield (CCD), a centre with over 300 beds, and CAPITAL CARE Grandview (CCG), an older centre that was starting renovations. Both were older facilities, with typical traditional

(institutional) environments that were clean and comfortable. Both facilities had plans for decorating public areas in more homelike ways and the four bed-wards were to become semi-private rooms.¹

These three centres, all operated by the CAPITAL CARE Group, encouraged bedroom personalization (The CAPITAL CARE Group, 2000). Formal policies governing resident belongings used for all the sites indicated that "clothing, jewellery, money, toilet articles, furnishings and any other personal possessions" were expected to accompany residents. Informal policies governing resident belongings were that objects could not be too large for the area and could not be a fire hazard and that furniture should permit the floor underneath to be cleaned by housekeeping staff.

Sample Population

The sample of residents included in the study was selected based on the following criteria:

- independently ambulatory, by foot or wheelchair
- Mini-Mental State Examination (MMSE) (Folstein, Folstein, & McHugh, 1975) score under 23/30
- residency in the centre for at least 3 months
- diagnosed with dementia
- not awaiting transfer to another LTC centre or unit

Final selection of residents for inclusion in the study was based on receiving consent forms on a first-come basis. Consents were obtained from family members (or public guardians) to assess 10 bedrooms of the private-homelike rooms, 10 bedrooms of the private-institutional rooms, and 10 resident spaces in the ward-institutional rooms. Families or public guardians of the residents also consented to the administration of cognitive tests and reviews of medical charts. Furthermore, verbal consent to enter a bedroom was sought from residents as each bedroom was assessed.

Demographic information on age, gender, marital status, and physical status was collected from resident charts. Date of admission was also recorded and the total number of months of stay at the centre calculated (up to and including the day the researcher entered the bedroom to count items). Observations were made over a 4-month period, beginning February 2001.

Measures

A six-item questionnaire was sent to families prior to sending the consent forms. The questionnaire measured the extent of family involvement and staff involvement in bedroom decoration, as well as

residents' attitude toward the personalization of their bedrooms. The questionnaire response categories were listed in order of increasing involvement in personalization. For example, one question assessing residents' attitude toward personalization of their bedrooms was, "Does your relative encourage having his or her room decorated or personalized?" Available responses for this question ranged from, "Has never encouraged having his/her room decorated" to "Has very often encouraged having his/her room decorated." Four LTC centre professionals reviewed the preliminary form of the questionnaire for face validity.

The TESS-2+ was used to assess the environmental quality and characteristics of the dementia units at the three sites. TESS-2+ scores were transformed into the National Institute on Aging (NIA) TESS-2+ subscales. The NIA subscales aggregate the scores from the specific environmental domains of the TESS-2+ to give a score for overall homelikeness, with higher scores indicating a more homelike environment. Item reliability ranges from 67 per cent to 100 per cent and inter-rater correlations for the global scales range from 0.89 to 0.93 (Lawton et al., 1998).

The MMSE (Folstein et al., 1975) was used to screen residents for inclusion in the study. Scores on the scale range from 0 to 30, with higher scores indicating better cognitive functioning. The MMSE has a consistent inter-rater reliability of better than 0.82 and test-retest reliability of better than 0.89.

Unless there were recent MMSE scores (within the last 6 months) available on resident charts, an MMSE was administered. For those residents who scored less than 10/30 on the MMSE, the Test for Severe Impairment (TSI) (Albert & Cohen, 1992) was administered to compensate for any floor effects commonly experienced with the MMSE. The TSI assesses cognitive impairment in more severely impaired individuals, with scores ranging from 0 to 24 (higher scores indicate better cognitive functioning), with good test-retest reliability ($r=0.96$, $p<0.0001$) and high internal reliability ($\alpha=0.90$) (Albert & Cohen, 1992).

