‘There’s a hell of a noise’: living with a hearing loss in residential care

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Abstract

Background: hearing loss is common in older age. Research with older people in residential care settings has identified high prevalence of hearing loss and low uptake of hearing aids. Hearing loss in these settings is associated with reduced social engagement. Although hearing aids remain the default treatment for presbyacusic hearing loss, these are not well used. We do not know what other modifiable factors contribute to communication problems for older people with hearing loss living in residential care.

Objectives: to explore the factors affecting communicating with a hearing loss in residential care.

Methods: an ethnographic study in two residential care homes comprised 19 sessions of observation, and in-depth interviews with 18 residents. Observations explored communication behaviour in everyday interactions, including mealtimes, structured groups and informal group activities. Interviews were informed by the observations and identified reasons for these behaviours and communication preferences. Observational data were recorded in field notes and interviews were audio-recorded and transcribed. Analysis was conducted using constant comparison methods.

Results: hearing loss affected whether residents were able to access social opportunities. Two key themes influenced this: (i) contextual issues compounded communication difficulties and (ii) environmental noise restricted the residents’ communication choices. Problems were observed at every mealt ime and during formal and informal group activities. The use of hearing aids and access to hearing services did not improve social engagement.

Conclusions: environmental and social factors are key to maximising communication opportunities. Improvements to communication in residential care settings could be based on changes in these with input from residents and staff. Further work is needed to develop effective communication strategies in residential care.

Keywords: older age, hearing loss, communication, hearing aid, residential care, elderly
Introduction

Hearing loss is common in older age: 1 in 10 people aged 55–74 years experience it, rising to approximately 5 in 10 of those aged 75 years and continuing to rise thereafter [1]. Reported prevalence of hearing impairment in residential populations is particularly high with estimates at 80–86% [2]. Hearing impairment is associated with reduced social engagement in residential settings, which leads to feelings of helplessness, social isolation and depression [3, 4].

A bio-medical solution to this scenario is to assess hearing levels of the residents and issue hearing aids, where audiometric thresholds suggest they would be helpful [5]. However, hearing aids are under used [6, 8]. Background noise levels and adjustment to hearing aid wear are problems and barriers to their use [2–10]. Alternative explanations for low uptake of hearing aids are individual preferences and ‘normalising’ coping styles where problems arising from ears and eyes are considered part of ‘normal ageing’ [6]. Interventions to improve uptake of hearing aids have been proposed but not fully evaluated [3, 7, 11, 12].

The focus on hearing aids as a potential solution to communication problems does not address other underlying issues. Without further detailed investigations of the reasons for communication difficulties, it is difficult to design appropriate interventions. Hearing needs have not been addressed by previous attempts to improve social engagement or activity [13, 14]. This study examines communication with a hearing loss in residential care. The research assumes the theoretical stance that communication breakdown is a shared problem embedded in psychological and social dynamics [15]. Communication in social institutions has been theorised as providing a means to social equilibrium [16, 17]. Within a social institution individual choices in communication are influenced by the mutually understood social rules that govern the status quo. Communication theory suggests that knowledge of these social rules determines choices made in communication [16].

Methods

An ethnographic approach was employed which comprised observations of the nature of communication, social relationships and environment. Interviews were used to explore observed factors in more detail [18, 19]. Ethnography provides uniquely fine-grained, detailed insight into daily life [20, 21] and has been successfully applied in other studies of residential settings [22]. Interviews were informed by the observations and as a whole these data provided information that questionnaires or one-off interviews are unable to provide.

The setting

The research took place in two residential care homes run by the same public Health and Social Care organisation. All residents are assessed for care needs prior to arrival and are allocated accommodation on the basis of their needs assessment. The homes each cater for up to 15 residents with dementia on one floor, and 15 residents who require personal and nursing care on a separate floor. The two settings are very similar with identically designed buildings and amenities. Staff may work across both homes or be based in one and share training and employment structures. At the time of the study, there were 57 residents within the homes.

