



Rubenstein² and Thomas A Teasdale¹
¹, Keith Kleszynski², Claire Dowers-Nichols², Amber S Anderson¹, Andrew N Dentino², Laurence Z

Abstract

Purpose: The purpose of this study was to compare and contrast health education needs of rural Oklahomans aged 65 and older compared to urban and sub-urban populations.

Methods: Surveys were distributed to a list of registered voters age 65 and older in Oklahoma with a total of 1,248 surveys returned. Survey items asked about interests in services, classes and activities, plus current barriers to accessing and/or engaging in such programs.

Findings: Survey respondents living in large rural towns (23.7%) and the urban core (21.5%) were significantly more likely than those in small rural towns (14.0%) or sub-urban areas (15.5%) to have attended a free health information event in the past year ($p = 0.0393$). Older Oklahomans in small towns and isolated rural areas reported more frequently than those in the urban core that they would participate in congregate meals at a center (small town/isolated rural: 14.4%, urban core: 7.2%) ($p = 0.05$). Lack of adequate facilities was more frequently reported by those residing in small town and isolated rural areas compared to urban core areas (16.4% vs 7.8%, $p = 0.01$). Finally, older Oklahomans in the large rural towns (0.6%) and small town and isolated rural locations (2.13%) less frequently reported use of senior information lines (Senior Infoline) than those in the urban core (6.0%) and in sub-urban areas (7.1%) ($p = 0.0009$).

Conclusions: Results of this survey provide useful data on senior interests and current barriers to community programs/activities have some unique trends among both urban and rural populations.

Keywords: Survey; Activities and services; Recruitment; Urban; Rural

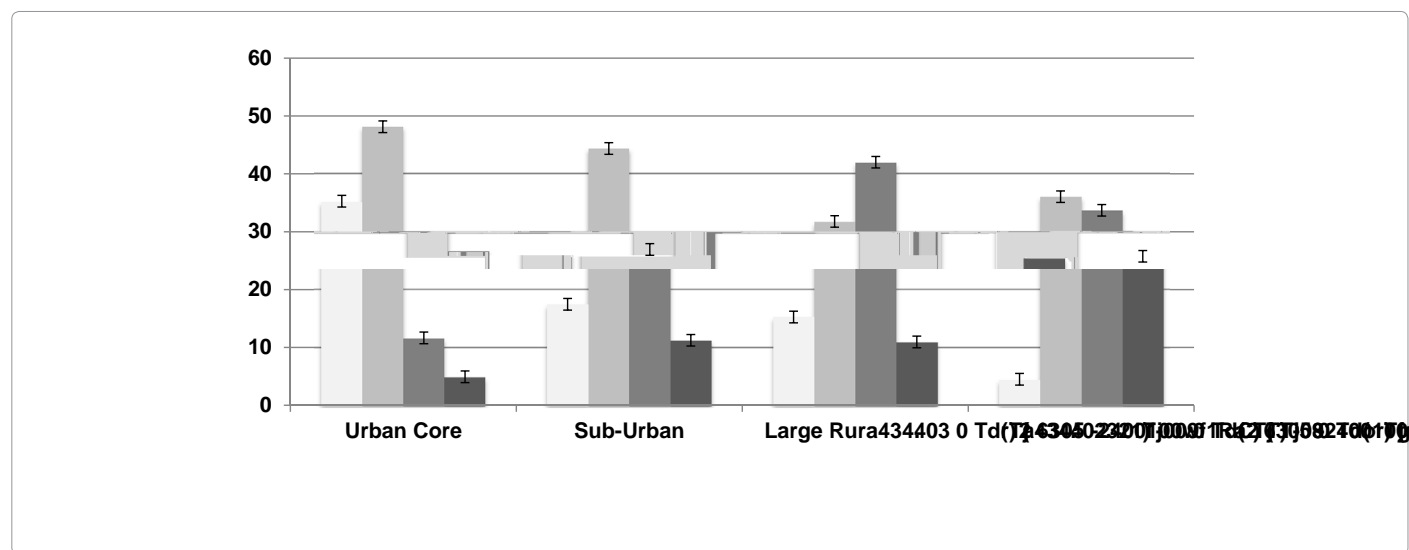
The 2015 American Community Survey estimated that there were 576,031 (14.7%) individuals aged 65 and older living in Oklahoma. The number of seniors in Oklahoma is expected to increase almost 50 percent to more than 757,000 older Oklahomans by 2030 [1,2]. In addition, Oklahoma's health indicators continue to be among the poorest in the U.S. According to the United Health Foundation, Oklahoma ranked 48th in "overall senior health" in 2017 [3]. Thus, the need for Oklahoma's older population to participate in health education and promotion services, activities and programs is critical. Moreover, we know that rural populations often, although not always, have

