



Introduction

Older adults are an emerging group of ICT consumers². As age-related changes influence health, functional abilities, and social relations, ICT can facilitate social connectivity, participation in routine daily activities(IADL), and involvement in leisure activities³. However, in skills, use, and particularly in attitudes towards ICT there is a notable digital divide between adults and older adults. Older adults express lower self-efficacy in learning ICT and under estimate their ICT knowledge and abilities¹. We need to fully understand the influences that mediate the patterns of ICT adoption and use among older adults if we are to invest resources in designing and providing them with effective ICT training³.

Goals of the Study

- Identify self-defined needs for ICT among older adults
- Identify profiles of older adults in relation to ICT use
- Examine patterns of ICT use for high and low valued activities
- Examine relations among psychosocial, demographic variables, and ICT use

Method

Conceptually based on the dual constructs of perceived usefulness and perceived use in a systems use model, this study examined ICT usage patterns, attitudes to technology, and psychosocial factors using a cross-sectional large sample survey.

Participants: 536 older adults aged 65 to 104 years who reside in the New England State participated in a 90 minute comprehensive survey of information and communication technology (ICT) attitudes and use by older adults and their physical, social, and psychological health.

Sex: 67% Females (n= 360) and 33% males (n=174)

Community: (n=470)

Rural and towns ≥ 2,500	19%
Small town = 2500 - 10,000	9%
City - urban =10,001 - 50,000	33%
City - Metropolitan < 50,000	8%
Other	1%

Education level

Some high school
Graduated high school
College (some college/completed college)
Graduate Degree

Living Arrangement

Alone in own home
Alone in rented home/apartment
Living with spouse in own home
Living with spouse rented home/apartment)
In retirement community
Living in assisted living facility

Instruments:

- Breath of Technology Use (BIU)
- Survey of Technology Use (SOTU)
- UCLA Loneliness Scale
- Satisfaction with Life Scale
- The Short Form SF36 Health Survey
- Center for Epidemiological Studies-Depression (10 items)

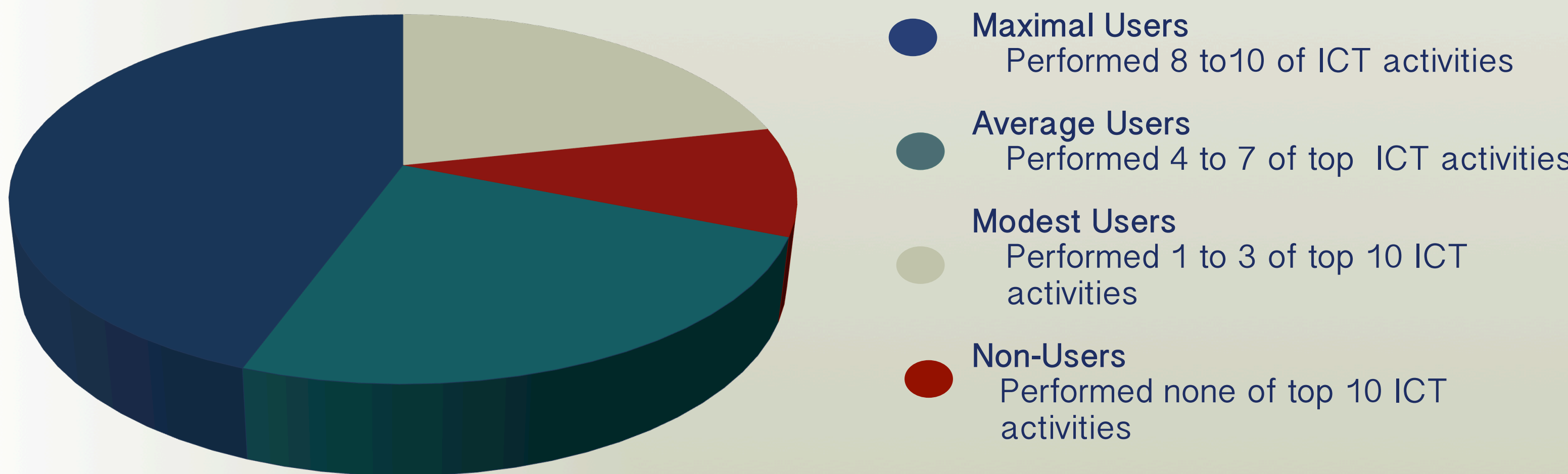
Patterns and Profiles of Information and Communication Technology use by Older Adults

