

Care home design for people with dementia: What do people with dementia and their family carers value?

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Objectives: To report on the views of people with dementia who live in care homes and their family carers on aspects of design that are important to them, and discuss these in relation to developing physical care environments that respond to the wishes of people with dementia and their family carers.

Method: Six focus groups were held: two in Northern Ireland and four in Scotland. A total of 40 people participated in the focus groups. Twenty nine people were with dementia (24 female and five male), and 11 were family carers (10 female and one male).

Results: Carers discussed the features of a building they took into account when selecting a care home, and discussed this in relation to 'bricks and mortar versus people'. Key themes reported by people with dementia and their family carers included how the space in the environment is used, for example, what happens in the building and the presence or absence of certain design features. Outside space and wayfinding aids were identified as positive features of the home, along with a general lack of concern about ensuite provision.

Conclusion: The results demonstrate the complexity of building design as it must provide living space acceptable to people with dementia living there and family members who visit, as well as provide a workable environment for staff. The findings highlight areas that should be considered by care home teams involved in the build of a new home or the redevelopment of an existing care home.

Keywords: physical environment; care homes; user and carer views; dementia

Introduction

The number of older people experiencing dementia is growing. In England alone there are an estimated 560,000 people with dementia (1 in 88) and this figure is likely to rise significantly, by 40%, in the next 15 years (Knapp et al., 2007). Dementia currently incurs a yearly cost of £17bn (Knapp et al., 2007), costing the nation more than cancer, stroke and heart disease put together (National Audit Office [NAO], 2007). It has been estimated that over half of those with a significant dementia in the UK live in a care home (MacDonald & Cooper, 2006). This is similar to current estimates for Scotland (Wilson & Fearnley, 2007). However, the proportion of those with dementia who will require care home provision will rise to 70% in the near future (Knapp et al., 2007). Care for people with dementia in care homes is not of a universally high standard (Alzheimer Scotland, 2008) with the Care Commission (2004) reporting that when inspected care for older adults in 45% of Scottish care homes did not meet the National Care Standards.

People with dementia are users of the physical environment, therefore just as quality of care can impact on their experiences, so can the quality of increasing recognition that design of buildings can be enabling or disabling for those who work and/or live there. In institutional settings, residents often experience the environment as restrictive and confining (Wiersma & Pedlar, 2008). The environment needs to be able to support remaining ability rather than operate to diminish it (Davis, Byers, Nay, & Koch, 2009) and to support the development and maintenance of relationships (Wiersma & Pedlar, 2008). Thus, design of buildings, if regarded as a therapeutic resource, can promote well-being and functioning of people with dementia (Day, Carreon, & Stump, 2000).

A 'dementia friendly' environment is argued to compensate for disability and should consider both the importance for the person with dementia of his/her experiences within the environment and also the social, physical and organisational environments which impact on these experiences (Davis et al., 2009). Torrington (2007) found a negative relationship between quality of life and buildings that prioritised safety and health, and positive effects of a range of attributes including community contact, physical support, comfort and control and personalisation. Similarly, Chalfont and Rodiek (2005) argue for a move away from design intended for control, surveillance or to diminish behavioural difficulties to considering how environments can encourage curiosity and engagement in everyday activities. This is as important for the outside as inside environments (Chalfont, 2008).

However, the relationship between the care home environment and residents' behaviour are complex. Low, Draper, and Brodaty (2004) conclude that there is no single environment suited to all residents; some will need more security, while others will need freedom to move about; some will prefer single rooms while others will prefer the company of shared rooms. Thus, there is a need for the environment to be able to meet differing needs and preferences of those who live there, including consideration of noise, access to the natural world, understanding the meaning and function of space.

Chalfont (2008) stresses the need for design to allow for access to the outside world. Going outside can be a great challenge in dementia care; for care staff and people with dementia. There is a need to consider the basics of physical accessibility such as handrails, ramps, door widths and the need to consider facilitating access to outdoors in any weather. Outside spaces can provide a different view on the world and offer places of quiet that can be hard to find inside (Brawley, 2001). Duggan, Blackman, Martyr, and van Schaik (2008) explored the experiences of people with dementia who lived at home of going outside and report strong consensus on the desirability and pleasure of going outside, and the negative effects of not going out regularly.

