

Validity Memo

As my research is quantitative, the main type of validity that I am concerned with is content validity. My study aims to contribute an implementation of an existing accessibility model to measure access to a new location: senior centers. Therefore, its success rests mostly on our ability to accurately model senior center accessibility in Philadelphia. We have taken steps toward this by reviewing numerous studies using the gravity and cumulative opportunities models, the models we are considering. These studies have applied the models in various settings including different countries and rural and urban areas, and they measure access to opportunities including jobs, healthcare, transport facilities, and food. By studying past implementations of each model and how scholars define parts of their models (e.g., how Karner (2018) defines the "impedance term" in his gravity model based on traffic and travel inconsistencies), we will be able to adapt the model based on our data for Philadelphia.

Additionally, to ensure that we are accurately measuring accessibility to senior centers, we are making an effort to account for the fact that our existing list of senior centers greatly differs from the actual number of senior centers in Philadelphia. To accurately portray the services and resources available to older adults in Philadelphia, we will be gathering and coding all of the senior centers in the city, from those in church basements to the more "official" ones partnered with the Philadelphia Corporation for Aging (PCA) and the Pennsylvania Department of Aging (PDA). This will act as an equalizer for the services available to less and more privileged older adults, as it will include services that aren't as well-funded as those on the PCA and PDA lists we previously relied on. This step will be especially important if we choose to implement the cumulative opportunities model, which looks at absolute numbers of opportunities (senior centers) available from each census tract.

Another concern for this research is convergent validity. Given Philadelphia's unusual demographic makeup, we likely cannot say that our results could apply to another city. Philadelphia's status as majority-minority and high-poverty may change some factors' (like race and income) relationship with transportation and opportunity accessibility and cause other ones to become more influential. However, I am confident that given our use of established formulas and models for measuring accessibility, our study could be replicated to find similar results in Philadelphia. Given our formulas, models, and criteria for defining a senior center, another research team should find similar results, especially regarding the geographic distribution of senior center accessibility in the city.