Results

Ten Top Activities Performed ICT Activities

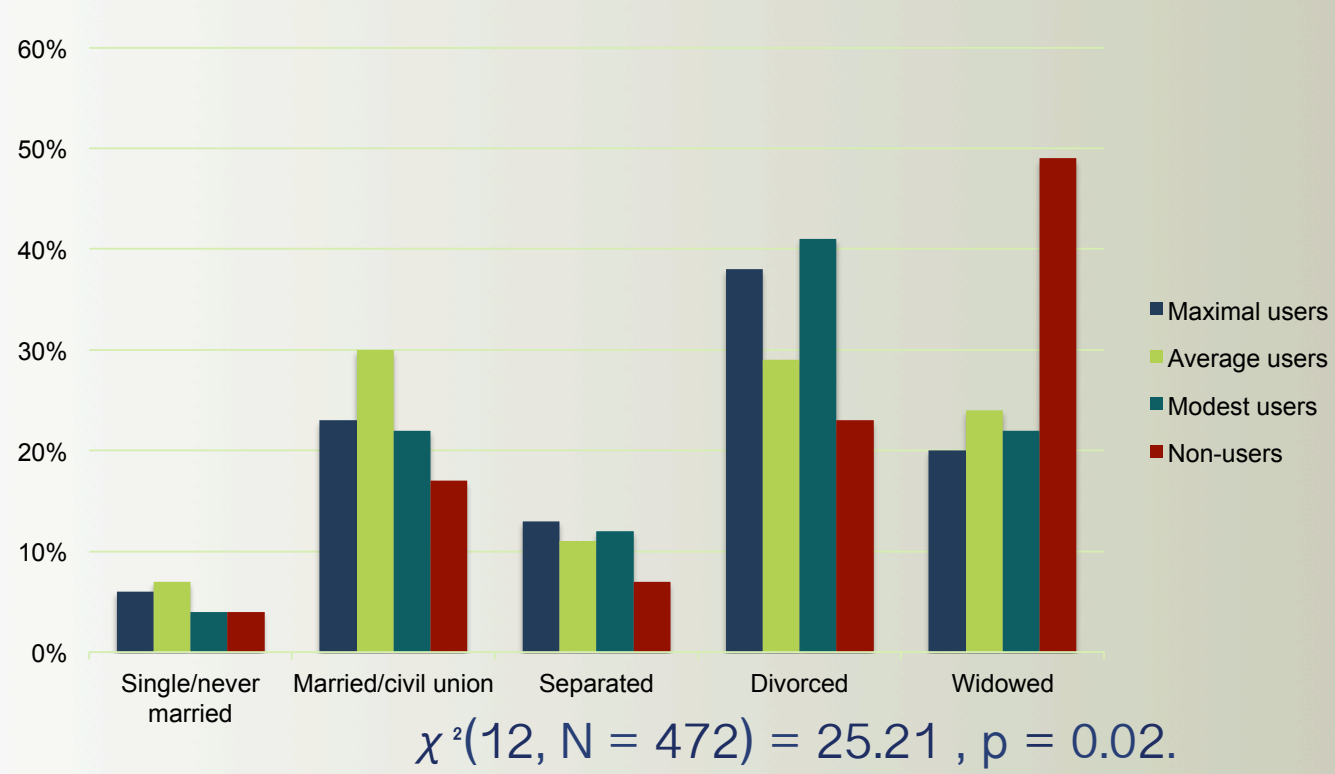
Send and Read Emails	Social connections	69%
Communicate via Email with Family	Family connections	63%
Information About Products and Services	Information access	60.8%
Staying in Touch with Distant Friends	Social connections	60.8%
Sending Greetings	Social connections	58.8%
Online Shopping	IADL	57.3%
Staying in Touch with Local Friends	Social connections	54.8%
Look for Health & wellness Information	Information access	54.2%
Read News Online	Information access	54.1%
Exchange Photos and Videos	Family connections	44.4%