Davis et al. (2009) argue that shifting thinking from 'condition' to 'experience' has the potential to facilitate the culture change needed to create environments that allow for active participation in everyday life. Activities carried out as part of group living such as dining can be enjoyable experiences or ones fraught with tension and design has an important role to play in influencing these experiences (Calkins & Brush, 2003). Factors such as noise levels, lighting, visual contrast, acoustics, colour and cues all have a part to play in influencing experience. An example of this is wayfinding. Nolan, Mathews, Truesdell-Todd, and VanDorp's (2002) study in which identifying items (photographs and significant memorabilia) were placed in memory boxes outside the door of each participant's room showed that the ability of participants to find their way to their rooms increased by 45%. This is significant in terms of maximising the usability of the building for people with dementia who live there.

Torrington (2006) argues that successful spaces are those that carry unambiguous meaning. Often in care homes, the size of the space can conflict with the size of a space normally encountered at home (sitting room or dining room). Further, the furniture and fittings chosen for their 'homeliness' may look inappropriate and incongruous in a large space and may increase confusion rather than making people 'feel at home'. Thus, consideration should be given to how the size of a space impacts on the meaning of that space for people with dementia.

Care home research has tended to focus on behavioural outcomes – with the aim of behaviour modification rather than ascertaining the wishes and preferences of people with dementia. Schwarz, Chaudhury, and Brent Tofle (2004, p. 175) state that the main goal of their study was to 'determine whether design interventions effect desirable behavioural outcomes in nursing home residents with dementia'. Sloane et al. (2007) attempted to modify sleep behaviour with bright light treatment, while Zeisel et al. (2003) used an expert

panel to develop the Environment-Behaviour Factor Model to systematically measure the association between environmental design features of nursing home special care units and the incidence of aggression, agitation, social withdrawal, depression and psychosis among the residents with Alzheimer's disease. However, no one with dementia or Alzheimer's was included in the expert panel. Low et al. (2004) used behaviour scales rated by care staff to evaluate self-destructive behaviours in people with dementia. Reimer, Slaughter, Donaldson, Currie, and Eliasziw (2004) used rating scales carried out by care staff, consultation with care home staff and family members to compare the effect of a specialised care facility on quality of life for residents with middle to late stage dementia over a one year period, with a control group of people with dementia living in traditional institutional facilities. Netten (1989) used questionnaires with staff to assess for dependency levels of people with dementia, while Samus et al. (2005) used rating scales completed by care staff on residents to determine their quality of life. These methods, while seeking information on the impact of different design features relied on proxy, rather than user views.

In a move towards understanding the impact of design from the perspective of people with dementia, Nolan et al. (2002) used observation of behaviour to evaluate aids for wayfinding, while Perritt, E. McClune, and S. McClune (2005) used observation of behaviour to evaluate the suitability of different carpet patterns and textures. Riemersma-van der Lek et al. (2008) used observation, behavioural rating scales and physical examination in their RCT to assess synchronisation of circadian rhythm. However, as with the other studies cited above, no studies included the views of people with dementia, nor mentioned this as a limitation of their studies.

Torrington (2006, 2007) investigated what activities people with dementia in care homes reported that they would like to see in place to gain an understanding of what the various spaces meant for those who lived there. Torrington (2006) reports a 'wish list' of favourite activities derived from conversations with people with dementia living in care homes, at home or in residential care, including access and connection to the natural world, community participation, participation in creative activities and support with routines. Torrington (2006) points to the importance for wellbeing of a physical environment that is designed to support activity of different types, provides opportunities for such activities to happen and provides settings that are recognisable at a multi-sensory level and are appropriate for their function. Harmer and Orrell (2008) reach similar conclusions in their study on meaningful activity for people with dementia living in care homes. Of importance here, is the interrelationship between the physical and psycho-social environment in contributing, or detracting from, residents' well-being.

This article contributes and adds to knowledge about the physical care environment by reporting on the views of people with dementia who live in care homes and their family carers on aspects of design that are important to them. We will conclude with a brief discussion of these factors in relation to developing physical care environments that respond to the wishes of people with dementia and their carers in the future.

Method

Sample

We created a database of 175 homes in our target locations, Central Scotland and Northern Ireland. Homes were included on our database if they mentioned dementia care on their publicity information. Eleven homes from the 30 included in our wider project were approached about their willingness to have their care home host a focus group (see Table 1). Geographical location, the sector they represented, and whether or not the building was purpose built or converted influenced the choice of homes to include in our focus groups.

