Vedi Ganguru

Dr. Kaczynski

HPEB 511: Neighborhood Walkability Assessment

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Neighborhood Description and Critique

I commute to college from my parents' home in Cherokee Trail, a suburban neighborhood in Lexington, SC, about 16 miles from campus. The drive typically takes 30 to 40 minutes, depending on traffic conditions. Cherokee Trail, developed in 2021 near Lakeside Middle School, is a relatively new community with around 80 single-family homes designed by Stanley Martin Homes. These houses, ranging from 2,500 to 3,000 square feet, feature front and backyards, as well as driveways. The neighborhood's layout is straightforward: upon entering, you can either proceed straight or turn left at the first intersection, and deeper inside, a four-way stop leads to additional streets lined with similar homes. In the evenings, it’s common to see middle-aged adults walking, while children ride bikes or engage in outdoor activities like cricket. The neighborhood is located just 1.5 miles from Lexington Plaza, a shopping center with a variety of stores and restaurants, as well as a nearby nail salon and dental clinic. However, Cherokee Trail lacks public transportation, and the nearest high school is a 15-20 minute drive, making it more suited for families with young children rather than for college students like me. According to the Neighborhood Environment Walkability Scale (NEWS), while Cherokee Trail offers some positive walkability features, it also has room for improvement. For example, grocery stores, clothing shops, and dining options are a 21-30 minute walk, making driving a more convenient choice since they are 1-2 miles away. Research has shown that proximity to

essential services plays a critical role in encouraging daily physical activity. In fact, a study by Sugiyama et al. (2012) found that residents living within a 10-minute walk to amenities like grocery stores were 2.5 times more likely to engage in regular physical activity. In Cherokee Trail, where essential services require driving, this could be a barrier to spontaneous physical activity. The Active Neighborhood Checklist has allowed me to identify features like the playground and cul-de-sacs at the end of each street which provide space for activities like pickleball and walking. The streets are well-maintained, with sidewalks on one side separated from the road by a grassy strip, improving pedestrian safety. However, limited tree shade and minimal visual interest beyond decorated homes are drawbacks. While Cherokee Trail offers a playground and cul-de-sacs at the end of each street, which are great for recreational activities like walking, cricket, and pickleball, the lack of tree shade along the sidewalks and minimal visual interest aside from the homes themselves are downsides. Traffic is light, but the absence of crosswalks and bike lanes raises concerns for both pedestrians and cyclists. Pucher et al. (2010) found that cities with well-designed bike lanes and crosswalks had up to 150% higher rates of active transportation, such as walking and biking, than cities without these features. Therefore, adding these elements to Cherokee Trail could significantly enhance the safety and physical activity levels of residents.

Influence of Walkability on Physical Activity and Healthy Eating

Sallis et al. (2016) found that residents of highly walkable neighborhoods were 45-59% more likely to meet physical activity recommendations than those in less walkable neighborhoods. The design and layout of Cherokee Trail, with its minimal traffic, cul-de-sacs, and well-maintained sidewalks, create a safe and comfortable environment for walking and biking within the neighborhood. Cul-de-sacs, in particular, are known to promote physical activity and safety as

they reduce traffic and create a space where residents feel secure engaging in outdoor activities. However, the overall impact on physical activity and healthy eating is limited due to the lack of nearby essential services and food outlets, which influences both lifestyle choices and habits in ways that are less conducive to health. I often see families walking their dogs or taking evening strolls, and kids frequently play cricket, badminton, or pickleball. However, because there aren't any designated bike lanes or crosswalks, more intense forms of exercise, such as jogging or cycling outside the neighborhood, feel less safe. Research indicates that the lack of pedestrian crossings and bike lanes often deters walking and cycling, as these features are critical for enhancing the safety and convenience of non-motorized transportation (Pucher & Dijkstra, 2003). For those of us who like going to a gym, we are forced to drive due to the lack of nearby fitness facilities or walking trails. The lack of walkable access to essential services and healthy food options also affects healthy eating habits in the neighborhood.While Cherokee Trail is located near Lexington Plaza, which has a variety of stores and restaurants, it's still 1.5 miles away, making it inconvenient to walk. Most residents rely on cars to reach grocery stores or restaurants. This reliance on driving reduces the likelihood of spontaneous walking or biking trips to pick up groceries. Additionally, the restaurants available nearby tend to be fast food or casual dining, which may not always offer the healthiest options. Adding crosswalks and bike lanes would make it safer for residents to walk or bike outside the neighborhood and access nearby services. Building a dedicated walking trail or fitness park within or near the neighborhood could also provide residents with more options for exercise without needing to leave the area. In terms of healthy eating, having a small, walkable grocery store or farmers' market within the neighborhood would give residents access to fresh produce without relying on cars.