Operational Definition

Personalization, for the purposes of this study, was operationally defined as any item or object in the room that was not provided or owned by the LTC centre. Therefore, a shelving unit provided by the resident was counted, whereas a chair provided by the LTC centre was not. Furthermore, four residents shared bathrooms in ward-institutional rooms, while residents in private rooms had access to their own private bathroom. Therefore, to increase

comparability between room types, items located in bathrooms were not included in the itemization. In addition, food or items such as nails or tacks were not included in the itemization because staff frequently removed these items from resident rooms. A list of standard room materials was obtained from each dementia unit to differentiate items the centre provided from those provided by the resident. When necessary, staff were asked whether certain items/furnishings belonged to the centre or the resident.

Item Categories

Visible items in the bedrooms were counted and recorded under 13 pre-determined categories. These categories were piloted on a sample population of bedrooms to assess their appropriateness. The 13 categories were *pictures and greeting cards*; *ornaments and glassware*; *bedding*; *clothing*; *coverings*; *toys*; *plants*; *electronics*; *jewellery*; *books and magazines*; *type-A furniture* (furniture that adds extra surface area to the room; e.g., shelves); *type-B furniture* (furniture that does not add extra surface to the room; e.g., lamps) and *miscellaneous*. Furthermore, items on vertical or horizontal surfaces were counted and categorized separately.

Pictures and greeting cards included photographs, artistic paintings/pictures, greeting cards, calendars, newspaper/article clippings, and letters. If a picture was enclosed in a frame, the frame was not counted as a separate item. If multiple pictures were visible within a single frame, all the pictures within the frame were counted. Ornaments and glassware included vases (including those that housed flowers), glasses, figurines, plaques, or plates. Bedding included pillows, cases, sheets, or blankets. Clothing included any clothing, hats, or shoes. Coverings included rugs, mats, or any table coverings. Toys included stuffed animals, board games, or playing cards. Plants included any real or artificial flowers or plants. If flowers or plants were potted, the pot was not counted as a separate item. Electronics included television sets, radios, clocks, and any mechanical type of object (e.g., wind-up clocks). Type-A furniture was defined as including beds (if provided by the resident), tables, shelves, and dressers. Type-B furniture was defined as including lamps and stands. Jewellery included any jewellery precious or otherwise that was in plain sight (jewellery boxes or drawers were not opened). Books and magazines included books, magazines, newspapers, or flyers. Miscellaneous included any items that did not fit into any of the categories mentioned. Categories were considered mutually exclusive (no item was counted more than once).

Procedure

The researcher and one person experienced with the instrument simultaneously, but independently, completed a TESS-2+. Percent agreement between the two surveyors was calculated for each unit.

Personalization was quantified as a measure of room density (items/m²), ensuring that any differences in personalization observed among the three types of rooms were not the result of differences in usable surface area. For each centre, room dimensions for private rooms were obtained from the *as built* (the actual built dimensions of the room) blueprints. For the ward-institutional rooms, the researcher measured the room dimensions. Neither bathrooms adjoining resident rooms nor ceilings of rooms were included in the study.

The total horizontal and vertical surface area was calculated separately for each bedroom in the study. Furnishings in the bedroom that added to the surface area of the bedroom (e.g., tables, shelves, etc.) were measured to the nearest cm. Then, the sum of the total available surface area (architectural features and furnishings) for vertical surfaces and horizontal surfaces was calculated separately for each bedroom in the study.

For each bedroom, the researcher identified all items provided by the centre, excluding them from the itemization. Items on vertical and horizontal surfaces were counted, recorded in their respective categories, and divided by the horizontal or vertical surface area as appropriate. The researcher did not change, move, or remove any items from the resident's bedroom. If the resident preferred to stay and visit while the researcher was in the room, the researcher engaged in a social visit so the resident would enjoy and benefit from the interaction.

Each bedroom was itemized once but sufficient time was allowed to count and categorize each item appropriately. Total itemization and categorization of a bedroom took approximately 1 hour to complete. Some bedrooms, however, required more than one visit to complete the itemization due to interruptions caused by planned (or unplanned) activities, family visits, or rest.

