



## Strategic Promotion of Ageing Research Capacity

# Communication with Older People in the Design of Major Housing Adaptations

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# Communication with Older People in the Design of Major Housing Adaptations

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The key to successful housing adaptation is the resident's ability to visualise what the completed work will look like. Many older people are concerned that a proposed adaptation will unfavourably change what they regard as their home, and so do not agree to adaptations being made. Visualising the appearance of the home after an adaptation is very difficult. In this research, six domestic adaptation projects were investigated. Properties were inspected, and interviews were carried out with residents and, in some cases, with their carers. Interviews were also carried out with a range of professionals. The ability to visualise what the finished adaptation would look like was found to be greatly influenced by the way in which the reasoning for the adaptation was presented and communicated by the occupational therapist. This had a direct impact on the satisfaction that the residents had with the end result, as did the aesthetic appearance of the completed work.

## Key Findings

- Older people who need adaptations to their homes are largely satisfied with the outcomes. Despite this, the adaptations are often not what they themselves believe would most appropriately meet their needs. This is usually because of the constraints of space, cost and health limitations. To a major extent, this satisfaction is due to the ability of the occupational therapist to articulate the benefits of specific adaptations in a manner which is convincing, and captures the trust of the individual requiring the home adaptations. It is essential that occupational therapists and other professionals who work with older individuals who require housing adaptations are able to effectively communicate details about the project to clients who are not familiar with technical building language.
- Most clients are pleasantly surprised with the result of a home adaptation, especially improvements in safety, and the support the adaptation gives to carers as well as the client. The appearance of the final adaptation has a major influence on client satisfaction, and many older people will fund work that is additional to that provided by the Disabled Facilities Grant to achieve a higher specification finish.
- For many older people, visualising the outcome of an adaptation project is difficult. Although professionals can use a variety of methods to illustrate the intended outcome, these may not be effective. This is problematic for some clients, but others are less concerned, and are willing to accept the advice which is offered. However, better communication methods need to be developed, especially to assist occupational therapists.
- Many researchers argue that *client-centred planning* is of great importance to achieving client satisfaction. This study shows that by carefully conveying professional knowledge, the clients' trust and satisfaction can be achieved. This approach demands sensitivity and professionalism from all in the briefing, design and construction process.

# Introduction

## The Issues

Many older people continue to live in their own homes, despite the considerable challenges arising from increasing frailty and disability. Major adaptations can help but they may not always meet the expectations of the resident. The way in which the adaptation process is discussed (the **dialogue**) with the resident (the **client**) during the design phase is very important in determining their level of choice, control, and satisfaction with the outcome. An equal partnership between the occupational therapist and the client should develop, with the client at the centre of the decision-making process without the professional imposing their own ideas.

Visualising exactly how a completed adaptation will look can be difficult. Technical drawings and written specifications can be hard to interpret. Three dimensional drawings, sketches, perspective drawings, photos of previous projects, models and computer assisted 'walkthroughs' of virtual environments, can help in this process.

## The Aims

This study investigated communication processes during the design and construction of home adaptations. The aims were:

- to explore the nature of communication between older clients, their family, occupational therapists, staff in social services, and surveyors, in the briefing and design process for home adaptations;
- to identify and examine the roles of the professionals involved in determining client needs and initial solutions, and in locating the sources and extent of knowledge related to key design and implementation issues.

## The Study

Six case studies of individual adaptation projects were compiled, focusing on the working processes of a social services department of a single London Borough in relation to the design and completion of major adaptations through the Disabled Facilities Grant system. Each project had involved substantial structural adaptations and, thus, complex design issues.

All the projects were bathroom adaptations with either a level access shower (LAS) or a walk-in-shower, a washbasin, and a toilet/closet. Additional equipment included pumps for water extraction, wall-mounted shower seats, grab rails in various positions, and extra seating. In three projects there was a major reorganisation of the room layout; walls were replaced and an adjacent space was integrated into the bathroom. All the bathrooms were fitted with non-slip flooring; two included a wheelchair turning space.