Reflection on the Neighborhood Environment Walkability Scale (NEWS)

After completing the Neighborhood Environment Walkability Scale (NEWS), I found the tool to be both insightful and comprehensive in capturing several important aspects of walkability. It was interesting to see how various factors in the built environment are connected to physical activity and, potentially, to health outcomes. One of the things that stood out to me was the range of attributes it covers, such as the proximity of essential services like grocery stores and parks, the quality of pedestrian infrastructure like sidewalks and trails, and overall neighborhood safety. For me, living in a neighborhood where I can easily walk to places like the library or a coffee shop feels like a key part of staying active and maintaining a routine that encourages physical movement. The scale also captures more subjective factors, such as the aesthetics of a neighborhood. For example, the presence of trees and the attractiveness of buildings play a big role in how enjoyable a walk can be. Personally, I find that a visually pleasing environment makes me more likely to walk, especially when the streets are lined with trees or have interesting sights along the way. The NEWS tool addresses these kinds of details, which I feel are often overlooked but can be important motivators for physical activity. I also appreciated how the scale asked about safety concerns like traffic speed and crime rates, as feeling safe is essential for people to feel comfortable walking regularly. Despite these strengths, one limitation I noticed is the reliance on subjective self-reporting. Since perceptions of walkability can vary greatly between individuals, I feel like it could be difficult to rely on this data for a full picture. For example, what one person considers a “well-maintained” sidewalk might be seen as inadequate by someone else.This variability could undermine the reliability of the results and make it difficult to compare neighborhoods accurately. As a student who values data accuracy, I think it would be beneficial to supplement these subjective responses with more objective measures, like

crime statistics or infrastructure data, to balance out the personal biases. Another limitation is the tool's “one-size-fits-all” approach. While the NEWS tool seems to work well for urban areas, where services and infrastructure are geared toward pedestrians, I can see how it might not apply as effectively in suburban or rural areas. For example, growing up in a suburban neighborhood, walking wasn’t a common way to get around, but there were still plenty of opportunities for physical activity, like hiking or biking, that the tool doesn’t account for. I think this could skew the results and suggest a neighborhood is not walkable when, in reality, it offers other ways for residents to stay active. One area where I think the tool could improve is in its focus on health outcomes. While the NEWS effectively measures walkability, it doesn’t ask enough about how these environmental factors influence physical or mental health. I would have liked to see more questions about how often residents walk, what barriers they encounter, and how their neighborhood environment affects their overall well-being. Adding these kinds of questions could make the tool more effective in linking neighborhood characteristics to specific health outcomes.

Reflection on the Active Neighborhood Checklist

Using the Active Neighborhood Checklist to evaluate neighborhood walkability offers valuable insights into the physical attributes of an area that encourage walking, but there are both strengths and limitations that affect its overall usefulness. One of the checklist's primary strengths is its focus on objective, observable infrastructure elements that are essential for walkability. It covers the basics, such as the presence of sidewalks, crosswalks, and traffic-calming measures, all of which are crucial for pedestrian safety. By including public transit stops, parks, and recreational facilities, the checklist also captures amenities that

encourage walking beyond the necessities of getting from point A to point B. These facilities promote leisure walking and physical activity, which are important for residents' overall health. Additionally, questions about tree shade, pedestrian islands, and sidewalk continuity show that the checklist digs deeper into the quality of the pedestrian environment, which is commendable. However, as I completed the audit, it became clear that while the checklist does a good job of covering the physical infrastructure, it overlooks factors that influence whether people will actually use these walkable spaces. For example, the checklist doesn't assess how safe or inviting a neighborhood feels. Lighting, for instance, plays a major role in whether people feel safe walking at night, but the checklist doesn't mention it. Even though the checklist is thorough in its coverage of physical attributes, it misses out on capturing the subjective aspects that heavily influence walkability. The objectivity of the checklist is another strength. By focusing on observable factors, it ensures that different users can perform the audit in a consistent manner. This makes it easier to compare data across neighborhoods or street segments without introducing personal bias. The tool's structured format helps keep the audit organized, which is useful when there are many segments to cover. Walkability is not just about the presence of infrastructure, but also about how residents perceive and experience their environment. A neighborhood might have excellent sidewalks, but if people feel unsafe or uncomfortable, they're unlikely to walk there. The checklist's failure to incorporate these subjective experiences means that it doesn't fully capture walkability as residents experience it. When it comes to validity, the checklist covers most of the major factors that influence walkability, but I noticed some areas where it could be more detailed. For instance, while it asks about the presence of grocery stores and restaurants, it doesn't differentiate between different types of food establishments. A neighborhood with a full-service grocery store offers more support for healthy eating than one

