# Research Development to define 'Shared Usability' in Product Design for Older Adults

Ms. Linda Shore • Dr. P.J.White • Mr. Hilary Dempsey

#### Introduction

A study of domestic product design for older adults identified the concept of "Shared Usability" (White, 2013) having many beneficial aspects for the older user. These benefits include but are not limited to: promoting good health, increasing sociality, encouraging safe use and instilling

financial control; all offering empowerment and independence in everyday life.

For future designed products, it is proposed that usability be a shared stakeholder concern.

By providing shared control over products, levels of self-sufficiency could be achieved in use regardless of the level of ability of the older adult. When executed correctly it can allow older adults maintain independence and 'age in place' with dignity and self-sufficiency.

### **Literature Review**

The Literature review firstly identified a hypothesis. This affirmed that Shared Usability was a viable concept to pursue and develop.

'It is possible to empower Older Adults through Shared usability by mutually agreed intervention with other stakeholders when using Products or services'

Secondly, and in preparation for fieldwork, eight areas of enquiry were identified as relevant to understanding day to day life for the older adult.

## 1 Access

(Entering, Exiting Buildings or vehicles, opening or closing doors jars, zips, locks, buttons)

## 2 Cooking

(Access in and around the kitchen, access to storage, function areas, and appliances)

### 3 Mobility

(Sitting down, Getting up falling)

## Dressing

(Footwear, buttons, zip: fasteners, Seasonal)

### 5 Interests /Activities

Outdoors, Independent, Grouped)

## 6 Bathing & Toileting

(Home, Bath or Shower Access in and around the bathroom)

## 7 TV, Radio & Communication

(Enjoyment, use, preference competencies, fears?)

8 Physical Function/Limitation

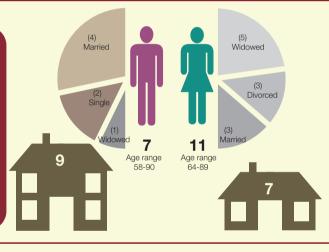
(Underlying conditions, Aids, Medications)

### Participant Breakdown

Total number of Participants: 21
The Participants who agreed to partake in fieldwork included 3 stakeholders (two health professionals and one family member) and 18 older Adults.

Participants lived in Urban areas of Dublin and Kilkenny (14) and 2 lived in <u>rural</u> areas of Kilkenny, Ireland.

Two participant's homes were not included as they engaged in tasks based in St Columba's Nursing home, Thomastown, Co Kilkenny.



### Fieldwork Strategy

Approval was sought and achieved from the Ethics Committee in IT Carlow in order to conduct fieldwork using ethnographic methods of interview and observtion. It involved three Pilot studies, (1.Older Adult, 2. Stakeholder, 3.Conjoined with stakeholder and older adult) It included a series of Interviews with Older Adults and sessions of Task Observations, specifically in the eight areas of enquiry as defined upon completion of literature review.

### Fieldwork - Lifelogging

Selected Images from Lifelogging Sessions Captured on Digital Camera



A series of contextual interviews and observation were conducted over a eight month period to build understanding of day to day life for older adults.









### Fieldwork - Task Observations

Sample Task Observation Session in a Kitchen Environment



**Opportunities** 

peen identified as possible concept

Conceptualisation and design will support definition of shared usability.

Sample Task Observations of the eight defined areas of enquiry were conducted by selected participants.

They were observed and recorded using audio and visual digital devices placed or worr in the task environment.









### Interior Lighting and Access

were a noted area during fieldwork from the participants as being problematic. This car create poor spatial judgement particularly moving from daylight to artificial light.



As a result of longer lifespan and medical advances we are living longer in our own homes, often with some sort of functional limitation(Haak,M et.al.2007)

This research identified a toolkit or support product as being a beneficial design outcome to Older Adults and Associated Stakeholder(s).

#### Vehicle access and Mobility

During Lifelogging and observation sessions participants discussed the challenge of vehicular access that they experience as drivers and passengers.

and seats of vehicles were often used alternatively i.e placing feet under the car door as a leverage to the older adult exiting the vehicle.



