

A questionnaire to gauge older adults' interest in using mobile phones as memory aids

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ABSTRACT

This paper describes the data gathered using a questionnaire distributed to older adults regarding mobile phones and memory aids. The findings suggest that increasing numbers of older adults own mobile phones, use them regularly and are receptive to their use as memory aids.

Categories and Subject Descriptors

K.4.2 [Computing Milieux]: Social Issues – *Assistive technologies for persons with disabilities, Handicapped persons/special needs.*

General Terms

Human Factors

Keywords

Mobile phones, memory aids, older adults

1. INTRODUCTION

One condition that can affect the quality of life and independence in older adults is the extent to which they can organise, plan and, crucially, remember to carry out simple everyday tasks. Memory problems are often associated with ageing and such problems can severely disrupt daily life and put huge strain on family members and carers. MemoJog is a research project that aims to develop a memory aid for older people that will run on current mobile phones. The system will allow users and carers to easily manage reminders using the phone and remotely from any internet accessible device. The system will also include a server based application that will monitor user responses. Should the user not respond to high priority reminders appropriate action could be taken such as an automated message sent to a relative or carer

Earlier work in the MemoJog project included the development of a PDA-based memory aid [1]. This system was evaluated with a small group of older and memory-impaired users. While the users found the system easy to use they were also reluctant to refrain from tried and tested methods they already had in place. The participants were hesitant to adopt an unfamiliar device, especially at the beginning, when they were not sure if they could use the device at all.

Now that devices such as mobile phones have become more common older adults may be more receptive to memory aids such

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as MemoJog especially as they may be using a device that they already own and feel comfortable with [2]. Mobile phones and the use of services such as MemoJog can offer a sense of security and increase connectivity for older adults, their families and carers [3].

2. QUESTIONNAIRE

A questionnaire to gauge current mobile phone use and interest in the use of electronic memory aids (EMAs) amongst older adults was drafted. Topics covered in the questionnaire included older peoples' attitudes to mobile phones, the strategies they adopt to assist their memory and what memory aids they currently use. The questionnaire consisted of 18 questions, primarily check box questions, presented on 2 sides of A4 paper.

The questionnaire was distributed with the first edition of the SiDE (Social inclusion through the Digital Economy) newsletter which was mailed to the current members of the Dundee SiDE userpool in December 2010 (<http://www.side.ac.uk>).

In total, 513 questionnaires were distributed. The overall response rate was high with 321 responses (62.6%). 63.2% of responses were from females and 36.8% from males. 7.5% were aged under 60, 26.6% were 60-64, 19.4% were 65-69, 19.7% were 70-74, 15.7% were 75-79 and 11% were 80 years old and over. Three randomly selected respondents each received a £30 gift card.

3. INTERNET VS. PAPER

Potential respondents were provided with the option to complete the questionnaire online via a webpage administered using the Bristol Online Survey tool (<http://www.survey.bris.ac.uk>). A link was provided to the online questionnaire as part of the consent process located at the beginning of the paper questionnaire.

87.8% of the respondents stated they have access to a computer at home and 85.0% also have home access to the internet. However, only 9.7% of all respondents chose to complete the questionnaire online while the remaining 90.3% returned the paper questionnaire via post using an attached Freepost envelope. Though the response rate was high it was also voluntary which may skew the results. The SiDE userpool itself may favour those with a greater interest or who feel more comfortable with technology.

Perhaps unsurprisingly, the respondents who used the internet option tended to be the younger old (age 60-64). They are also more likely to have owned a mobile for more than five years, use their mobile at least once a day and are much more likely to currently use an EMA (48% v 11.7%).

4. AGE

The younger old (age 60-64) are much more likely to have access to the internet and currently use an EMA. Mobile ownership dips slightly with age (97.6% for 60-64 to 88.6% for 80+) though perhaps surprisingly, the level of mobile phone *use* is unrelated to age (Fig. 1). While it appears as they get older the respondents are more likely never to use their phone, their daily mobile phone use is still high.

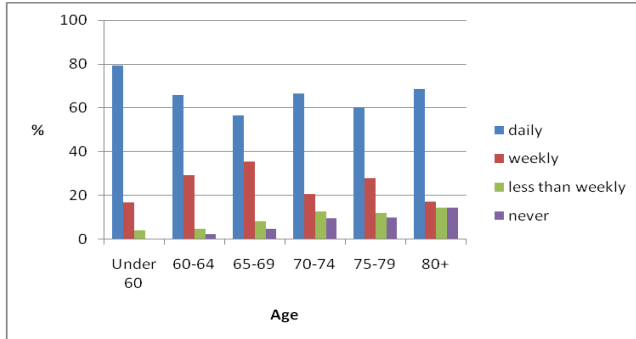


Figure 1. Mobile phone usage based on age.

5. MOBILE PHONES

94.1% of the respondents currently own a mobile phone. Compared with other recent surveys this was high e.g. Pew Internet reported 57% mobile ownership by 65+ [4] (see also [5] for similar numbers in the UK). In this case it may be that the SIDE userpool members who own a mobile were more likely to respond.

Most of the respondents use their mobile phones regularly: 66.1% daily, 24.6% at least once a week and only 2.8% of respondents say they never use their mobile.

The most common use of mobiles phones by the respondents was for phone calls (77.3%) and texting (68.9%). Other uses included the address book (34.6%), the camera (36.8%) and the alarm clock (31.4%). Accessing the internet and listening to music were both used infrequently (6.4%). This may be due to this option being unavailable on older or more basic mobile phones. Some respondents currently used their mobile phone as a memory aid through built-in applications such as the address book (34.6%), calendars (12.5%) or reminders (10.6%).

Few of the respondents reported owning one of the latest models of smartphone (it is difficult to provide precise figures as many stated only the brand name of their phone). A number of respondents provided comments that displayed an awareness of current smartphone capabilities (e.g. internet access). Many also mentioned that they feel they are not using their phones to their potential and would like to learn how to use them more fully. However, throughout the comments there was also apprehension about learning how to use this new technology.

6. MEMORY AIDS

Respondents reported a wide variety of strategies they adopt to help them remember. Written reminders such as notebooks,

calendars, diaries and to-do lists are all used by over 50% of the respondents. Other strategies that were mentioned included leaving things out, keeping items in the same place (e.g. medication) and relying on partners or family members.

Few respondents stated that they currently use an EMA (15.1%) or an aid to help manage medication (14.6%). However of the group who did not use an EMA, 56.9% would be interested in trying one. Of the group who did not own a mobile phone 47.1% would be interested.

Many of the respondents' comments indicated that, while they felt they did not require an EMA to assist with their memory, it may be something they would be interested in trying in the future. In the meantime, they were keen to continue without support if they felt it was not needed. They feel that memory is something that is 'use it or lose it'.

7. CONCLUSIONS

Due to the high rate of mobile ownership that was found compared with other recent surveys the data should be treated with caution, however, the findings do suggest that increasing numbers of older adults own mobile phones and use them regularly. While few of the respondents currently use electronic reminders they are receptive to the use of mobile phones as memory aids. These results are encouraging as they demonstrate that older people have an increasing awareness of new assistive technology and are not shying away from its use.

8. ACKNOWLEDGMENTS

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