Statistical Analysis

Analysis of variance (ANOVA) was conducted to assess differences across the three types of rooms in resident's age and length of residency, as well as in room surface area and degree of cognitive impairment. Multivariate analysis of variance (MANOVA) was conducted to determine differences across the three types of rooms in item densities for vertical

surfaces and horizontal surfaces. Post-hoc analyses of group comparisons were conducted (Tukey HSD). Only comparisons of $p < 0.05$ are presented. A contingency coefficient for the family questionnaire was conducted to investigate any correlation between resident attitude toward bedroom personalization and family/staff involvement with bedroom personalization.

Results

While there were no males in the private-homelike room group, the other two groups had at least 30 per cent males (Table 1). There were no significant differences among the residents of the three types of rooms regarding age, months in residence, or cognitive impairment as measured by the MMSE (Table 1). Nor were the residents at the three sites different in marital status (data not shown). The private-homelike room type had the greatest homelike quality (greatest TESS-2+ score), whereas the other two sites had lower, but similar, ratings (Table 1). There was 96 per cent agreement between the observations of the two observers conducting the TESS-2+.

Table 2 and Table 3 show, respectively, the vertical and horizontal surface areas available for personalization and item densities for each item category in the three types of rooms. Room types differed as to available vertical ($F [2, 27] = 148.75, p < 0.001$) and available horizontal surface area ($F [2, 27] = 11.53, p < 0.001$). Vertical and horizontal surface areas available for personalization were significantly greater in private-institutional rooms than in either private-homelike or ward-institutional rooms. Vertical surface area was greater in private-homelike rooms than in

ward-institutional rooms. Because private-institutional rooms had a larger floor area, they were generally larger than rooms in the other types, which accounts for the greater availability of vertical and horizontal surface areas. Furthermore, in ward-institutional rooms, resident spaces had only two vertical walls per resident, so there was little vertical surface space.

There was a significant main effect for room type when comparing item densities on vertical ($F [11, 18] = 2.87, p = 0.02$) and horizontal surfaces ($F [14, 15] = 3.36, p = 0.01$). Specifically, for horizontal surfaces, total item densities, including densities for pictures or greeting cards, and type-A furniture were significantly greater in private-homelike rooms than in either private-institutional rooms or ward-institutional rooms. In addition, densities for ornaments and glassware and for coverings on horizontal surfaces were significantly greater in private-homelike rooms than in private-institutional rooms. Densities for type-B furniture on horizontal surfaces were significantly greater in private-homelike rooms than in ward-institutional rooms. On vertical surfaces, there were significantly higher densities of electronic items in private-homelike rooms than in ward-institutional rooms and higher densities of jewellery in private-homelike rooms than in either private-institutional or ward-institutional rooms.

A gender analysis of vertical and horizontal total room density of items in the private-institutional and ward-institutional types of rooms yielded no significant effect of gender. Room-type differences in total item densities were not significantly correlated with scores on items from the family questionnaire. Survey

Table 1: Demographics, cognitive impairment, and homelike quality of private-homelike, private-institutional, and ward-institutional room styles

Measure	Room Style		
	Private-Homelike (n = 10)	Private-Institutional (n = 10)	Ward-Institutional (n = 10)
Number of Men	0	3	4
Number of Women	10	7	6
Age in Years M (SD)	83.20 (7.44)	77.50 (6.06)	73.50 (11.48)
Age Range in Years	70–96	69–86	54–93
Residence in Months M (SD)	27.70 (16.99)	24.74 (20.25)	32.00 (28.75)
Range of Residence (months)	6.25–66.74	7.13–67.76	7.66–97.81
MMSE Score M (SD)	8.50 (7.12)	7.80 (10.23)	7.10 (9.45)
Homelike Quality ^a	37	31	30

^a National Institute on Aging (NIA) subscale aggregate score of the environmental domains assessed in the TESS-2+ giving an overall homelike score. Higher scores represent more homelike qualities.

