Technology Use among American Indian/Alaskan Native Elders

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Background

According to the United States Census Bureau (2010), an elder is defined as someone over 65 years of age. There is a lower life expectancy of American Indian/Alaskan Native (AI/AN) people overall. AI/ANs define an elder as someone who is over 55 years of age (McDonald, 2003). The elder population as of the 2010 census is estimated at 40.2 million, which represents 13 percent of the general American population. Of this population, the Administration on Aging (2007) stated that the AI/AN population was 369,399, or approximately 0.009%. This overall elder population is continuing a rapid increase and is estimated to double to about 88.5 million by 2050. For AI/AN Elders growth is projected to about 918,000 in the same amount of time. The increase is largely attributed to the baby boomers, who are defined by the Census Bureau (2010) as those born during the post World War II era, 1946-1964. By 2030, all baby boomers are projected to be over 65 years of age.

The field of research in analyzing the relationship between elderly people and technology is defined as Gerotechnology (Rodeschini, 2011). Gerotechnology is an interdisciplinary field of research and application involving gerontology, the scientific study of aging, and technology, the development and distribution of technologically based products, environment, and services (Rodeschini, 2000). Hough & Kobylanski (2004) stated that the enduring quality of their (elders') golden years is of utmost importance to the elders, caregivers, and to society in general. Information technology (IT) is one mechanism which can provide assistance in meeting the needs of an increasing number of elders with a decreasing number of caregivers (Hough & Kobylanski, 2009).

The purpose of this poster is to present information on AI/ANs' use and access to technology such as computers, cellphones and email. Further, this poster will highlight those who utilize technology in any of its forms to access information on their health or to sign up for health insurance through the Affordable Care Act Marketplace (ACA).

Methods

A survey of AI/AN Elders was conducted at the 20th Biennial Conference of the National Indian Council on Aging, Inc. (NICOA). NICOA is a non-profit organization advocating for the needs of AI/AN Elders. The survey assessed areas such as: general information, economic wellbeing, aspects of health, and home & community based services. Participants at the conference were given a survey form, asked to complete it, and put it into a box at the registration desk to receive a ticket for a prize drawing. A total of 668 surveys were completed and returned. A Memorandum of Understanding (MOU) was established between NICOA and the University of North Dakota (UND) Seven Generations Center of Excellence in Native Behavioral Health (SGCoE) and the National Indigenous Elder Justice Initiative (NIEJI) to enter, analyze, and develop dissemination materials for the data. The data was entered using SPSS version 22 by the Tribal Undergraduate Research Training and Learning Experiences Program (TURTLE) students of the SGCoE. The data was cleaned, checked and analyzed. The completed data set included data from 135 males and 533 females ranging in age from 23 to 89. Those under the age of 50 were excluded from the results to ensure an elder demographic. Variables used in this poster included: age groups (50-54, 55-64, 65-74, and >75) and questions related to technology. Researchers used cross tabulation and chi-squares to analyze the relationships between technology questions and age groups. In these analyses attempts were made to identify significant variables that may relate to AI/AN Elders' overall health and the services provided to them.

Results

- There is a definite relationship between age and technology use. Elders over 55 presented the least amount of technology use while the 50-54 age group showed the most use
- Elders in the 50-54 age group showed the highest use of technology: 85.7% indicated having access to computers, 93% own a cellphone, 93% use email, and 78.6 % use the internet to learn more about health than the older age groups
- Elders in the >75 age group utilized technology the least: 48.4% reported having computer access, 78.2% own a cellphone, 33.9% use email, and 17.1% use the internet to learn more about their health of all age groups
- The Affordable Care Act (ACA) Marketplace had the lowest percent use by elders of all age groups and of all technology based questions. There was a 0% use in the 50-54 age group. Age groups 55-64, 65-74, >75 years indicated that over 85% did not use the ACA Marketplace
- Of all technology related questions "Do you have a cellphone?" showed the highest usage across all age groups with an average of about 88.5% of participants
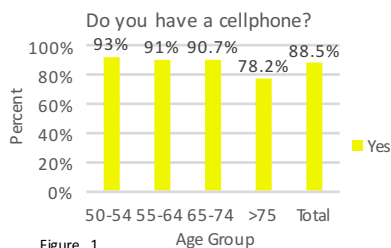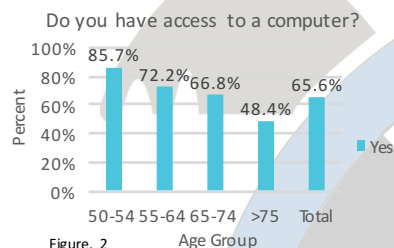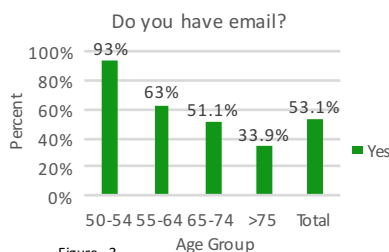