Semi-structured interviews were carried out with the clients, their carers, and professionals involved which included occupational therapists, grant surveyors, consultant surveyors and builders. The interviews lasted between one and one and half hours and were conducted by a qualified architect. Participation in the study was voluntary and anonymous. Interview topics included: the nature of the adaptation; the quality of the communication around the proposed adaptations with the professionals involved; the quality of the adaptation work; and satisfaction with the outcome.

Direct observation of the adaptations was carried out during the interviews with the clients. Photographs were taken; drawings made before and after the adaptation by the professionals involved were examined; schedules for construction, and client related documents such as letters and forms were also collected.

Of the six clients, five were owner-occupiers and one was a housing association tenant. Their ages ranged from 45 to 93, and there was an even split of men and women. The clients had a variety of disabilities and problems, which in all cases affected their mobility and balance to some degree. Four had been using their adapted bathroom for approximately six months, one for more than a year, but one was still awaiting completion.

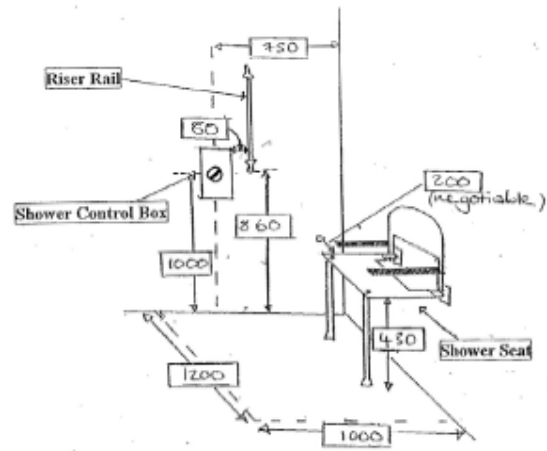
The professionals included: four occupational therapists; four grant surveyors; three builders from the borough's list of approved builders; and two consultant surveyors responsible for housing adaptations in the Housing Association.

Interview topics included: quality of, and difficulties in, communication about proposed adaptations with clients and other agents; reasons for any communication difficulties; the means used to facilitate communication; sources of information; access to knowledge; special techniques for conveying messages; and a discussion of areas of special difficulties.

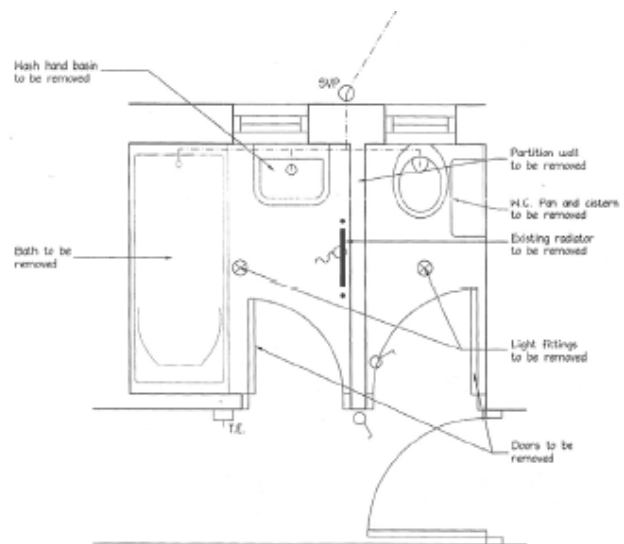
### **The organisation of the projects**

Each project had two major phases, design and construction. The design phase started with the client being assessed by the occupational therapist during an initial visit to the client's home. Additional visits occurred, depending upon the complexity of the required adaptation, and on the client's understanding of the project.