Table 2: Vertical surface areas and item densities^a under 13 categories in private-homelike, private-institutional, and ward-institutional styles of room

	Mean \pm Standard Deviation			Main Effects		Post-Hoc
	Private-Homelike	Private-Institutional	Ward-Institutional	F Statistic	p value	
Total Surface Area						
Vertical Surface Area (m ²)	34.475 \pm 0.911	52.637 \pm 7.629	18.441 \pm 0.001	148.75	<0.001	x, y, z
Density on Vertical Surfaces				2.87	0.02	
Pictures & Greeting Cards	0.150 \pm 0.132	0.353 \pm 0.270	0.542 \pm 0.592			
Ornaments & Glassware	0.047 \pm 0.062	0.022 \pm 0.041	0.049 \pm 0.060			
Bedding	0	0	0			
Clothing	0.015 \pm 0.037	0	0.027 \pm 0.069			
Coverings	0.003 \pm 0.009	0.002 \pm 0.006	0			
Toys	0.012 \pm 0.015	0	0.011 \pm 0.034			
Plants	0.011 \pm 0.019	0.012 \pm 0.016	0.005 \pm 0.017			
Electronics	0.012 \pm 0.015	0.004 \pm 0.008	0			y
Jewellery	0.017 \pm 0.020	0.001 \pm 0.004	0			x, y
Books & Magazines	0	0	0.016 \pm 0.051			
Type-A Furniture	0.002 \pm 0.009	0	0			
Type-B Furniture	0	0	0			
Miscellaneous	0.003 \pm 0.009	0	0			
Total Density	0.272 \pm 0.204	0.395 \pm 0.284	0.651 \pm 0.604			

^a Densities are items per m².

x Significantly different between private-homelike and private-institutional, $p < 0.05$ (Tukey HSD).

y Significantly different between private-homelike and ward-institutional, $p < 0.05$ (Tukey HSD).

z Significantly different between private-institutional and ward-institutional, $p < 0.05$ (Tukey HSD).

items included degree of family involvement in personalization, staff involvement in personalization, and resident attitudes toward personalization.

Discussion

This study is the first to develop a robust objective empirical measure of bedroom personalization. This is a significant contribution because the literature, as reviewed in the introduction of this article, is of the view that room personalization by LTC centre residents is an important factor in their well-being (Cohen & Day, 1993; Cohen & Weisman, 1991; Kruzich et al., 1992; Millard & Smith, 1981). The validity of the index used to measure item density is supported by the principal finding that private-homelike rooms are more personalized than are private-institutional or ward-institutional rooms. This effect is entirely credible, given claims of the homelikeness of sites designed architecturally for that feature (Hoglund, 1995; American Institute of Architects, 1992).

Further validation of the measure comes from the congruence of the site differences in item density and the homelikeness scores of the sites on the TESS-2+. The latter measure of homelikeness is a composite of two items – one asking the observer to determine the per cent of residents' rooms in which three pictures or mementos are present in the residents' rooms, and the other asking to what extent residents' items (trophies, awards, artwork, photos) are displayed in common areas. While a statistical test could not be done on this agreement, it is apparent that the private-homelike rooms showed greater homelikeness on both the TESS-2+ composite measure and on the total item-density measure, compared to the other two sites, which scored lower.

It is clear from the results that the effect was not due to the amount of surface area available for decoration because the effect was obtained using a measure of item density that controlled for area available. Room size can also be ruled out because the residents in the private-institutional rooms had the largest

Table 3: Horizontal surface areas and item densities^a under 13 categories in private-homelike, private-institutional, and ward-institutional room conditions