Table 1. Participants in each focus group.

Focus groups	People with dementia	Family members
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1	5	2
2	3	4
3	8	0
4	4	0
5	3	5
6	6	0
Total	29	11

Focus groups

Six focus groups were held: two in Northern Ireland and four in Scotland. A total of 40 people participated in the focus groups; 29 people with dementia (24 female and five male), and 11 family carers (10 female and one male). Three of the focus groups comprised people with dementia and their carers. Three focus group included only people with dementia; although care home management had advertised the focus group to relatives no-one attended and they felt that this reflected the fairly low levels of relative involvement/visits in the home.

The focus groups began with tea/coffee and refreshments provided by the researchers. This created a 'tea party' atmosphere reported on favourably by participants and staff alike and set a positive tone for the friendly, informal and open discussions. The researchers began by emphasising that the focus of the research was on the building itself; its design, de'cor, accessibility and understandability. The exact opening question varied depending on the room the focus group was held in but related to the room we were meeting in or the view of the outside space. A focus group topic guide directed the discussions examining the location of the building in relation to residents' recall of where they previously lived, outside space, personal internal areas (e.g. bedroom, bathrooms) and communal internal areas (e.g. lounges, dining areas). Focus groups were audio-recorded with the consent of participants. An average of two hour was spent in each home for focus group facilitation.

Ethics and consent

Full ethical approval was granted by the authors' University ethics committee prior to contacting any potential participants. Local ethics processes were also followed as required by organisations hosting the focus groups. Consent was given by care home management to host a focus group. Care home managers contacted family carers directly as well as posting information in prominent positions in the care homes that both residents and family carers could see. Care home managers made the decision as to whether a person with dementia would be able to participate in the focus group. All participants received a hard copy of an information sheet and the consent form prior to the researchers' arrival. The researchers went through the written copies verbally with each participant prior to obtaining their written and/or verbal consent before the focus groups commenced.

Analysis

Focus groups recordings were fully transcribed. A thematic analysis process was followed. The preliminary coding focused on the 'units' of a Design Audit Tool (Cunningham, Marshall, McManus, Pollock, & Tullis, 2008). These included:

- hall/entrance/wayfinding,
- lounge/day room and dining room,
- meaningful occupation and activity,
- bedrooms,
- bathroom areas,
- examination/consulting/treatment areas and
- lighting and exterior.

This coding was then developed with one researcher (AI) coding the data based on the areas covered in the focus group topic guide. Namely, reasons for choosing the home,

location of building and how this related to wider community and family ties, areas of the building (e.g. outdoor space, communal internal areas, own individual space, views on how the environment facilitates (or not) their preferred lifestyle, the 'atmosphere' and whether this was pleasing on a sensory level (lighting, heat control, noise, smells), overall thoughts on the positives and negatives of the building and any changes/things they would like to see improved. One researcher (AI) carried out a careful and repeated review of the transcripts and the resultant 37 codes were slowly refined into five overarching themes verified by the other two researchers (FK and OD). Sub-themes were also identified during the analysis process that were part of the broader themes but which warranted further discussion as they focused on specific aspects of the wider themes. The themes and sub-themes are documented in Table 2.

Table 2. Themes.

Theme	Sub-themes
Choosing a care home	Variety and choice in where to spend time
Bricks and mortar versus people	Homely and own possessions
How the space is used	Children and animals
What happens in the building	Use of space
Important features of the building	Safety and control
	Wayfinding
	Outside space
	Ensuites

In addition, an open thematic analysis of the transcripts ensured that attention was given to issues that were not represented in the audit tool units that were reported on as being important to those with dementia and their families. In this way we engaged in a process that moved between the issues of importance in the audit tool, the topics covered by the focus group topic guide and the transcript data.

Results

What people with dementia and their families had to say about care home buildings

Talking to people with dementia about what they like about a care home, when it happens, tends to focus on the quality of care experienced or the perceived quality of life that care home living provides (Harmer & Orrell, 2008; Orrell et al., 2008; Train, Nurock, Kitchen, Manela, & Livingston, 2005). Asking people with dementia their views on the building where they live is a new area our study set out to explore. The development of design audit tools (Cunningham et al., 2008; Fleming, Forbes, & Bennett, 2003) have to date been based on evidence from professionals' viewpoints in line with the literature in the field, thus we aimed to build on the work of these professionals and question/ challenge their conclusions about what constitutes high quality from a design and physical environment stance, by seeking to hear what people with dementia and their families had to say.

