

Uncovering Areas of Vulnerability Within Alachua County

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Background

According to 2010 data released by the US Bureau of Justice, the United States has the highest rate of incarceration in the world. A total of 7.25 million people are under correctional supervision and at least 40 percent of these people are re-incarcerated less than three years after returning to their communities (Cadora & Kurgan, 2006).

The concentration of incarcerated individuals is disproportionately distributed among very few neighborhoods in the country's biggest cities (Cadora & Kurgan, 2006). In many places, the concentration is so dense that states are spending millions of dollars per year to incarcerate the residents of single city blocks or neighborhoods. As a result, other important elements of these neighborhoods have suffered greatly – education, housing, health, family, and accessibility (Cadora & Kurgan, 2006) to everyday services that many of us take for granted. In addition to the millions spent on incarceration, efforts must be made to support their families and children that are left behind.

Furthermore, these neighborhoods are typically home to high concentrations of children and are found in dense, neglected urban centers. Children, who are arguably our most sensitive and vulnerable citizens, are rarely considered in the planning of modern cities, a consequence of our shift in design from a human to an automobile scale. City children, in particular, have sustained the greatest figurative loss as the vitality and relevance of these urban neighborhoods has faded (McLennan, 2011).

The dominance of automobiles has made it less safe for children to bike, walk, or play outside; inner-city poverty requires parents (frequently single) to work more and spend less time with their children; and funds supporting public health programs for low-income city kids are quickly diminishing, while obesity, depression, attention deficit disorders, and violence are on the rise (McLennan, 2011). In these neighborhoods, housing conditions are poor, evidence of violence and crime are abundant, and there seems to be little hope for the future. As the design and planning of urban cities has shifted towards a landscape dominated by high-rise buildings and endless streets, the scale of the child has been left behind.

Study Area

In Alachua County, the average household size is 2.32 people. Following the federal poverty guidelines for 2010, an annual income of less than \$22,050 for a household of 4 is considered below the federal poverty line. According to a report by Florida's office of Economic and Demographic Research, the unemployment rate in Alachua County was 7.9 percent in 2010, with 23.6% percent of the population below the federal poverty level.

The 2010 census reports that there are 44,285 children out of a total population of 247,336 in Alachua County. Data from the County School Board shows that about 50 percent of the

children are on free meal programs, with 25 percent receiving Food Stamps or other welfare programs. At any given time there are around 400 homeless children and around 400 children in foster care.

Although crime and vulnerability are an issue throughout Alachua County, our study focuses specifically on areas within and around the city of Gainesville. Basic census data shows a significant difference between Gainesville and other areas of Alachua County, including a lower median household income, a higher percentage of the population below the poverty level, and almost 1,800 more persons per square mile.

2010 Census Data

	Alachua County	City of Gainesville
Total Population	247,336	124,354
Below Poverty Level	23.6%	34.6%
Median Household Income	\$40,644	\$30,036
Persons per Household	2.32	2.20
Land Area in Square Miles	875.02	61.31
Persons per Square Mile	282.7	2,028.40

While it is important to understand that there are a large number of students living in Gainesville, which may skew the data slightly, there are still stark differences between these areas. Because Gainesville is a densely populated urban city, we found especially vulnerable neighborhoods with greater concentrations of incarcerations, safety violations, and children. By 2011, the population of Gainesville had increased to an estimated 125,236 people, with 13.4 percent under 18 years of age.