	Mean \pm Standard Deviation			Main Effects		Post Hoc
	Private-Homelike	Private-Institutional	Ward-Institutional	F Statistic	p value	
Total Surface Area						
Horizontal Surface Area (m ²)	30.545 \pm 5.25	37.332 \pm 3.914	17.810 \pm 5.866	11.53	<0.001	y, z
Density on Horizontal Surfaces				3.36	0.01	
Pictures & Greeting Cards	0.459 \pm 0.247	0.190 \pm 0.263	0.094 \pm 0.167			x, y
Ornaments & Glassware	0.457 \pm 0.611	0.009 \pm 0.267	0.065 \pm 0.158			x
Bedding	0.107 \pm 0.069	0.074 \pm 0.040	0.054 \pm 0.055			
Clothing	0.029 \pm 0.043	0.003 \pm 0.009	0.028 \pm 0.049			
Coverings	0.065 \pm 0.063	0.014 \pm 0.020	0.026 \pm 0.067			x
Toys	0.070 \pm 0.065	0.111 \pm 0.136	0.110 \pm 0.186			
Plants	0.069 \pm 0.102	0.024 \pm 0.023	0.065 \pm 0.191			
Electronics	0.033 \pm 0.028	0.017 \pm 0.020	0.052 \pm 0.064			
Jewellery	0.015 \pm 0.048	0	0			
Books & Magazines	0.087 \pm 0.154	0.077 \pm 0.113	0.037 \pm 0.090			
Type-A Furniture	0.056 \pm 0.046	0.018 \pm 0.019	0.003 \pm 0.011			x, y
Type-B Furniture	0.026 \pm 0.029	0.013 \pm 0.015	0			z
Miscellaneous	0.204 \pm 0.209	0.020 \pm 0.038	0.140 \pm 0.222			
Total Density	1.647 \pm 0.908	0.570 \pm 0.370	0.673 \pm 0.739			x, y

^a Densities are items per m².

x Significantly different between private-homelike and private-institutional, $p < 0.05$ (Tukey HSD).

y Significantly different between private-homelike and ward-institutional, $p < 0.05$ (Tukey HSD).

z Significantly different between private-institutional and ward-institutional, $p < 0.05$ (Tukey HSD).

rooms and yet did not show the logical effect of room size on item density. Finally, the credibility of the item-density measure is enhanced by the finding that the categories of items which most clearly differentiated the sites were those likely chosen by the elderly (i.e., pictures, greeting cards, glassware, ornaments, jewellery, and table coverings). It also makes sense that the elderly would be more likely to decorate by placing objects on horizontal surfaces than by hanging them on the wall, due to physical limitations and to difficulties with access to equipment (e.g., nails and hammers).

Of the confounding factors that could account for the site differences, that of gender is of the most concern. It could be that the greater degree of display of personal items in the private-homelike rooms was due to the fact that the residents in this group were all women, and it might be expected that women would be more likely to personalize their rooms than men. However, the authors were unable to

find any research from others to support this conjecture. In addition, analysis of the private-institutional and ward-institutional data failed to reveal any effect of gender on item density. Nevertheless, the possibility that gender interacted with the private-homelike room effect to enhance item density in those rooms remains to be examined by future research. It is apparent that resident age, marital status, years in residence, and MMSE scores of cognitive impairment did not contribute to the room effect on item density because the groups did not differ on these variables. If cognitive impairment was not a factor, it seems unlikely that physical health was a factor, although this could be easily checked in future studies.

Surprisingly, results from the family questionnaire indicate that room type differences in total item densities are not related to the reported degree of family involvement in personalization, in staff involvement in personalization, or in resident attitudes

toward personalization. Still, because there is some evidence that there is a disconnect between what people say and what they do (Aronson, Ellsworth & Carlsmith, 1990), it would be worth conducting a study to find out who decorates the rooms.

The simplest hypothesis to explain the item-density differences is that decisions to display personal effects are the result of site differences in formal or informal policies regarding bedroom personalization. Such policy differences would be a natural expression of the differences in the architectural and interior design of the sites. However, this hypothesis remains to be examined by future research.

Overall, the evidence supports the view that item density is a useful, valid measure of bedroom personalization for the LTC centre elderly. However, it must be made clear that personalization is only one of many components required in creating a homelike environment for the LTC elderly and the objective of the present study is to provide an empirical valuation of bedroom personalization. While the TESS-2+ was used to characterize the three types of rooms, it provides no indication of the degree or magnitude of personalization nor does it identify in a comprehensive manner the type of items included in the personalization. Thus, while greater degrees of personalization in private-homelike rooms were expected, the operationalizing of personalization in the present study provides both greater insight into the degree of personalization and a descriptive inventory of the items incorporated into the bedrooms. The findings give credence to claims of homelikeness by LTC centres and offer a measure for linking such claims to the presumed benefits for the well-being of centre residents. LTC administrators and managers might consider providing shelving attached to walls or allowing space for furniture that adds horizontal surface area, in an effort to promote bedroom personalization. Future research comparing the health-related quality of life for the elderly living in LTCs in different homelike environments is also warranted.