Choosing a care home

Participants reported 'ending up' in a particular care facility due to the availability of a bed at the time that it was decided care home living was required.

Person with dementia: *'I was put in . . . I cannae remember how many of them there were [who said she needed to go to a care home]'*

Residents also described being 'brought in' to the care home; reflecting the lack of choice and control they had over the process. The decision to place a relative in a care home was largely based on professional advice that family members then acted upon.

Carer: *'I actually had a friend who is in social services so it was on her recommendation [choice of home] as well'*

Where relatives did investigate different care homes they reported their eventual choice on the basis of the 'feel' of a home and their sense that it would 'suit' their relative. Smell, cleanliness and staff welcome were all reported as part of helping them to get a 'feel' for a place.

Bricks and mortar versus people

Asking people with dementia to reflect on the physical space where they live (even if they reported 'only visiting' and 'living at home' and therefore not relating to the building we were asking them to comment on as where they lived) required careful facilitation. Even those who told us they 'were visiting' were able to comment on the building, including their bedrooms (where they were just visiting). The lack of real connection with the care home as the place where they now live can be interpreted in a number of ways. For example, the care home did not feel like 'home', they did not remember moving into the facility, they were expressing their wish not to live in this environment or they were expressing a dislocation between 'living' and care home life.

People with dementia want to talk about the staff who provided care and support to them and the food they received. In this way residents were quite clear in ranking what they were most concerned about; the building itself was of lesser concern. For example, one woman described the building as 'they are all the same' and went on to talk about what you do in a building, thus people (staff and other residents) and the functionality of the building were of primary concern. Families were equally clear that it was the staff who made the experience of the care home positive or otherwise, particularly family members whose relative had experienced care in more than one setting.

Families looked at the building itself positively if:

Carer: *'It was clean, no bad smells'*

But, the welcome they received from staff was a key issue for their 'feel' for a care home

Carer: *'The thing with me was, the home was nice, but the biggest thing was the care'*

Carer: *' . . . my sister said, it's great. It's not luxurious But the atmosphere, the staff . . . And the staff are really nice'.*

Thus, although our intention was to focus on the physical environment, carers and people with dementia were well able to point out the important role that people working there had on their experiences of the building, reinforcing previous research about this important factor (Harmer & Orrell, 2008; Train et al., 2005).

How the space is used

There were three aspects to this theme raised by people with dementia and their family carers: variety and choice in where to spend time, the 'homeliness' of the building and the presence of children and animals.

Variety and choice in where to spend time

Family members and people with dementia spoke about the importance of having a choice of space. For families this meant a quiet place they could go to with their relative, or a place where they could join in with the life of the home while spending time with their relative.

Carer: *'Well it is all quite open [plan], all the sitting rooms . . . And um they can congregate at the breakfast bar if they want'*

Residents spoke about their bedroom; even when sharing, residents stressed the importance of being able to create their own private area within a shared space

by 'drawing the curtain'.

Person with dementia: [talking about the choice of spaces to spend her time] *'It's ideal because you are not stuck in the same ritual . . . Variety is the spice of life!'*

Thus the importance of spaces that provide assistance for the person with dementia 'to remain engaged in everyday life in a meaningful way' (Davis et al., 2009, p. 187) was true for people with dementia in our study.

'Homely' and own possessions

The importance of having familiar and treasured items relates not only to a sense of security and association with a place, but also helps to create an individualised, personal or what is often loosely referred to as 'homely' feel. Residents spoke about having photographs and some of their own 'knick knacks' around them.

Person with dementia: *'I brought one or two things . . . ' My chest of drawers, deep, deep drawers, the old fashioned kind and held a lot. I say 'I'm not parting with them!'*

One resident sadly reported that she had brought only her clothes. Some families were reluctant to bring furniture or any valuable possessions into the home and gave different stories of clothes, jewellery and other small sized personal belongings going missing or being claimed by other residents. Families therefore controlled what the person with dementia was able to have with them. Photos and pictures were perceived as 'ok' by families as they could be fixed on the wall. There was the odd exception to this where family members embraced being able to bring their relative's possessions into the care home:

Carer: 'But even the fact that she was getting her own furniture and own carpet'

Just as Chalfont and Rodiek (2005) argued for design to move away from control, there is a need to encourage family carers to resist controlling the personal and meaningful items that people with dementia have available to them to use in the care home environment.