0-1.211 Td[(di)3 (s)5 (p)-5 (a)9 (r)-6 (i)12 (t)-4.9 (ies in h)4 (e)-5.9 (a)

in health education and optimizing health and aging policy” [45]. This statewide program uses a three-prong approach to improve the wellness of seniors: 1) Increase access to and quality of interdisciplinary geriatric healthcare 2) Provide excellence in health education to healthcare professionals, students of the healthcare and social service disciplines, older adults and their families and the community at large and lastly 3) Optimize health and aging policy. OHAI's five Centers of Healthy Aging provide both clinical care and health education throughout Oklahoma. One of the first tasks undertaken by OHAI was the 2013

continuous variable of travel distance for necessities such as groceries or prescriptions was analyzed using a weighted t-test. All analyses were conducted using SAS®9.4 (Care, NC). We assumed an alpha of 0.05 unless otherwise specified. The study was approved by the Institutional Review Board at the University of Oklahoma Health Sciences Center.

213



middle in both the sub-urban and large rural towns (11.2%, SE 3.06 and 11.0%, SE 2.25 respectively) with the urban core being the lowest (4.9%, SE 1.2).

We observed differences in attendance at free health information events in the past year ($P=0.04$), with respondents living in large rural towns (23.7%) and the urban core (21.5%) reporting attendance more frequently than those in small rural towns (14.0%) or sub-urban areas (15.5%) (Table 2). One important difference among the RUCA was that older Oklahomans living in sub-urban areas rarely stated I don't leave my home as where they spent most of their time away from home (0.7%) compared to all other RUCA (urban core 7.0%, large rural towns 4.3% and small town and isolated rural 6.3%) ($P=.02$) (Table 2).

isolated rural: 14.4%, $P=.0008$) (Table 5). Older adults, living in large rural towns (33.8%) and the urban cores (34.4%) more frequently reported that they had information from churches than those in small town and isolated rural locations (24.94%) or sub-urban areas (25.8%) ($P=0.04$). Those residing in small town and isolated rural areas (18.8%) and sub-urban areas (20.6%) less frequently reported that they accessed a national organization such as AARP for help than those in large rural towns (26.4%) and the urban core (28.9%) ($P=0.03$). Finally, older Oklahomans in the large rural towns (0.6%) and small town and isolated rural locations (2.13%) less frequently reported use of senior information lines (Senior Infoline) than those in the urban core (6.0%) and in sub-urban areas (7.1%) ($P=0.0009$).

When asked about their interest in using services, classes or activities if they were available free of charge or for a significantly reduced rate, we observed few differences (Table 3). Older Oklahomans in small towns and isolated rural areas reported more frequently than those in the urban core to say they would participate in congregational meals at a center (small town/isolated rural: 14.4%, urban core: 7.2%) ($P=0.05$).

In addition to resources for help, we also observed differences in how residents found information in their community by RUCA status (Table 5). Older adults in the urban core (58.6%) reported less frequently using family, neighbors, or friends as a source of community information than those living in the sub-urban area (68.2%), large rural town (72.1%) or small town and isolated rural areas (74.9%) ($P=0.0002$).

The most common answer for perceived barriers to accessing programs was transportation, though this differed only marginally by RUCA status ($P=0.05$). Among those in large rural towns (33.9%), small town and isolated rural (31.6%) and the urban core (26.0%) had the highest responses with sub-urban (19.9%) being the lower. Lack of adequate facilities was more frequently reported by those residing in small town and isolated rural areas compared to urban core areas (16.4% vs. 7.8%, $P=0.01$). Transportation was reported as a problem more frequently in the urban core (10.9%) than sub-urban (5.2%), small town and isolated rural (4.1%) and large rural towns (4.0%) ($P=0.004$) (Table 4).