Note

- 1 All but one of the four bed-wards in this study have been converted into semi-private bedrooms (The CAPITAL CARE Group Best Practice Leader, personal communication, June 2003).

References

- Albert, M., & Cohen, C. (1992). The test for severe impairment: An instrument for the assessment of patients with severe cognitive dysfunction. *Journal of the American Geriatrics Society*, 40(5), 449-453.
- Anderson W. Chuck, Doris L. Milke, and Charles H.M. Beck
- American Institute of Architects. (1992). *Design for aging: 1992 Review*. Washington, DC: Author.
- Aronson, E., Ellsworth, P.C., & Carlsmith, J.M. (1990). *Methods of research in social psychology* (2nd ed.). New York: McGraw-Hill.
- Canadian Study of Health and Aging Working Group. (1994). Canadian study of health and aging: Study methods and prevalence of dementia. *Canadian Medical Association Journal*, 150(6), 899-912.
- The Capital Care Group. (2000). *The Capital Care Group policy Manual*. Edmonton, AB: Author.
- Carey, A., & Thompson, T. (1980). Structured normalization: Intellectual and adaptive behaviour changes. *Mental Retardation*, 18, 193-197.
- Cohen, U., & Day, K. (1993). *Contemporary environments for people with dementia*. Baltimore, MD: Johns Hopkins University Press.
- Cohen, U., & Weisman, G.D. (1991). *Holding on to home: Designing environments for people with dementia*. Baltimore, MD: Johns Hopkins University Press.
- Folstein, J., Folstein, S., & McHugh, P.R. (1975). Mini-mental state: A practical method of grading the cognitive state of patients for the clinician. *Journal of Psychiatric Research*, 12, 189-195.
- Hiatt, L.G. (1990). Design of the home environment for the cognitively impaired person. In N.L. Mace (Ed.), *Dementia care: Patient, family, and community* (pp. 231-242). Baltimore, MD: Johns Hopkins University Press.
- Hoglund, J.D. (1995, November). *Place makes a difference: advances in assisted living for older adults*. Paper presented at the 48th annual meeting of the Gerontological Society of America, Pittsburgh, PA.
- Kruzich, J.M., Clinton, J.F., & Kelber, S.T. (1992). Personal and environmental influences on nursing home satisfaction. *The Gerontologist*, 32(3), 342-350.
- Lawrence, R.J. (1987). What makes a house a home? *Environment and Behaviour*, 19, 155-156.
- Lawton, M.P., Weisman, G.D., Sloane, P., Norris-Baker, C., Calkins, M., & Zimmerman, S.I. (1998). Professional environmental assessment procedure for special care units for elders with dementing illness and its relationship to the therapeutic environment screening schedule. *Alzheimer Disease and Associated Disorders*, 14(1), 28-38.
- Millard, P., & Smith, C.S. (1981). Personal belongings: A positive effect? *Gerontologist*, 21(1), 85-90.
- Namazi, K.H., Eckert, J.K., Rosner, T.T., & Lyon, S. (1991). The meaning of home for the elderly in pseudo-familial environments. *Adult Residential Care Journal*, 5(2), 81-96.

- Schwarz, B. (1996). *Nursing home design*. New York: Garland.
- Sherman, E. (1991). Reminiscentia: Cherished objectives as memorabilia in late-life reminiscences. *International Journal of Aging and Human Development*, 33(2), 89-100.
- Weisman, G., Calkins, M., Sloane, P., & Zimmerman, S.I. (1995). *Therapeutic environment screening scale (TESS2+): Instrument B*. Milwaukee, WI: National Institute on Aging.
- White, C.B., & Janson, P. (1986). Helplessness in institutional settings: Adaptation or iatrogenic disease? In M.M. Baltes & P.B. Baltes (Eds.), *The psychology of control and aging* (pp. 297-313). New Jersey, NY: Lawrence Erlbaum.

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