Children and animals

Residents commented favourably about the presence of children and animals in the building. In the case of one home, dogs were every day visitors and had been brought up in the care home by the manager. This was a talking point for the residents in this particular home.

Person with dementia: 'I take the dogs out. Depends on what else that's doing'

Having children visiting was perceived positively, one resident suggested that the grounds should have a playground visible from the building where they could go and help if required.

Person with dementia: *'It's nice to see other children coming and then I can handle them I think'*

The important point that was stressed is the normality animals and children bring to an unnatural grouping only due to age and lack of functional or mental ability. Having animals and children in a community is 'normal'; having no contact reinforces the enforced nature of communal living. This supports Torrington's (2007) findings that included the positive effects of community contact; animals and children are often missing components in institutional settings, yet were clearly valued by our participants.

What happens in the building

There were two aspects to this theme discussed by people with dementia and their family carers: first, how space was used in practice, and second, the paradox of safety and control.

Use of space

Relatives and residents both spoke about activities that took place in different spaces, for example bingo and crafts would occur in dining spaces, music, reading and TV in lounge areas.

Person with dementia: *'and we have bar night in here [dining room] . . . And carpet bowls'*

Relatives reflected on the popularity of lounge areas with a view of the entrance to the building or the office where staff were based. This suggests a couple of things, the working life of staff and the comings and goings of visitors and staff were the 'main routine event' of life in the home. Activities tend to be structured and timed, rather than spontaneous, thus if people with dementia want to socialise, interact or observe life they need to position themselves to the artery of work and the outside world.

Safety and control

While relatives were concerned that the building offered safety, cleanliness and security for their relative, residents in two homes were able to articulate the feeling they had of being controlled and needing to ask (and accept this was the case), or 'be allowed', to use space, go outside and generally be able to move around the home and grounds. Residents mentioned 'sitting there', 'slipping away', 'learning what was possible' as part of their experience of care home life. This reflects part of communal living and restrictions on use of space (locked doors for example) that could promote or control what living in a place could feel like.

Person with dementia: *'Under some circumstances you could do whatever you wanted . . . But others you wouldn't be able to do . . . Well in here, er, you definitely would give them some permission'*. [talking about lack of freedom to come and go around the building and go into the grounds]

This is very important as it relates to Torrington's (2007) work where buildings that prioritised safety and health were found to have a negative relationship on quality of life.

Important features of the building

Relatives and residents were able to reflect easily on particular features of the building that they either liked or disliked. Wayfinding, ensembles and outside space were the three features that received most discussion in all six homes where the focus groups took place.

Wayfinding

Both people with dementia and carers discussed the need for wayfinding cues to enable them to locate toilets.

Person with dementia: *'Well we need to be able to find them'* [toilets and way finding in a building with poor signage]

Relatives were quite clear in two of the homes that residents would not be able to find the toilets as they were 'tucked away' with no visual cues. Suggestions about 'leaving doors open' so that residents could have a visual cue were made.

Carer: *'The toilets are not as visible as they could be . . . trying to make it more visible for people'* [talking about difficulties they have observed residents have in finding toilets]

In addition to not being able to find the toilets, residents spoke of not being able to find their bedrooms and quiet places to be alone. Equally, other residents spoke of being able to find their bedrooms and of the wayfinding cues that enabled them to do so (name on door, next door to another landmark in the building). Relatives in one home had got involved in decorating and colour coding different areas of the home, partly to 'brighten the place up', but they had noticed that it helped their relative, and other residents to locate their bedroom corridor.

Wayfinding has been examined in other research from the perspective of the person with dementia (Nolan et al., 2002) and was found to be important, what people with dementia and their carers said about finding toilets supports this.