Figure. 1 — Do you have a cellphone? (Yes): 50-54: 93%, 55-64: 91%, 65-74: 90.7%, >75: 78.2%, Total: 88.5%

Figure. 2 — Do you have access to a computer? (Yes): 50-54: 85.7%, 55-64: 72.2%, 65-74: 66.8%, >75: 48.4%, Total: 65.6%

Figure. 3 — Do you have email? (Yes): 50-54: 93%, 55-64: 63%, 65-74: 51.1%, >75: 33.9%, Total: 53.1%

Figure. 4 — Do you ever use the internet to learn more about your health? (Yes): 50-54: 78.6%, 55-64: 46.4%, 65-74: 34.8%, >75: 17.1%, Total: 36.4%

Figure. 5 — Have you signed up for health insurance through the new Affordable Care Act Marketplace? (No): 50-54: 100.0%, 55-64: 84%, 65-74: 88.2%, >75: 85.1%, Total: 86.4%
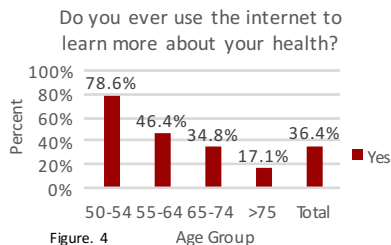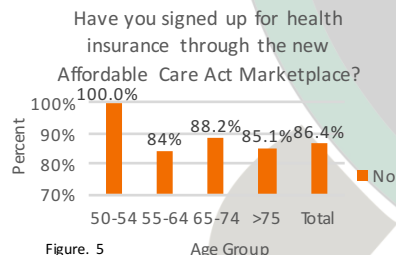
Discussion

The hypothesis: elders will have a majority negative response for all technology related questions for all age groups, failed to be supported by the results. Evidence showed more elders use technology including: computers, cellphones, email and the use of technology to learn more about their health. This aspect of the hypothesis was supported in that not many elders make use of the (ACA) Marketplace service, as evident in figure 5. This is possibly due to lack of information being available or the lack of knowledge on how to navigate the site. The youngest group, 50-54 years old, have the highest use of technology. This may indicate that elders face barriers with technology as they age. These barriers may include; cost, accessibility, mistrust, cellphone and internet service, and language. Cost may be an important barrier contributing to lack of use of technology among elders, in that they may not be able to afford the latest technology. Another barrier could be accessibility. Elders may have diminished eye sight, hearing or fine motor skills, making use of cellphone or other computer devices more difficult. Lack of experience with technology may also inhibit use. Furthermore, tribal lands are often located in rural areas with limited or no access to cell phone towers or network centers. Although this study is not fully representative of the entire AI/AN population, it points to emerging trends in technology use among Elders in Indian Country.

References

Hough, M., & Kobylanski, A. (2009). *Increasing elder consumer interactions with information technology*. Journal of Consumer Marketing, 26(1), 39-48. doi:10.1108/07363760910927037

McDonald, L. (2003). Risk Factors, Chronic Disease, and Functionality of Native American and Alaskan Native Elder Population (Doctoral dissertation, University of North Dakota). Retrieved from http://search.proquest.com/docview/305315800/fulltextPDF/B89 9C0 A5E D2C439APQ/1?accountid=40810

Rodeschini, G. (2011). *Gerotechnology: A new kind of care for aging? An analysis of the relationship between older people and technology*. Nursing & Health Sciences, 13(4), 521-528. doi:10.1111/j.1442-2018.2011.00634.x

U.S. Census Bureau. (2010, May). The Next Four Decades The Older Population in the United States: 2010 to 2050 (Report No. P25-1138). Washington DC: U.S. Census Bureau.

U.S. Department of Health and Human Services, Administration on Aging. (2012). *A Statistical Profile of American Indian and Native Alaskan Elderly*. (n.d.). Retrieved July 17, 2015, from http://www.aoa.acl.gov/Aging_Statistics/minority_aging/Facts-on-AINA-Elderly2008-plain_format.aspx

Acknowledgements