

Exploring Older Persons Use of Computer-Mediated Communication Technologies

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Abstract. Older persons receiving services in community settings, rather than Nursing Homes, are at risk of social isolation. Computer mediated communication offers technological resources which recipients of Home and Community-Based Services (HCBS) might use to reduce their social isolation. The present study involved personal interviews with 40 HCBS-customers regarding their interest in communicating with members of their social networks, and using computers. After watching a videotape illustrating *PointerWare*- an easy-to-use computer interface that allows older persons to communicate with families and friends – 85% said they wanted to use computer to communicate. Current computer users were significantly less lonely than non-users.

1. Introduction

Many states including Kansas are changing the sites where Medicaid eligible older persons receive care, from Nursing Homes to community-based sites, including private homes [1]. In Kansas, the state has also shifted its responsibilities of administering care to older persons living in community settings to three private managed care organizations. Living in homes and community settings has identifiable consequences as frail older persons have greater risk of social and emotional isolation [2] with associated adverse health outcomes and diminished quality of life [3]. With distant living and dispersed families, more studies have to be done to assess whether the networks of frail older persons living in their homes and community settings are enough to provide them with the needed support, and if they are willing to use computer-mediated communication (CMC) technologies to communicate with friends and family. Therefore, the purposes of the current study were to assess the isolation of HCBS customers and explore whether they wanted to use CMC technologies to strengthen their social support networks.

2. Experiment, Results, Discussion, and Significance

Participants and Measurement

The current study is a small-scale exploratory study involving 40 participants who were selected from the caseload of the Central Plains Agency Area on Aging (CPAAA) HCBS elderly, Medicaid-eligible customer population in Sedgwick County. All participants were aged 65 and older (75.10 ± 5.86 yrs), cognitively able to complete the interview, and had adequate proficiency at written and spoken English in order to be able to understand the interview. The KDADS as well as the Wichita State University's Institutional Review Board approved the study.

Recruitment procedures that protected HCBS customers' rights to confidentiality and guaranteed the voluntary nature of their participation were negotiated with KDADS and CPAAA. Each participant read and signed an informed consent document, and was paid \$50 for their participation in 90-minute interviews. The interview included questions about participants' social convoys, loneliness, isolation, quality of life, subjective health status, and their interest in and use of computers. Participants were asked about their interest in using computers after watching a videotape illustrating *PointerWare*.

Data Analysis

Data were expressed as mean \pm SD and screened for outliers, and the assumptions of normality and homoscedasticity. Participants' health outcome comparisons were determined using independent sample t-test. A

probability value of less than 0.01 was considered statistically significant using a Bonferroni adjustment correcting for multiple measurements.

Results

The t test revealed that there was marginally significant association between older computer users and their level of loneliness, $t(38) = -2.45, p = .02$. At the time of the study 25% of participants were using computers and these participants had marginally significant larger social networks and were less lonely than non-users [Table 1]. After seeing a 3-minute video illustrating a CMC system which accommodated visual and manual disabilities, 85% of customers reported they would use such a system if it were available to them. The results also show that over 40% of the participants were “isolated” or “at risk” for isolation; isolation significantly correlated with loneliness ($r = .58, p < .01$), and loneliness negatively correlated with quality of life ($r = -.69, p < .01$). The study population anticipated using computers primarily for communication; 23% would use computers to communicate with friends and family and 18% for Facebooking.

Table 1: *Computer Use and Health Outcomes Among HCBS Customers*

Health Outcomes	Users			Non-Users			df	t	p
	n	mean	sd	n	mean	sd			
Isolation	10	20.60	7.20	30	25.83	11.29	38	-1.37	0.18
Loneliness	10	1.60	0.43	30	2.05	0.52	38	-2.45	0.02
Quality of life	10	2.14	0.35	30	2.05	0.42	38	0.63	0.53
Network Size	10	18.70	8.35	30	12.73	6.52	38	2.34	0.02

Discussion

A body of empirical studies has shown that computer use has several positive effects on older persons' lives. The use of CMC technologies can help with older persons to maintain their independence by fostering linkages to their family and friends [4, 5], and it can improve their psychological well-being and their social status [3]. Our findings suggest that over 40% of the study population were isolated or at risk for isolation. Also, isolation significantly correlated with loneliness ($r = .58, p < .01$) and older computer use -was associated with less loneliness, $t(38) = -2.45, p = .02$. These findings are consistent with -those of other studies [3] where older computer users reported decline in loneliness suggesting that the use of CMC has some association with loneliness. Results of a study by Eilers [9] on older persons' use of CMC technologies showed that the use of such technologies -was positively associated with their quality of life and networks, and improved- their “sense of community.”

3. Conclusions

The sites at which care for “frail” older persons is provided are shifting and increasing numbers of persons are receiving care in HCBS settings. Social isolation is a risk for this population and CMC is a technology which could be a protective factor to reduce this risk. These findings have implications for managed care companies; they should experiment with making computer interfaces- like *PointerWare*- available to HCBS customers.

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