Data collection

The first author (H.P.) undertook 19 periods of observations in the 2 homes over a period of 6 months in 2010. Observations averaged 4 h each and were spread across a 12 h time-frame (7 a.m.–7 p.m.) to capture daytime routine, activities and interactions, including 27 mealtimes, 9 structured group activities (music sessions, quizzes, book groups) and 40 informal group activities (watching television, tea, informal conversations between groups of residents). Observations were made in the communal areas of such as day rooms, lounge areas and dining areas. Following observations, interviews with residents in their private rooms explored their perspectives on hearing and communication. Residents were asked about observed interactions and to comment on communication and how hearing loss might affect it. The researcher (H.P.) is a Hearing Therapist with experience in working with older people with a variety of communication difficulties and this facilitated access to the settings. To reduce the influence of this professional role on residents’ insights, the researcher sat with them in communal areas to observe the working of the home as a resident might. This facilitated observations of staff–resident and resident–resident interactions. Observational data were recorded by written field notes made during or immediately after observations. Interviews were audio-recorded [20].

Sample

Of the 57 residents, only those with capacity to give fully informed written consent were eligible to participate and, on the advice of care staff, this reduced the possible sample to 30 residents in total. All 30 were approached and 18 residents provided their written informed consent to take part. In addition, 7 of the 16 care staff working within the homes consented to take part in the study as consent from staff as well as residents was needed to enable observation of communication and interaction. Participating residents included those with varied experiences of hearing loss, both direct and as communication partners. This provided contrast within the data set. All participants provided their written consent to be audio-recorded and observed.

Ethical approval was provided by the local NHS Research Ethics committee and local Research Governance approval was obtained.
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Data analysis
Audio recordings of interviews were transcribed. Transcripts and written field notes of observations were anonymised. Both sets of data were analysed using a thematic approach informed by grounded theory [19]. Codes were assigned to portions of the data and linked together to explore their properties and dimensions. Individuals with dementia who were capable of informed consent were included because people with dementia have frequently been excluded from research as active participants [23]. Our qualitative approach enabled inclusion of their perspectives. Where participants experienced dementia, data were analysed using established approaches for the meanings within indirect references, metaphors and allusions [24]. These approaches enable us to see beyond the literal meaning of utterances and appreciate the intended meaning. To triangulate perspectives in data analysis, six transcripts were coded independently by the second author and agreement was reached about codes. Follow-up interviews with two residents provided respondent validation by checking findings [21]. Data presented here comprises material from field notes and interview transcripts.

Results
Participants
Of the 18 study participants, 8 were recruited from the dementia floor and were identified by care staff as experiencing dementia including Alzheimer’s disease, vascular dementia and dementia with Lewy bodies. Fourteen were female and four were male and they ranged in age from 76 to 99 years. All initials relate to pseudonyms.

Data relating to self-reported hearing ability and perspective on hearing are presented first. This is followed by presentation of the two key themes that emerged from analysis of communication practices: social context and environmental factors.

Hearing history and perspectives on hearing
Eight of the residents were regular hearing aid users, eight identified themselves as having hearing difficulties but had not sought help for them and two people considered their hearing to be good (Table 1). Access to hearing services relied on staff or family and friends to facilitate access to hospital or clinic settings. In both of the residential homes, there were no specific services to help with hearing aid maintenance, no additional access to environmental equipment (e.g. television or telephone aids), and no staff training specific to hearing services. Most residents had not accessed hearing services and in some cases there was disparity between self-reported hearing ability and the functional hearing difficulties observed by the researcher (Mrs F, Mrs O). Some residents reported that they had not received or sought diagnosis of hearing loss, but did miss out on some conversations (Mrs D, Mrs G, Mrs P) or were aware that they had a hearing loss for which they had not sought help (Mrs E, Mrs H). Residents with some degree of dementia were at increased risk of communication breakdown as mis-hearing coupled with cognitive and expressive language difficulties made it more difficult for them to maintain conversation. Some residents described feeling ‘unwanted’ and as though others were not concerned with their well-being (Miss A, Mrs D).

The social context
Communication tended to be task focussed, with carers providing choices or requesting actions or residents describing needs or wants. In addition there were opportunities to communicate in structured activities, for example music group or during group games and quizzes. The observations of these group interactions indicated that hearing loss frequently affected participation, as shown in this field note excerpt:

Staff member comes in run a quiz. Mrs R is sitting next to me. ‘Can’t we have it off’ she says indicating the TV in the corner. No one responds. The questions are spoken some 12 foot away across the room. The carer raises her voice to make the question louder. Mrs R turns to me ‘what did she say?’ I tell her the question. After each comment or question she me to repeat until she gives up and drifts off to sleep. (field note 16)

The resident’s choice is limited to the behaviours that are socially sanctioned in this context. Reflecting on this event, Mrs R felt that her hearing difficulty and the breakdown in communication were not significant enough concerns for her to challenge the speaker:

I’m not too bad really. I don’t always hear everything. (Mrs R)

Therefore, when Mrs R fell asleep, she minimised costs of challenging the group interaction.