with just convenience stores or fast-food outlets, but the checklist treats them equally. This could lead to an overestimation of a neighborhood's ability to support healthy eating. In terms of ease of use, the checklist is fairly straightforward, and its structure makes it easy to follow. However, for someone who is not used to conducting audits there are a lot of elements to track, and some questions, like those about public amenities or street design, require a good understanding of the neighborhood layout.

Comparing NEWS Instrument and Active Neighborhood Checklist

When considering neighborhood walkability, the Neighborhood Environment Walkability Scale (NEWS) and the Active Neighborhood Checklist offer two distinct approaches that cover different aspects of the walking experience. One of the most noticeable differences between the two tools is the type of information they gather. NEWS captures the residents' perceptions of their neighborhood, focusing on subjective factors such as how safe they feel, whether they find the area accessible, and even how aesthetically pleasing they consider it to be. This tool digs deep into the personal, lived experiences that shape walking behavior, which is critical for understanding why someone may or may not choose to walk in a certain area. For instance, even if a neighborhood is well-designed with great infrastructure, residents might avoid walking due to safety concerns, which NEWS can help highlight. On the other hand, the Active Neighborhood Checklist focuses on assessing the physical infrastructure of a neighborhood, such as sidewalks, crosswalks, parks, and access to public transportation. It provides a detailed look at the built environment, offering a clear understanding of whether the necessary physical features are in place to support walking. However, what it lacks is the residents' perspective on how they interact with those features. A perfect sidewalk on paper might not be enough if residents feel unsafe or uncomfortable using it, which is something the checklist alone cannot capture. NEWS

is particularly strong in its ability to gather personal, nuanced feedback from the people who actually live in the neighborhood. It uncovers barriers to walking that may not be visible in an infrastructure audit, such as concerns about crime or discomfort with busy streets. However, because NEWS relies on subjective responses, the data can vary significantly from one person to another, leading to potential challenges in aggregating the results. In contrast, the Active Neighborhood Checklist offers an objective evaluation of the physical environment, ensuring consistent data collection across different neighborhoods. This makes it particularly valuable for comparing multiple areas, as it removes the subjectivity that comes with personal perceptions. However, its weakness lies in its lack of insight into how people feel about using the neighborhood's features. You can have an area that scores perfectly on infrastructure, but without understanding how residents engage with it, you miss a key part of what makes a place truly walkable. Additionally, the checklist doesn't include a scoring system, which can make comparing neighborhoods a bit more difficult without some additional analysis. In terms of ease of use, the Active Neighborhood Checklist can be more time-consuming. It requires detailed fieldwork to assess physical features, which can be labor-intensive, especially in larger areas. In contrast, NEWS is easier to administer as it involves surveying residents rather than auditing physical spaces. However, the effectiveness of NEWS depends on residents' willingness to participate and their ability to accurately reflect on their experiences, which can sometimes lead to gaps in data if certain groups are underrepresented. If I had to choose only one tool to assess a neighborhood's walkability, I would prefer NEWS. While both tools offer valuable insights, I believe that understanding residents' perceptions provides a more comprehensive picture of what actually influences walking behavior.To enhance the reliability of NEWS, I would recommend using electronic tracking systems to aggregate responses from multiple residents, creating a more

holistic and representative view of the neighborhood. By combining these perceptions, we can form a composite picture of the walkability of an area, focusing on what really drives people to walk. In conclusion, while combining both tools would offer the most thorough understanding of a neighborhood's walkability, NEWS stands out for its emphasis on the lived experiences and feelings of community members.

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