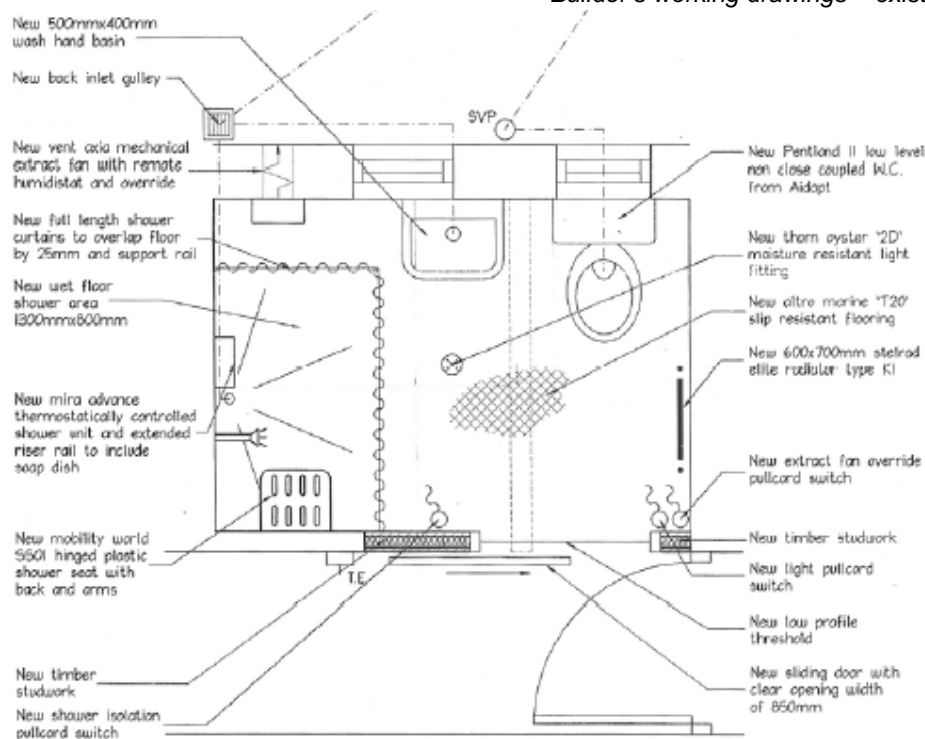
After the initial assessment, the occupational therapist made recommendations on the adaptations required. The grant surveyor then produced an adaptations proposal based on a technical assessment of the house and on the occupational therapist's recommendations. During the construction phase, the surveyor was responsible for the supervision of the adaptations work, and there was substantial contact between the builder and the client. Clients were informed about the Disabled Facilities Grant (DFG) process early on in the meetings with the occupational therapist.



*Occupational therapist's drawing*



*Builder's working drawings – existing bathroom*



*Builder's working drawings - proposed layout*

## Findings

### ***Communication between client, occupational therapist and surveyor***

For the consultant surveyors, good communication was central to project success; problems arose when it was difficult to communicate with any one party. All of the professionals spoke about the key role of the occupational therapist in the process, as they had the most contact with the client and responsibility for explaining the adaptation proposal. Clients confirmed this, but some also had significant contact with the surveyors. All expressed appreciation of the professionals involved, especially the occupational therapists.

The majority of the clients felt the adaptation was not what they had originally envisaged. This was usually because of lack of space or because the client's health condition precluded the desired adaptation. Whilst their input to the design was relatively small, they accepted what the occupational therapist suggested. There was no instance of where they had felt overruled, not listened to or not respected: they felt involved and informed. Their trust in the occupational therapist was of major importance in establishing and maintaining a successful dialogue.

### ***Clients and adaptations***

There were some areas where clients did have influence over the design, especially the appearance of their bathrooms. For example, because the Borough would only pay to tile those areas of the bathroom walls exposed to water and limited the colour to white, each had paid privately for different finishes, such as extra tiling, coloured tiles, different colours of floor covering, halogen light fittings, or decorated wall paper. Some had added furnishings and fittings such as Venetian blinds, curtains, mirrors and cupboards.

