



The relationship between building design and residents' quality of life in extra care housing schemes



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ABSTRACT

Well-designed housing is recognised as being an important factor in promoting a good quality of life. Specialised housing models incorporating care services, such as extra care housing (ECH) schemes are seen as enabling older people to maintain a good quality of life despite increasing health problems that can accompany ageing. Despite the variation in ECH building design little is known about the impact of ECH building design on the quality of life of building users. The evaluation of older people's living environments (EVOLVE) study collected cross-sectional data on building design and quality of life in 23 ECH schemes in England, UK. Residents' quality of life was assessed using the schedule for the evaluation of individual quality of life-direct weighting (SEIQoL-DW) and on the four domains of control, autonomy, self-realisation and pleasure on the CASP-19. Building design was measured on 12 user-related domains by means of a new tool; the EVOLVE tool. Using multilevel linear regression, significant associations were found between several aspects of building design and quality of life. Furthermore, there was evidence that the relationship between building design and quality of life was partly mediated by the dependency of participants and scheme size (number of living units). Our findings suggest that good quality building design in ECH can support the quality of life of residents, but that designing features that support the needs of both relatively independent and frail users is problematic, with the needs of highly dependent users not currently supported as well as could be hoped by ECH schemes.

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1. Introduction

Well-designed housing is recognised as being an important factor in promoting a good quality of life (QoL) (Evans et al., 2002; Parker et al., 2004; Wahl et al., 2009). Good quality housing is also seen as being instrumental in fulfilling the health and social care agendas for older people in the United Kingdom (UK), i.e., preventing or delaying the need for care (Department of Health, 2001). Moreover, good building design should contribute positively to making housing better for people to live in. The UK National Strategy for Housing in an

Ageing Society (Communities and Local Government, 2008) recommended that housing should support healthy, active and independent living in welcoming communities and be inclusive, attractive and sustainable for the ageing population. Specialised housing models incorporating care services, such as extra care housing (ECH) schemes, are seen as enabling older people to maintain a good QoL despite increasing health problems that can accompany ageing. Such schemes allow older people to live in their own flats or bungalows with a range of facilities and support designed to meet their needs (Department of Health, 2010). This is the first study to investigate the relationship between the design of ECH and QoL.

2. Background

Between 1983 and 2008 people aged 85 years and over formed the population sub-group in the UK that proportionately increased

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the most, from 600,000 to 1.3 million (Office for National Statistics, 2009). Population projections suggest that by 2033 this number will have increased again to reach 3.2 million, accounting for 5% of the total population. Furthermore, the population of centenarians is projected to increase from 11,000 in 2008 to 80,000 in 2033, and the population of state pensionable age (65 years and over) is projected to increase by 23% from 11.8 million to 15.6 million (Office for National Statistics, 2009). For policy makers such population ageing has implications for spending on health and social care services, resulting in new policy paradigms such as “active ageing” and “ageing in place”, which are developed to enable older people to maintain their mobility and independence, thereby avoiding expensive and dependency-enhancing institutional care (Walker & Lowenstein, 2009). The physical, psychological and societal effects of ageing are well documented with older people at risk of being affected by comparative poverty, poor physical and/or mental health, chronic physical or sensory impairment and social isolation. Such factors impact on housing need in terms of the suitability of housing design, location and facilities to support an acceptable QoL for older people.

Conceptually, QoL is perceived as a multidimensional construct containing domains of physical health, psychological wellbeing, social relationships and the physical environment (World Health Organisation Quality of Life (WHOQoL) Group, 1998). Ageing is often perceived as negatively affecting a person's QoL but, when other factors are controlled for, the effects of age on QoL may disappear. For example, results from the first wave of the English longitudinal study of ageing investigating QoL suggest that mobility and independence in activities of daily living, living in a neighbourhood perceived as being good and having trusted relationships with friends and family are significant contributors to a good QoL, whereas a poor financial situation, depression, limitations in physical activities and having a chronic illness are associated with a poorer QoL (Netuveli et al., 2006). Furthermore, Wahl et al. (2009) suggest that the maintenance of independence in activities of daily living and QoL are related to the utilisation and optimisation of environmental resources, e.g., housing. Taken as a whole, the above research suggests that a good QoL can be sustained in later life given a supportive environment that reduces the impact of any functional limitations.