User Profile by Breath of ICT Activities

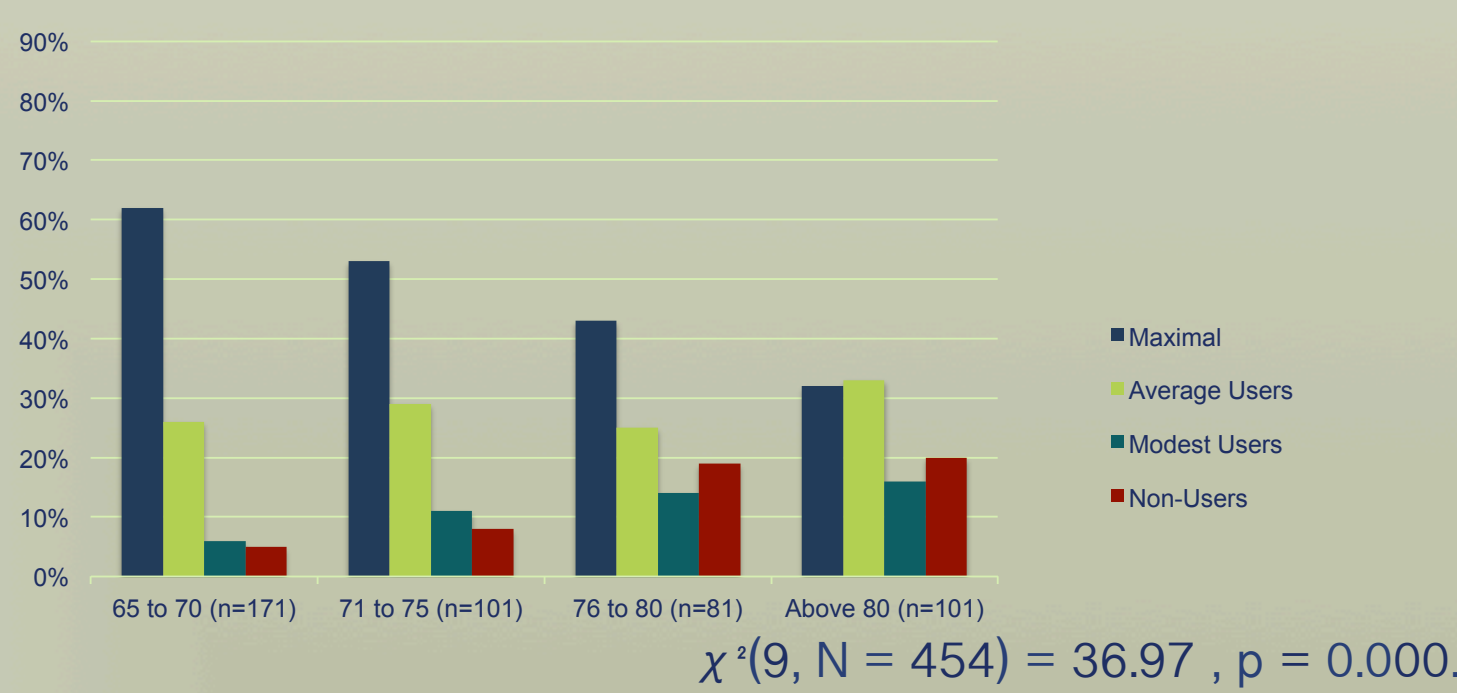


User Profile by Demographics

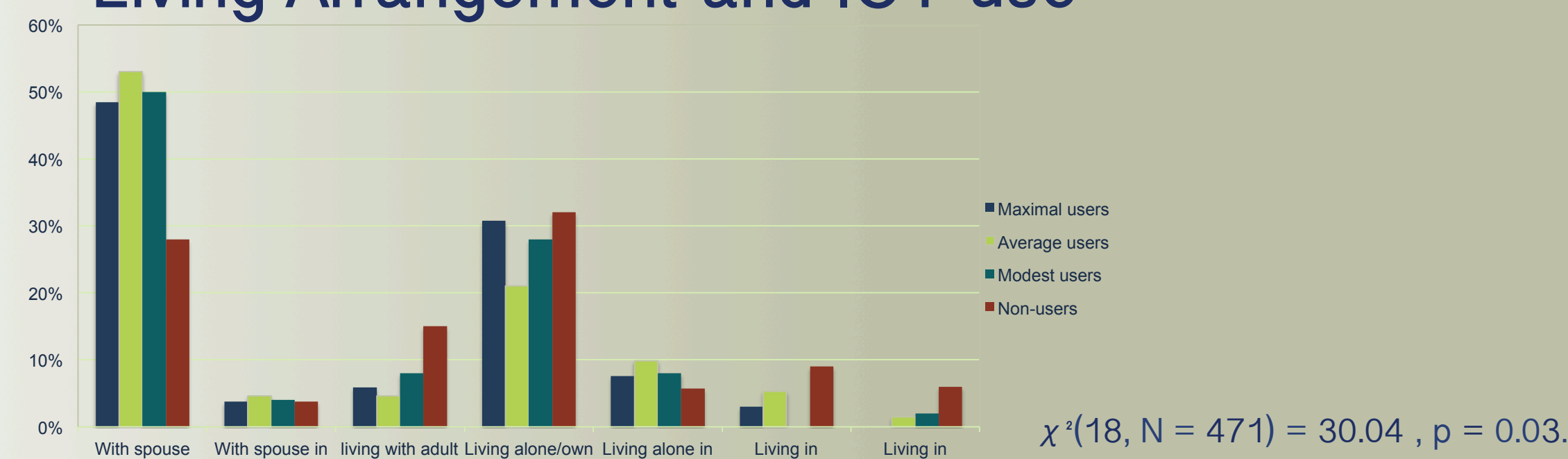
Marital Status and ICT use



Age and ICT use



Living Arrangement and ICT use



Psychosocial & Function Differences by Mean among User

Analysis of variance by user profile for psychosocial and functional variable showed significant differences between groups for Depression ($F_3 = 5.85, p=001$), Loneliness ($F_3 = 3.37, p=01$), Perceived General Health ($F_3 = 5.91, p=001$), Physical Function ($F_3 = 9.13, p=000$), Physical Role limitation ($F_3 = 5.96, p=001$), and Social Functioning ($F_3 = 5.12, p=002$). Post-hoc comparisons (Bonferroni) indicates significantly different mean scores.

Max. User	Depression	Loneliness	Perceived Health	Soc. Function	Phys. Function	Role Limitation	Pain
Av. User	-2.176	-3.548	-8.100	-7.179	6.841	9.257	3.025
Mod. User	-1.065	-1.138	-0.867	-2.012	8.847	6.858	1.785
Non-User	-2.137	-1.466	-9.352	-16.310	21.206	24.416	8.974
Non-User							
Av. User				- 9.131	-14.336		
Mod. User				-18.322	-12.359		

Significant difference $p \geq 0.05$



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Summary of Results

Study data shows that:

- The majority of surveyed older adults used ICT for family and social connectivity and a limited number of IADL and information accessing tasks
- Older adults aged 65–70 years with higher education and/or living with a spouse/partner were more likely to use ICT.
- Higher ICT use was associated with self-perceived socio-personal characteristics such as being “satisfied with activities”, “persevering”, “physically and emotionally independent” and having a “positive outlook”.
- The majority of non-users reported their activities did not change across time and that they felt “intimidated” and “anxious” with technology.
- Average and Non-users presented with psychosocial and functional challenges.

Discussion

Contextual changes in the shifting population of aging baby boomers along with new innovations will be fundamental to the use and adoption of ICT by older adults. However, such transformations are time bound by cultural and societal dynamics and cannot be applied in the short-term to current older adults.

Findings show that current use and desire to use ICT among older adults is motivated by primarily by social connectedness. It is from this paradigm that occupational therapists need to develop strategies that promote and sustain older adults in their adoption and use of ICT. We propose a **community-centered socio-ecological model**³ in which the dispositional characteristics of older adults and their motives to use ICT as the premise for ICT training programs.

Implications for Practice

- An older adult’s attitudes towards ICT is crucial in augmenting ICT based social connectivity and ICT application to community living.
- Practitioners need to individualize training and make the process client driven
- Focusing on supporting the most isolated individuals who are older, may experience depression, who are living alone and are limited in physical and social functioning to use ICT is critical in sustaining community living for this population.

For now, the most practical strategies are those that identify functions and features of ICT products and applications that fit with individual dispositional characteristics and specific interests of older adults in order to promote facilitate their understanding, autonomy, and self-realization of the benefits of ICT to sustain aging in place.

References

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