Mealtimes provide a key opportunity for social interaction and similar choices were observed at mealtimes (Table 2). Background noise affected communication during every observed mealtimes. Staff reported that residents tended to sit in the same places each day, which was on tables of four. The observations revealed limited interaction. The interactions that did occur were brief and included simple statements of friendship: ‘We always sit together don’t we’ (Mrs P). Most interactions were between staff and residents and these were usually needs focussed, for example, staff asked: ‘do you want another cup of tea?’, and, ‘would you like toast or porridge?’

Staff are waiting on the tables and one resident wants to go to bathroom. She nudges away from table and starts to move zimmer frame towards her. Carer continues to offer pudding choices to other residents and is then distracted to mop spilled tea on a table.
Table 1. Participants’ hearing history and views about hearing

<table>
<thead>
<tr>
<th>Resident</th>
<th>Age</th>
<th>Self-reported hearing ability</th>
<th>Perspective on hearing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miss A</td>
<td>89</td>
<td>Has a severe hearing loss and is a hearing aid wearer. Spinal curvature makes eye contact at table difficult and reduces her communication opportunities</td>
<td>Reports that her hearing loss contributes to depressive feelings including feeling ‘unwanted’. She describes feeling helpless and hopeless about hearing</td>
</tr>
<tr>
<td>Mrs B</td>
<td>88</td>
<td>Has a previously diagnosed hearing loss and reports little aid use. Relies on TV subtitles and manages with amplified telephone</td>
<td>Reports that she is not keen to change much to do with hearing. She considers her hearing to be a low priority</td>
</tr>
<tr>
<td>Mrs C</td>
<td>85</td>
<td>Has relatively little apparent hearing difficulty but some cognitive and memory problems with dementia. She has not sought any help for her hearing</td>
<td>Enjoys the social aspect of life in residential home. She worries about others who may not hear well</td>
</tr>
<tr>
<td>Mrs D</td>
<td>82</td>
<td>Reports hearing difficulties. She also describes some anxiety about needing to go out. She is open to possibility of a hearing aid but has not sought help up to now</td>
<td>Reports that she is able to manage in interactions but is anxious about access to hearing services and need to travel</td>
</tr>
<tr>
<td>Mrs E</td>
<td>98</td>
<td>Reports a severe hearing loss, and uses a hearing aid. Isolates herself in her room to manage communication difficulties</td>
<td>Reports little motivation to change her situation. She considers herself happy with strategies to manage</td>
</tr>
<tr>
<td>Mrs F</td>
<td>89</td>
<td>Reports no diagnosed hearing loss but refers to missing out on conversations</td>
<td>Is not considering accessing hearing services. She finds communication with others with hearing loss frustrating</td>
</tr>
<tr>
<td>Mrs G</td>
<td>75</td>
<td>Has not been assessed but she suspects she has a loss</td>
<td>Finds communication without lip-reading frustrating</td>
</tr>
<tr>
<td>Mrs H</td>
<td>83</td>
<td>Is not sure about own hearing but reluctant to use aids</td>
<td>Her husband had a history with hearing aids before she became a resident</td>
</tr>
<tr>
<td>Mrs I</td>
<td>97</td>
<td>Has two hearing aids with which she is generally happy</td>
<td>Identifies practical difficulties, particularly that using the telephone is difficult</td>
</tr>
<tr>
<td>Mr J</td>
<td>95</td>
<td>Possesses two hearing aids, one of which is broken. He describes difficulties with management of the hearing aid and that staff seem not to know how to help</td>
<td>Unable to access much communication in home and relies on withdrawing to room</td>
</tr>
<tr>
<td>Mr K</td>
<td>97</td>
<td>Possesses two hearing aids and wears one of them. He has difficulties managing his hearing aids. He relies on family to assist with battery changing</td>
<td>Finds using the telephone and TV difficult and he cannot manage to hear at mealtimes. He reports feeling depressed and hopeless about hearing</td>
</tr>
<tr>
<td>Mr L</td>
<td>97</td>
<td>Has a hearing loss but does not wear aids. He reports that his right ear is completely deaf and he relies only on the left</td>
<td>Reports feeling trapped and depressed by lack of stimulation including the opportunity to have full conversations</td>
</tr>
<tr>
<td>Mrs M</td>
<td>99</td>
<td>Reports that she wears her hearing aid and manages it well but she needs repair to tubing. Said that staff did not know how to manage this</td>
<td>Reports finding communication difficult unless people are close by. She misses social communication</td>
</tr>
<tr>
<td>Mrs N</td>
<td>87</td>
<td>Reports a long standing hearing loss and tinnitus. She has had no hearing assessment or hearing aids</td>
<td>Reports some communication difficulties, although says she has good lip-reading ability</td>
</tr>
<tr>
<td>Mrs O</td>
<td>84</td>
<td>Identifies herself as having no hearing loss and has not sought any help. Observations indicate that she has an apparent hearing loss</td>
<td>Thinks that hearing difficulties are inevitable in older age</td>
</tr>
<tr>
<td>Mrs P</td>
<td>82</td>
<td>Identifies that she has a hearing loss but has not sought help. She sees her role as to support others</td>
<td>Notes that her concerns are primarily for others. She dislikes background noise</td>
</tr>
<tr>
<td>Mrs Q</td>
<td>86</td>
<td>Reports a significant hearing loss and she owns hearing aids but tends to keep them in her handbag</td>
<td>Relies on friends and family to assist with her hearing aids. She does not like to ‘trouble’ staff with them</td>
</tr>
<tr>
<td>Mr R</td>
<td>82</td>
<td>Has not had his hearing assessed. He considers it to be good</td>
<td>Has accessed some groups and social activities but additional cognitive difficulties make full participation difficult</td>
</tr>
</tbody>
</table>