### ***Clients' understanding***

All the professionals had worked with clients who could not actually visualise what the adaptation proposal would look like. This problem was not necessarily age-related, although there was a relationship with physical and psychological health. There were also problems in visualising an adaptation where the client had not seen anything like it before.

Efforts were made to help clients understand. No project moved ahead without the consent of the client, which implied some level of understanding. However, sometimes clients did not really appreciate the full implications of the design. After completion, though, they reported that the adaptations were to their full satisfaction.

### ***Methods of communication***

Several approaches were used to help clients understand the proposals. The most basic was to explain the adaptation to the client, the layout, the equipment and how it would function. Sketch drawings were used in support. Clients received a schedule of work, sketch drawings, and a technical drawing. The technical drawing showed the size of the shower tray, the position of the shower fitting, and the wall mounted shower seat, if provided. In addition, supplier catalogues were used, and sometimes photos of previous adaptations. Some clients indicated that they had, in principle, understood the drawings, even though they were not very detailed and used very simple symbols.

The clients revealed different levels of concern about the information provided; some wanted more, others did not. Some had been invited to visit an equipment showroom; three had done so. Others went to an existing adaptation in their neighbourhoods. One had visited demonstration centres; spoken with the occupational therapist, a multiple sclerosis (MS) nurse, and a company in the field; and had looked on the internet. Another felt that she had too much information, at the wrong time, from a commercial catalogue; it did not make sense to her and she threw it away. One client had not been worried about the outcome; she had a general idea but was not able to visualise what the bathroom would look like when completed.

Discussion in this case was minimal; she just signed and sent back the agreement form.

In general, despite the different strategies, trying to visualise how an adaptation would appear in a particular home environment was difficult.

### ***Aspects of understanding***

All clients said that the occupational therapist had explained the use and function of the adaptation as well as the safety benefits. Yet, according to the professionals and the clients, many were surprised by the outcome. This was partly because of confusion caused by the technical terms in the specifications and drawings, although some accepted that this was beyond their knowledge. For example, the technical term of 'wet floor' gave the impression of water going all over the floor. Initial concerns were raised about the use and function of the level access shower, especially as most of the clients had never seen one before. Other concerns included: ease of cleaning; worries about scalding or freezing if they were to fall in the shower; would the shower seat be steady enough; whether the curtain would be too heavy; where the shower gel would be kept for ease of reach. Worry about space was common among the clients. There was a lack of understanding about how the lack of space would be handled, or how space would be reorganised.

Many of the positive reactions revealed the initial difficulty of being able to imagine all the

benefits of a level access shower. For instance: the way they supported carers with their tasks; greater convenience and safety than expected; and improved independence. Some clients had developed care routines with their helpers, which they continued to engage in once the adaptation was completed. They had not foreseen or used the opportunity for changes in care practices. Some were worried that they would be unable to adapt to the new environment or use the bathroom at all. Indeed, some did not use the new equipment.

Most clients had been worried about the inconvenience of the construction phase and about how the builder would manage some of the works. One builder said that people were often concerned when things were taken out, but they relaxed when the construction came closer to completion. Another builder said that clients often had a very vague idea about the construction process itself and about how much disruption it was going to cause them.

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## Discussion and Implications

### **Professional framing**

The clients' influence on the design was, in most cases, virtually non-existent, but any disappointment with this was not evident. A major factor was the occupational therapist's **professional framing**, an ability to present a rationale for an adaptation in such a way that the occupational therapist gains the client's trust. This requires a delicate balance between professionalism and an attitude which shows sensitivity to the client's wishes.

Professional framing is perceived as positive when the project ends in a fully functioning adaptation, but may be interpreted negatively where the adaptation has failed to fulfil its purpose. The client may then remember their experience of the adaptations process as being 'forced' into an unwanted solution.

