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Readiness of elders to use assistive devices to maintain their independence in the home

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Introduction

With an increasing proportion of the population surviving into old age, it is important that as many people as possible are enabled to maintain their health and independence. Assistive devices, a term that encompasses all products which 'compensate, relieve or neutralise' a person's impairments [1, p80], are known to improve independence. The actual number who could benefit from any particular device is difficult to determine, but the proportion increases with age. However, the degree to which elders become aware of assistive devices and their benefits, how they feel such devices fit with their lifestyle and image, and how ready they are to acquire and use them is not well known.

The aims of this study were:

To explore the current use and intention to use assistive devices in a cohort of 72-82 year olds.

To gain information that will inform future research aimed at exploring ways to increase appropriate uptake of assistive devices.

Method

This study formed part of the Hertfordshire Ageing Study [2]. A baseline survey in 1995 had 717 participants and survivors were invited to participate in a follow-up study ten years later.

No tool is currently available that explores intention to use devices in order to maintain independence, so we developed a questionnaire to include the commonest challenges encountered by elders: walking outdoors, bathing, stairs, weak grip, getting up from chairs and stamina in standing. It asked what people actually used or how they behaved and it cited specific scenarios with common assistive devices or alternative ways of doing something. This approach is more effective at tapping intended behaviour than a general question [3].

Ethical Committee approval was obtained to use this self-completion questionnaire in the ten year follow-up of the Hertfordshire Ageing Study.

The data were analysed using STATA version 8. We used ANOVA and the χ^2 test to identify significant differences in response between men and women.

Results

Questionnaires were completed by 284 of 294 people who attended a clinic for the longitudinal study. There were 121 women, 163 men. All were between 72 and 82 years old, mean age 76.0 years (SD 2.21). As a whole, the sample was fairly independent, with only 29% using a walking stick for outdoor walking.

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Respondents only ticked items they felt they would use or where they had used the device suggested (see Appendix in the supplementary data on the journal website http://www.ageing.oupjournals.org for a sample question). Non-response was therefore assumed to indicate that the respondent would not consider the item even if difficulty was being encountered. Table 1 illustrates that the use or concept of using devices or an adapted activity was acknowledged by differing proportions of the sample.

The data were also analysed for gender differences between those already using devices or techniques, and those expressing a willingness to do so. Those with highly significant differences are shown in Table 2. In every case the proportion of women already using devices or adapted techniques was higher than for men.

Discussion

Although a pilot study, these results indicate that attitudes to some assistive devices and adapted activities are different from others. The results are not definitive, but do provide a picture of where people in this study possibly drew a line in order to maintain the quality of life they wanted. Unwillingness to use a product also included a concern about affordability, as some respondents' comments showed, so research is needed to explore people's attitudes more fully.

We have not addressed the effect of influences such as functional status, co-morbidity and social participation on the use of assistive devices. This is an important area for future research to fully understand the findings presented here. Nevertheless, this survey suggests that elders do have goals concerning the maintenance of their independence. Responses indicated that they prefer some solutions over others, and it could be that attitudes depend on gender, lifestyle, previous experience, and knowledge of what is available. The uptake of assistive devices depends on availability and accessibility as well as psycho-social factors.

The questionnaire was compiled as a pilot tool, but it was not intended to explore non use as there is literature on this topic already. The experience gained through using it would inform future work to refine its theoretical basis. Further exploration of positive aspirations could inform inclusive design [4, 5] for the future, which would benefit the increased proportion of elders who have sufficient spending power for private purchase. Increased acceptance and use of assistive devices would lighten the load for formal and informal carers.

Conclusion

This study was undertaken to explore the use and preparedness to use some of the common ways of overcoming difficulties in daily life that older people often encounter. It has shown that attitudes vary, with financial considerations and gender being amongst the factors that affected the way items were answered. The findings are preliminary but concern an area that would benefit from further research.

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Table 1

Proportions of the whole sample who were, or would consider, using devices or strategies

All questionnaire items are included

	Already doing this		Would do this		No response	
Walking outdoors	**N**	**%**	**N**	**%**	**N**	**%**
Use a walking stick	83	29%	182	64%	19	7%
Use a car for journeys previously done on foot	71	25%	130	46%	83	29%
Take a taxi	40	14%	142	50%	102	36%
Walk with someone whose arm you can hold	43	15%	135	48%	106	37%
Get an electric scooter	14	5%	148	52%	122	43%
Not bother to go out	9	3%	25	9%	250	88%
Standing for a period						
Take frequent breaks to sit down	70	25%	181	64%	33	11%
Get higher stool to perch on	39	14%	170	60%	75	26%
Alter worktops to be the right height when sitting	14	5%	98	34%	172	61%
Delegate the task	21	7%	78	28%	185	65%
Strength in your hands						
Look for gadgets in shops	72	25%	183	65%	89	10%
Get gadgets by mail order	24	9%	92	32%	168	59%
Only but items that you can open easily	18	6%	98	35%	168	59%
Ask someone to do the things for you	51	18%	111	39%	122	43%
Stairs						
Only go up/down once a day	17	6%	80	28%	187	66%
Move to a bungalow	35	12%	72	25%	177	63%
Get handrail(s) fitted	59	21%	118	41%	107	38%
Get a stairlift	14	5%	115	40%	155	55%
Live downstairs	10	4%	57	20%	217	76%
Getting in/out of the bath						

	Already doing this		Would do this		No response	
	N	%	N	%	N	%
Walking outdoors						
Fit grab rails by bath	45	16%	82	29%	157	55%
Get seat to go in bath	43	15%	105	37%	136	48%
Install a special bath	8	3%	50	18%	226	79%
Replace bath with walk-in shower	35	12%	109	38%	140	50%
Just strip wash	20	7%	39	14%	225	79%
Getting up/sitting down						
Put extra cushion on seat	41	14%	126	45%	117	41%
Get new, higher chair	36	13%	128	45%	120	42%
Get electrically operated riser/recliner	12	4%	96	34%	176	62%
Ask Social Services for advice	13	5%	85	30%	186	65%

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Table 2

Gender differences between those already using assistive devices or adapted activities, and those who would do so if needed

Items listed only if p <0.01. Whole sample comprised males n = 163; females n = 121

Walking outdoors	Gender	Already do this (% of N)	Would do this (% of N)	P <0.01 Direction	N for the item (% of whole sample)
Walk with someone	M F	5 19	46 30	<0.001 F>M	178 (61%)
Standing for a period					
Take frequent breaks	M F	11 17	46 26	<0.001 F>M	251 (88%)
Use high stool to perch on	M F	7 12	49 32	0.006 F>M	209 (74%)
Strength in your hands					
Look for gadgets in shops	M F	11 17	49 23	<0.001 F>M	255 (90%)
Ask someone to do things for you	M F	10 22	39 29	0.003 F>M	162 (57%)
Stairs					
Get handrail fitted	M F	13 20	45 22	<0.001 F>M	177 (62%)
Getting in/out of bath					
Just strip wash	M F	9 25	41 25	0.008 F>M	59 (21%)
Getting up/sitting down					
Get a new, higher chair	M F	9 13	52 26	0.002 F>M	164 (58%)