Those living in the urban core (33.0%) more frequently reported using the internet than those in sub-urban (26.4%), large rural town (27.0%), or small town/isolated rural areas (19.4%) ($P=0.005$). Those living in the urban core (45.7%) more frequently reported using newsletters, flyers or bulletins than those in sub-urban (40.0%), large rural town (42.9%), or small town/isolated rural areas (33.9%) ($P=0.04$). Lastly, older adults living in the urban core (72.0%) more frequently reported using television to find out what was happening in their community than those living in sub-urban (56.1%), large rural town (62.2%), or small towns and isolated rural areas (51.5%) ($P<0.0001$).

Older Oklahomans from the urban core area reported a higher frequency of using aging agencies, senior centers, or retirement communities to find out information about help for older adults (urban area: 21.5%, sub-urban area: 6.3%, large rural town: 14.6%, small town/

Results of this survey provide useful data on older adults' general demographic trends, desires for services, classes and activities as well as perceived barriers to community programs/activities in urban, sub-urban, large town and small town/isolated rural populations (Table 6). One in five older adults attended an event offering free health services in 2013. Older adults in Oklahoma clearly (in virtually all subgroups) reported being interested in services that include legal assistance, health screenings, assistance with tax preparation and prescription assistance. For the most part, there were no differences in these populations by geographic area.

Citation: Campbell JE, Janitz AE, Kleszynski K, Dowers-Nichols C, Anderson AS, et al. (2018) Results from the 2013 Senior's Health Services Survey: Rural and Urban Differences. *J Comm Pub Health Nursing* 4: 213. doi:

newsletters, fliers and television. In fact, the only sources of information that was higher for small town or isolated rural areas was getting information about the community from family, neighbours or friends. Similar to advice offered in 2003 by Scala [28] programs will be less effective in providing information to older Oklahomans in rural areas, but that persistence and using all of the resources combined (such as television and the Internet) were effective, but not as effective as in urban areas. Scala's advice of needing assistance for finding services, recruiting local leadership, making connections and understanding the power of the word of mouth (family and friends) is still critical for these populations [28]. While we can and do still use all resources available we need to understand the uniqueness of the rural area and how people learn about services.

Strengths of this survey include the identification of senior interests and barriers to current programs for urban, sub-urban and rural adults in Oklahoma, which can be used guide for development and implementation of new senior programs into Oklahoma communities.

Implementing such programs could potentially decrease health problems and increase quality of life among Oklahoma's older adults. Barriers to programs identified by this survey can help determine methods to increase participation in newly implemented programs in specific rural or urban areas. We anticipate that additional analyses of the survey data will aid in appropriate methods of reaching Oklahoma seniors with advertisements that emphasize certain desired programs such as legal aid and tax preparations, in addition to health services, classes and activities. Finally this survey did include an adequate sample size for specific sub-analyses including rural and isolated areas.

Limitations of this study include the using voter registry as a population source and the somewhat low response rates, in particular among the sub-urban areas. Participants were selected from the Oklahoma Voter Registration file and the estimated voter registration differed by age group (87.4% for ages 65-74 and 66.5% for age 75 and older). Consequently, results of this survey may not be representative of

Citation: Campbell JE, Janitz AE, Kleszynski K, Dowers-Nichols C, Anderson AS, et al. (2018) Results from the 2013 Senior's Health Services Survey: Rural and Urban Differences. *J Comm Pub Health Nursing* 4: 213. doi:

to vote and those less likely to register to vote despite eligibility. The latter group may be less socially engaged and at increased risk for poor health [50]. Differences in interests and barriers to program access likely exist between those who responded and those who did not.

Citation: Campbell JE, Janitz AE, Kleszynski K, Dowers-Nichols C, Anderson AS, et al. (2018) Results from the 2013 Senior's Health Services Survey: Rural and Urban Differences. *J Comm Pub Health Nursing* 4: 213. doi: