Socioeconomic Segregation and the Location of Assisted Living Facilities in WA State

Miranda M. Anderson;
Central Washington University,

ABSTRACT

- My research project looks at the relationships between segregation by socio-economic status, race & ethnicity, and the location of assisted living facilities in the state of Washington. We know that segregation affects a variety of living conditions and life chances and outcomes, such as employment, housing, and school success rates. We lack research, however, on the effects of segregation on the location of assisted living facilities. Are assisted living homes being located in heavily segregated neighborhoods? Assisted living homes are not subject to the standard regulations that a nursing home is, and often the residents of these homes are not being cared for by qualified professionals. Are the residents of assisted living facilities – already marginalized in main stream society – being spatially marginalized as well? This research will give us a better idea of how the state of Washington is caring for its elderly population.

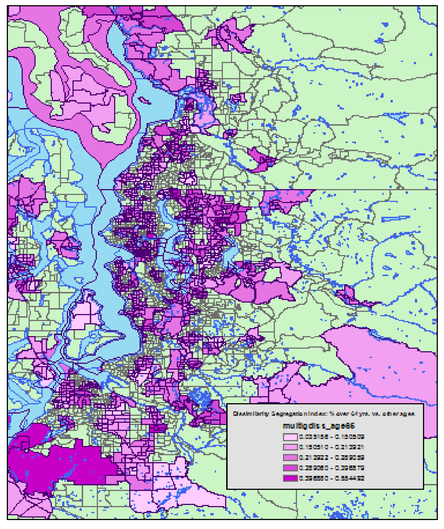
BACKGROUND

- A complex relationship between the locations of high poverty and Nonprofit Human Service Organizations (NHSO) is clear, although the poverty variable failed to explain the location of nonprofit human service organizations. The data showed that the distribution of services was uneven and in some areas local supply of NHSO outweighed local need, while other areas, most often the poorest neighborhoods, were underserved (Katz p. 167). Nonprofit organizations may locate in areas of greater need, but evidence shows that those organization's effect on neighborhood poverty is weak and that other neighborhood conditions, as well as the economy, may have far greater power in explaining poverty (Peck p. 138). Racial and ethnic segregation has shown to have an effect on the level of success that students attending public schools are seeing. Racial residential segregation is a known cause of racial disparities in health, segregation is a primary cause of racial differences in socioeconomic status by determining access to education as well as employment (Williams p. 404)

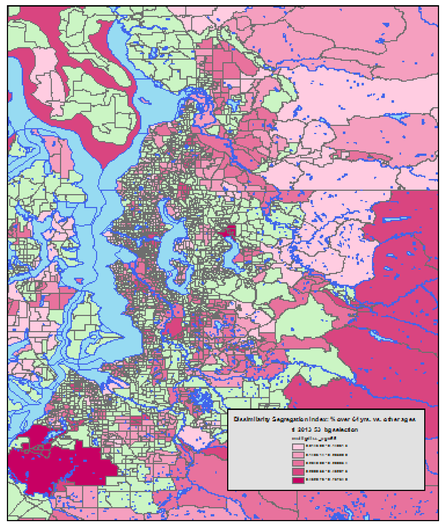
METHODS

- To address the question of the class and racial/ethnic segregation of assisted living facilities ("ALF"s), we successfully geocoded 496 of the list of 545 total ALFs available through the Open Access Data system of the WA Department of Social and Health Services. Each Census Block Group containing one or more ALFs was designated as a "focal block group" (FBG), for a total of 415 FBGs for 496 ALFs.
- The 2nd step involved building "ALF clusters" around the FBGs, consisting of the FBG and all block groups whose boundary touched the boundary of the FBG. Next a group of non-ALF comparison clusters was created by drawing a stratified (by county) random sample of census block groups that do not contain an ALF. We then followed the same procedure as used above to build "non-ALF" clusters around the non-ALF FBGs, consisting of all block groups whose boundary touched the boundary of the non-ALF FBGs.
- For both the ALF and non-ALF block group clusters, we calculated dissimilarity and isolation indices of segregation among the block groups within the clusters. We measured cluster-level segregation by age, income, receipt of various forms of public assistance, and race and ethnicity.

Age Segregation, Assisted Living Facility Blockgroup Clusters
Puget Sound Area



Age Segregation, Comparison (non-ALF) Blockgroup Clusters
Puget Sound Area



RESULTS

Dissimilarity and Isolation Indices of Segregation, by Age, Income & Poverty Status, in Assisted Living Blockgroup-Clusters and Comparison Blockgroup-Clusters, 2010-2014

	Non-ALF-Clusters	ALF-Clusters	statistical significance (2-tailed test)
	N=405	N=414	
Dissimilarity Index			
Population over 65 years old	0.20	0.23	**
Population over 75 years old	0.27	0.30	**
Poor elderly households	0.52	0.47	**
Race / ethnicity	0.30	0.30	-
Household Income (among elderly households)	0.41	0.39	**
Household Income	0.27	0.27	-
Poor elderly single female households	0.23	0.27	-
Poor elderly single male households	0.09	0.07	-
Poor elderly married-couple households	0.48	0.48	-
Households receiving cash public assistance	0.40	0.39	-
Households with social security income	0.18	0.20	**
Households with supplemental security income	0.36	0.35	+
Isolation Index			
Population over 65 years old	0.16	0.19	**
Population over 75 years old	0.07	0.11	**
Poor elderly households	0.04	0.05	**
Race / ethnicity	0.16	0.16	-
Household Income (among elderly households)	0.29	0.32	**
Household Income	0.18	0.21	**
Poor elderly single female households	0.01	0.01	-
Poor elderly single male households	0.003	0.002	*
Poor elderly married-couple households	0.017	0.015	-
Households receiving cash public assistance	0.07	0.08	+
Households with social security income	0.31	0.33	**
Households with supplemental security income	0.08	0.08	-

Notes: Statistical significance: + = p< 0.10; * = p< 0.05; ** = p< 0.01; Segregation indices based on segregation among Census Blockgroups within Blockgroup-Clusters; Data from U.S. Census Bureau: *American Community Survey*, 2014 5-year estimates and 2010 *Decennial Census Summary File 1*

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UNDERSTANDING MEASURES OF SEGREGATION

- The dissimilarity index can be interpreted as an indication of the proportion of the minority group that would have to relocate to other subunits (in our case: other block groups within the cluster) in order to achieve an even distribution across all units. So if the proportion of, for example, people below the poverty level, in the cluster as a whole is .20, and the dissimilarity index is .27, this means that 27% of the poor would have to switch block groups with non-poor people, in order to achieve an even distribution in which the proportion of poor people in each block group were .20.
- The isolation index can be understood intuitively as the probability that a random encounter with someone in your unit (in our case: block group) will be an encounter with someone in the same group as you. For example, the isolation index of segregation by receipt of social security income is .33 in ALF clusters, indicating that for a person receiving social security, there's a 33% chance that an interaction with a randomly chosen person from the same block group will be an interaction with *another person also receiving social security*.

CONCLUSIONS

- Using the dissimilarity index to measure segregation the data showed that the ALF clusters had a higher level of segregation when looking at age and race, while the Non-ALF clusters showed higher levels of segregation based on income and poverty. When we measured segregation with the isolation index we found that our ALF clusters showed higher levels of segregation when looking at age and race, as well as household income among elderly. Our Non-ALF clusters showed higher levels of segregation for only one group, poor elderly single male households.
- There are significant differences in the level of segregation based on both the isolation index and the dissimilarity index data for populations over the age of 65, where the Non-ALF group's level of segregation is .20 and the ALF group is .23. This may be because the ALF groups have assisted living facilities located in their borders. The greatest level of segregation is with poor elderly households in both the Non-ALF and ALF clusters.