All clients were pleased with the aesthetic outcome of their projects. The extra costs, which all had incurred for additional tiling and other decoration, reflect the importance of the appearance of the adaptation to many clients. Indeed, satisfaction with the adaptation may have been substantially derived from aesthetic components.

### **Presentation of information on design**

Most clients had been able to visualise, to some extent, what the bathroom would be like but said that the appearance of the bathroom turned out to be better than they had expected. Whilst this was a positive outcome, it still implied a lack of effective communication.

The professionals were aware of the clients' difficulties in understanding and visualising an adaptation. Meeting their information needs was a challenge. Although all clients had accepted the proposed adaptation, made easier because of the trusting relationship established by the occupational therapist, none fully grasped all aspects.

The success of methods of communication used to convey information was variable and visualising the adaptation in the context of their own home environment still proved difficult.

Recently, there has been much interest in the development of CAD 3D visualisation systems. Whilst this study does not provide any evidence about how acceptable these might be to clients, they could provide yet another aid to visualisation, which could be valuable to all parties.

### **Function**

Occupational therapists gave particular attention to explaining the use and benefits of an adaptation; often this involved addressing complex issues. Many clients had appreciated the safety benefits, but enhanced comfort and the improved levels of independence were a surprise. The clients then developed novel ways of using the adaptations which the occupational therapists had not initially anticipated. The benefits to the carer and to the wider family were often greater than expected.

### **Technical matters**

Clients were concerned about the technical functioning of the adaptation. A major concern among many female clients and carers was whether the water from the shower would fail to drain away as planned or flood the room.

### **The construction process**

A number of issues in relation to the construction phase were a concern to clients and this was confirmed by the builders. It was suggested that occupational therapists should continue active contact with the clients throughout the construction phase.

### **Conclusions**

The client's understanding of an adaptation includes comprehension of many tangible and intangible, private, tactile, sensual, body-based factors, in which aesthetics has a major influence, especially on satisfaction.

The importance of visualisation of the finished adaptation is of key importance to a client's understanding of the design issues. This is enabled by the ability of the occupational therapist to present and communicate the rationale for the adaptation.

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## The Study

The study received financial support from SPARC of £30,500 and ran for 15 months ending in July 2007. Additional support was provided by London South Bank University.

More information about the study can be found on the SPARC website [www.sparc.ac.uk](http://www.sparc.ac.uk) and obtained directly from the investigators.

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## Ethical Approval

Ethical approval for this project was given by the host university and the borough council involved with the study.

## SPARC

SPARC is a unique initiative supported by EPSRC and BBSRC to encourage the greater involvement of researchers in the many issues faced by an ageing population and encountered by older people in their daily lives. SPARC is directed, managed and informed by the broader community of researchers, practitioners, policy makers and older people for the ultimate benefit of older people, their carers and those who provide services to older people.

SPARC pursues three main activities:

**Workshops** to bring together all stakeholders interested in improving the quality of life and independence of older people.

**Advocacy** of the challenges faced by older people and an ageing population and of the contribution of research to improving quality of life. SPARC is inclusive and warmly welcomes the involvement of everyone with a relevant interest.

**Small Awards** to newcomers to ageing research, across all areas of design, engineering and biology and at the interfaces relevant to an ageing population and older people. In 2005 and 2006 SPARC received 185 applications for support in response to two invitations for competitive proposals of which 34 were supported.

## Executive Summaries

SPARC is supporting its award holders through funding, mentoring, a prestigious dissemination platform, professional editorial assistance, international activities and provision of contacts. Each of the projects has been small, yet the enthusiasm for discovery, and impatience to contribute to better quality of life for older people, has more than compensated for the very limited funding which was provided.

This executive summary is one of a series highlighting the main findings from a SPARC project. It is designed to stand-alone, although taken with summaries of other projects it contributes to a formidable combination of new knowledge and commitment by newcomers to ageing research, with a view to improve the lives of older people. This is a tangible contribution towards ensuring that older people receive full benefit from the best that research, science and technology can offer.