Ensuites

We asked directly about ensuites as this was never offered as a particular reason for selecting a care home or used in descriptions of what was positive or negative about living in a care home, yet it was a unit in the design audit tool (Cunningham et al., 2008) that helped structure our topic guide. Relatives reported the presence or absence of ensuites as peripheral to their decision about what home would be best for their relative. The cost of a room with ensuite provisions was contrasted with the cost of choosing a home without this feature; the extra cost was not seen as worth it. Family members reported ensuites 'not being' their relative, in that they had never previously had an ensuite, and during the day they would not use it as they spent little time in their bedrooms. Relatives also felt that ensuites were not essential, rather they valued the presence of staff who could assist residents to use the toilets.

Carer: 'I think to have an ensuite here – would not be used very much here'

Residents made no strong comment about ensuites, both those who had one and those who did not. Many residents commented on the communal bathrooms that they liked using (e.g. a communal jacuzzi bath in one home received universal praise). The absence of interest in ensuite provision challenges the strong focus on this in audit tools (Cunningham et al., 2008).

Outside space

Family members were quick to comment positively on the outside space available. Having an accessible, attractive and safe outside space created the opportunity to spend time with their relative outdoors, for example, to share short walks when they were visiting.

Residents reported different things in relation to outside space. One woman liked to be able to take the home's dogs out for a little walk, a man liked being able to maintain an interest in gardening by working on the flowerbeds and growing some vegetables, another liked being able to walk right round the whole building.

Person with dementia: 'There's some nice sitting areas out there . . . when my nephew comes . . . on visiting day it was so warm [to sit] outside . . .'

The importance of outdoor space, and easy access to this space has been stressed in the literature (Chalfont, 2008; Duggan et al., 2008), and identified as one of the key areas where improvements in accessibility should be made (Brimelow & Lyons, 2009). This refers not only to gardens and grounds, but to the wider community to which residents want to remain connected.

Discussion

The care home: the complexities of building, staff and lifestyle Family members were better able to separate issues around the building itself, the type of lifestyle the building promoted and the quality of staff and the care they perceived their relative would receive. In addition, family members in our study reported wanting a building that was clean and provided a safe environment. Families also looked at how staff, activities on offer and the building would promote what they perceived to be 'quality' of care or life for their relative. In this way carers in our research reinforced the call from Torrington (2006) to look at the interplay between the building and the care delivered.

People with dementia living in the home were more concerned about the life they were able to lead due to the support systems in place, the provision of food that was generally seen to be good, the availability of stimulating activities that they enjoyed (e.g. carpet bowling, gardening, music, bingo and crafts). As such this reinforces findings that meaningful activities were important to people with dementia in care homes (Hancock, Woods, Challis, & Orrell, 2006; Orrell et al., 2008). Getting out and about, whether this was in the care home building and garden or on structured outings has also been reported previously as an important design feature (Chalfont, 2008) and important to people with dementia (Duggan et al., 2008).

The composition of each focus group, the location and the order topics are covered can all have an impact on the findings (Sim, 1998). The size and membership of all our focus groups varied. In addition, we adopted a purposive approach when selecting homes to conduct the focus groups to ensure we included purpose built and converted buildings from different care sectors (private, voluntary and statutory) in different geographical locations. It is possible therefore, that different issues could have been raised in different homes and with different residents. This therefore limits the generalisability of our data, a common limitation of small-scale qualitative research (Coffey & Atkinson, 1996). However, taken together, our findings demonstrate that people with dementia want environments that allow them to live in the way they want to, in buildings that enable their preferred lifestyles.

Conclusions

People with dementia and their family carers recognise design features that are important to them. The most important design features relate to wayfinding cues and outside space. These areas have been found to be important in previous research on either gardens (Chalfont & Rodiek, 2005), public spaces (Blackman et al., 2003) or on wayfinding (Nolan et al., 2002; Passini, Pigot, Rainville, & Tetreault, 2000) and our study concurs with these findings. We have also shown that the use of space is very important to both people with dementia and their carers; this is somewhat different from the research stressing the need for design features, for example carpet design and texture (Perritt et al., 2005) or design principles (Brawley, 2001). Thus, practitioners and managers need to regularly reassess their care homes to ensure that the spaces are being used as they were intended and that care staff do not alter the use of space to the detriment of the well-being of those who live there. Future research and those designing and planning care homes need to consider whether the design features are usable and meet the lifestyle preferences of people with dementia. Of crucial importance is that design meets the needs and wishes of all who live, visit or work there. While needs and wishes differ, design must accommodate all of them if care home living is to be acceptable to people with dementia.

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