Resident continues to try to get up and asks for help, sounding increasingly distressed. Eventually staff are free to help her stand up to go to bathroom. (field note 3)

Residents reported that they deliberately chose their communication opportunities, including social group attendance, meals in a communal area or seeking out contact in a social area:

I can talk when I want to. (Mrs E)

In addition, people deliberately sought isolation:

I don’t know what other people would react but I’m not over bothered about not being able to mix or anything like that. (Mr E)

I come in here and I shut myself away and that’s how I keep my sanity. (Mrs F)

Residents’ choices about communication relied on them being able to remove themselves from social situations. However, observations suggested that this choice was not always preserved (Table 2). Where residents relied on staff to collect or take them back to their rooms around mealtimes they spent longer periods of time in the dining room waiting for staff to take them back to their room or to elsewhere.

Otherwise, residents who tried to communicate with each other were frequently observed to experience communication breakdown when noise levels from music or television, from other residents or from staff raising voices or singing along to music made it difficult to hear each other.
In this case, residents often stopped attempting to speak against background noise.

**Environmental factors**

Music and television were played regularly in both settings. At every observation of a meal additional music or television was present. Only once were staff observed to ask residents whether they wished to have music playing. The room layout contained a dining area with a hatch through to a kitchen through which a staff member would serve food and drink while also moving crockery and loading the dishwasher. As a result there was considerable background noise in the dining rooms. This led residents to comment:

> When I come into the dining room I don’t hear nothing because there’s a hell of a noise. (Mr K)

However, while residents discussed background noise with the researcher, they had not raised it with staff who had the ability to reduce or remove the extraneous sound:

> I often think, oh gosh I wish they’d switch that off once in a while. (Mrs C)

> It’s sad really because I don’t keep up with what they’re saying. (Mrs G)

> It’s a terrible feeling … I’ve just got to put up with it. (Miss A)

Interviewer: What would you like to do with your hearing that you can’t at the moment?

Participant: Well – a conversation with anyone. (Mr K)

The study showed that residents make choices based on the need to preserve the equilibrium within their social setting. Such observations are explained in social exchange theory as a process of negotiated exchanges between individuals [17].