The home environment is acknowledged as being the primary context for growing old (Scheidt and Windley, 2006; Wahl and Gitlin, 2007), with older people preferring to age in place for as long as possible (American Association of Retired Persons, 2003). As people age they spend more time in their home (Baltes et al., 1999; Wahl and Gitlin, 2007). Analysis of data from the English House Condition Survey suggests that people over the age of 65 years spend more than 80% of their time in their homes, increasing to more than 90% for people aged 85 years or over (Adams & White, 2006), whereas younger people spend more of their time away from the home due to work and social commitments (Gershuny et al., 2005). Spending so much time at home has the effect that the home becomes more important for creating meaning for the older person (Rubenstein and De Medeiros, 2004). Consequently, the home is more likely to enhance or to undermine the health and well-being of older people as environmental factors are not only related to negative health events, such as falls (Gitlin, 2003; Oswald and Wahl, 2004) or disability-related outcomes (Wahl et al., 2009), but also to positive health-related outcomes, such as independence in daily activities of living and subjective well-being (Evans et al., 2002; Oswald and Wahl, 2004; Oswald et al., 2007). The type of housing that people occupy as they age will therefore be important in fostering health and social well-being.

ECH is a relatively recent form of housing that has been developed in the UK. Similar models are “Aanleunwonen” or “Wonen Plus Living” in the Netherlands and Germany, “Housing with Care” in Australia and Canada, and “Continuing Care

Retirement Communities” and “Assisted Living” in the USA. ECH has been developed to provide higher levels of support than sheltered housing. Residents have self-contained apartments or bungalows in developments that include a wider range of communal facilities than are normally provided in sheltered housing schemes, and personal care based on assessment of needs is available. The expectation is that for many residents ECH will be a home for life and will reduce the need for residential or institutional modes of care. Between 2004 and 2010 the UK government provided £227 million total capital funding from the Department of Health's Extra Care Housing Fund Initiative to stimulate developments and partnerships between social services departments, housing authorities, care providers and the private sector and social housing developers (Darton et al., 2012).

There is considerable variation in size and typology across schemes, encompassing villages with several 100 units to small scale developments and remodelled schemes. The scale of the development determines a number of factors. Larger schemes, such as retirement villages with more than 100 dwellings offer economies of scale, allowing for more extensive communal areas and a wider range of non-care facilities and activities, e.g., fully equipped gymnasias and spas, restaurants and activity specific workshops (Croucher, 2006). Smaller schemes are easier to site and simpler to plan because they have fewer facilities (Callaghan et al., 2009), and may use communal facilities for more than one type of activity, e.g., a restaurant can also serve as part of the communal activities area. In some instances existing sheltered housing schemes have been remodelled as ECH schemes. Remodelling typically involves “cutting and carving” of existing sheltered housing in order to provide larger individual units and communal spaces, renewed services and finishes and to bring buildings into line with current regulatory requirements (Wilkes, 2007).

Despite the variation in the building design of ECH, the underlying aims of such schemes are to maintain or improve independence in daily activities, reduce social isolation and improve the QoL for residents. To date, however, there is a lack of research that has examined the relationship between building design and the QoL of older people living in ECH schemes. Furthermore, until now, there has not been a suitable tool available to capture and to measure building design in ECH as the building design in this context refers to a variety of building attributes ranging from the use of space (macro level design) to individual design elements, e.g., type of tap (micro level design).

The aims of this study were therefore twofold: (1) to produce an evidence-based building evaluation tool that would be suitable for use in assessing housing developments designed for older people and (2), to use this tool to explore the relationship between building design and the QoL of older people living in ECH schemes. The EVOLVE (*Evaluation of Older People's Living Environments*) tool (Lewis et al., 2010a) was developed by the research team from literature reviews, policy guidelines, reviews of recent buildings, design guidance, the results of evaluations of building surveys, quality indicators, focus groups with ECH scheme residents and their relatives, and expert consultations. This development work is reported elsewhere (Barnes et al., 2012; Lewis et al., 2010a, b). In this paper we report the key findings of analyses which investigated the relationships between the micro and macro aspects of building design using the EVOLVE tool and the QoL of older people living in ECH schemes.

3. Method

3.1. Design

A cross-sectional survey-based design was used.

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