**Discussion**

Our work revealed that the choices in communication were influenced by the care home environment rather than hearing loss as ‘impairment’. This removal of choices was a complex phenomena caused not only by the internal factors (hearing loss), but also by social context and the environment in which communication opportunities were available. Within the care environment choices about communication are informed by the needs of residents. These needs shaped the opportunities to communicate and the nature of the communication that took place. These needs appeared consistent between those with additional dementia and those without.

Lack of spontaneous communication between residents has been observed in other studies of residential settings [25–28]. However, previous work has emphasised the role of hearing as a cause of limited communication [11, 12]. Suggestions to improve this problem have included the idea that carers could have a role in audiological care by providing a modified listening environment which reduces background noise to improve signal to noise detection [6]. However, our study indicates that this does not happen in all residential settings and that residents lack choice in their communication options. The choice is limited by the background noise present and the perceived social acceptability of asking for changes in noise levels.

This study lends a new perspective to an established problem. The ethnographic study design of observation followed by interviews enabled in-depth probing in interview about observed communication practices. Data collection took place in two publicly run care homes. Although there is likely to be variation between areas and structures of care homes, and there is scope for research in other regions, the detail and richness of the data means that findings are likely to resonate with other settings [21]. The researcher’s professional expertise as a Hearing Therapist framed the communication style and hearing difficulties were observed as a problem with potential, as yet untapped, solutions. As participants knew of this role, they may have been influenced to emphasise practical aspects of hearing over a fuller description of communication. However, the researcher brought insight into common hearing problems and is herself hearing impaired. As such she was able to experience some of the difficulties experienced by residents.

**Conclusions**

The lack of uptake of hearing services in residential care has been well documented [9, 10, 22, 29]. Previous research identifies that low uptake of services relates to barriers to access and the nature of the services themselves. However, our study suggests that individual hearing difficulties are compounded by a social and environmental context which shapes choices in communication. The restriction in opportunity to communicate is not openly discussed between staff and residents. To address these issues, it would be helpful to conceptualise hearing loss as a shared communication difficulty within care settings and not only as an individualised impairment which requires remediation. Didactic training and patient-based assessment and amplification
strategies are therefore only likely to achieve limited success. More significant changes may require discussions about the role of communication and the effects of background noise as well as the involvement of residents and staff in devising improvements. Future interventions should aim to make explicit the choices that are being made and to present alternative options.

Key points

• Hearing loss places a great burden on older people and care staff. Research into hearing loss in residential care settings to date has focussed on degree of hearing loss and low uptake of hearing aids. There may be other potentially modifiable factors in communication. We used an in-depth ethnographic study design to understand communication in residential settings.

• We found that contextual factors (social and environmental) limited residents’ communication choices. These factors—rather than hearing loss itself—were the main barriers to communication for care home residents.

• There is potential to improve communication and associated well-being for care home residents by modifying contextual factors. This would facilitate choice in communication.

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Conflicts of interest

None declared.

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References


Determinants of fracture risk in a UK-population-based cohort of older women: a cross-sectional analysis of the Cohort for Skeletal Health in Bristol and Avon (COSHIBA)

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Abstract

Background: identification of individuals with high fracture risk from within primary care is complex. It is likely that the true contribution of falls to fracture risk is underestimated.

Methods: cross-sectional analysis of a population-based cohort of 3,200 post-menopausal women aged 73 ± 4 years. Self-reported data were collected on fracture, osteoporosis clinical risk factors and falls/mobility risk factors. Self-reported falls were compared with recorded falls on GP computerised records. Multivariable logistic regression was used to identify independent risk factors for fracture.

Results: a total of 838 (26.2%) reported a fracture after aged 50; 441 reported falling more than once per year, but 69% of these had no mention of falls on their computerised GP records. Only age [odds ratios (OR): 1.37 per 5 year increase, 95% confidence interval (CI): 1.23–1.53], height (1.02 per cm increase, 95% CI: 1.01–1.04), weight (OR: 0.99 per kg increase, 95% CI: 0.98–0.99) and falls (OR: 1.49 for more than once per year compared with less, 95% CI: 1.13–1.94) were independent risk factors for fracture. Falls had the strongest association.

Conclusion: when identifying individuals with high fracture risk we estimate that more than one fall per year is at least twice as important as height and weight. Furthermore, using self-reported falls data is essential as computerised GP records underestimate falls prevalence.

Keywords: fractures, falls, COSHIBA, FRAX, cohort study, elderly