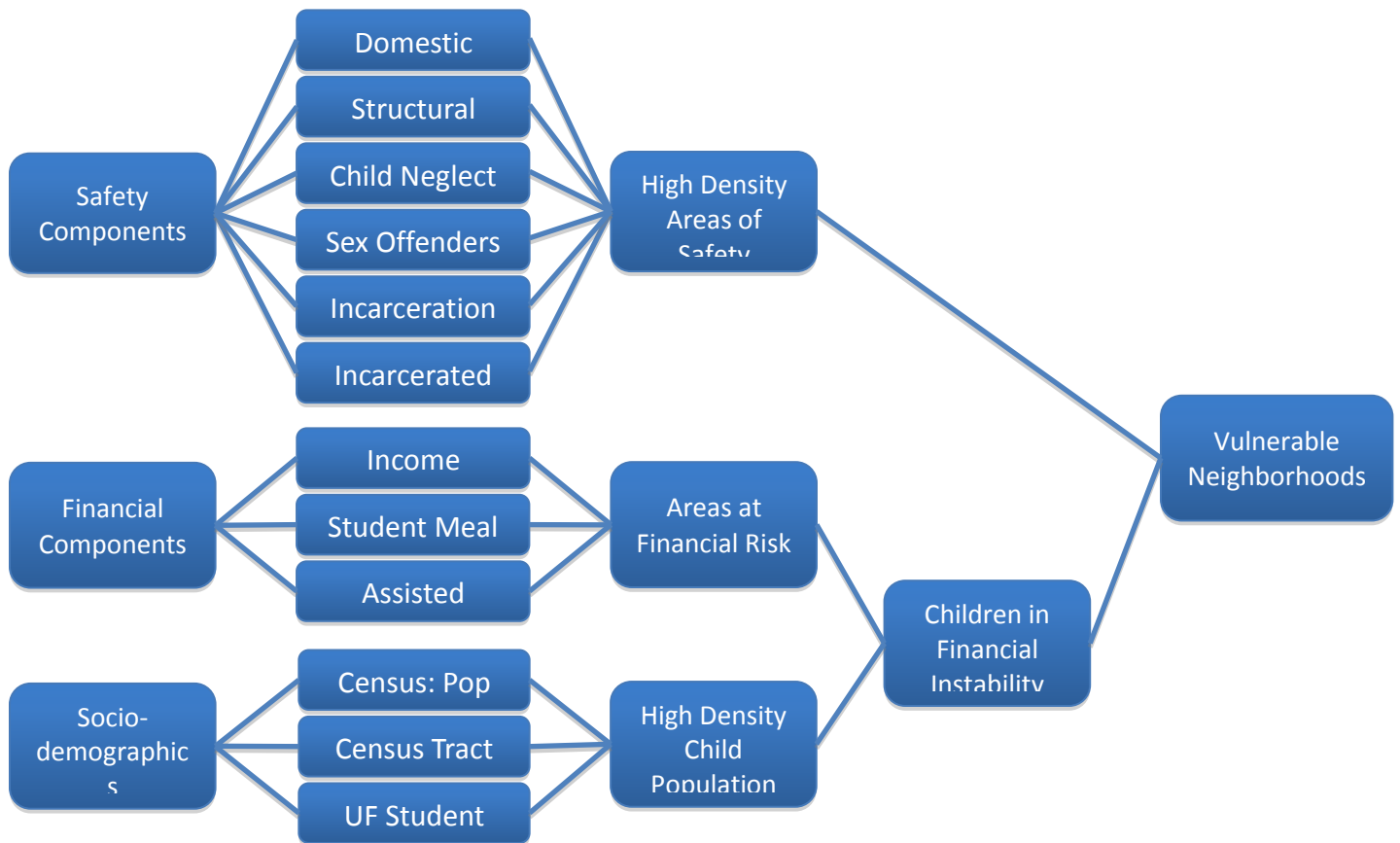
Objectives

“Vulnerability, the susceptibility to harm, results from an interaction between the resources available to individuals and communities and the life challenges they face” (Mechanic & Tanner, 2007). These life challenges can occur at an individual, community, or larger population level resulting from developmental problems, personal incapacities, disadvantaged social status, inadequacy of interpersonal networks and supports, and degraded neighborhoods and environments (Mechanic & Tanner, 2007).

The primary objective of this study is to identify vulnerable areas within Alachua County using GIS data. We divided this data into three components: Safety, financial, and socio-demographic. The main criteria we used to classify an area of vulnerability include:

- High concentration of crime and safety issues
- Low-income households
- Dense population with high traffic
- High density of children

Methodology



Variable 1: Safety Components

The first step was to identify areas with a high concentration of crime. Using the point layer that display incarcerated and convicted felons, we discovered that crime was relatively widespread throughout Alachua County. Next, we included safety incidents including domestic violence, child neglect and abuse, sex offenders, and structural code violations. Again, these incidents occur throughout Alachua County, but there were numerous areas that appeared to have significantly higher concentrations. In addition, there was no data available to show structural code violations within the city limits of Gainesville.

It was important to include safety attributes, in addition to crime, because the nature of the environment children live in can play a major role in how they develop into adults. Studies have shown that children who grow up in poor housing conditions and filthy neighborhoods frequently develop health problems. In addition, early childhood conditions can affect their learning capacity and overall well-being (Brooks-Gunn, Duncan, Klebanov, Sealand, 1993). Also, children, in general, tend to exhibit the same traits and tendencies as the people surrounding

them: “Residing in very poor neighborhoods may have particularly detrimental effects for well-off adolescents via the contagion effect” (Brooks-Gunn et al, 1993).

Variable 2: Financial Components

After identifying the areas with a higher rate of crime and can be considered “unsafe”, we used several financial factors to further isolate the areas of vulnerability. First, using the census blocks to identify groups, we selected the areas with a household income of \$40,000 or less. Although the federal poverty threshold was below \$22,050 for a household of four in 2010, we chose \$40,000 as the maximum household income because the federal number is a very extreme estimation based on relatively out-of-date standards.

Next, we added the point layers that show student meal assistance and assisted housing. Using data related to children and the meal assistance they receive allows us to infer household economic information; children that receive free or reduced lunches typically come from low-income families (North Carolina Department of Public Instruction). Likewise, assisted housing is reserved for low-income families and individuals (US Department of Housing and Urban Development).

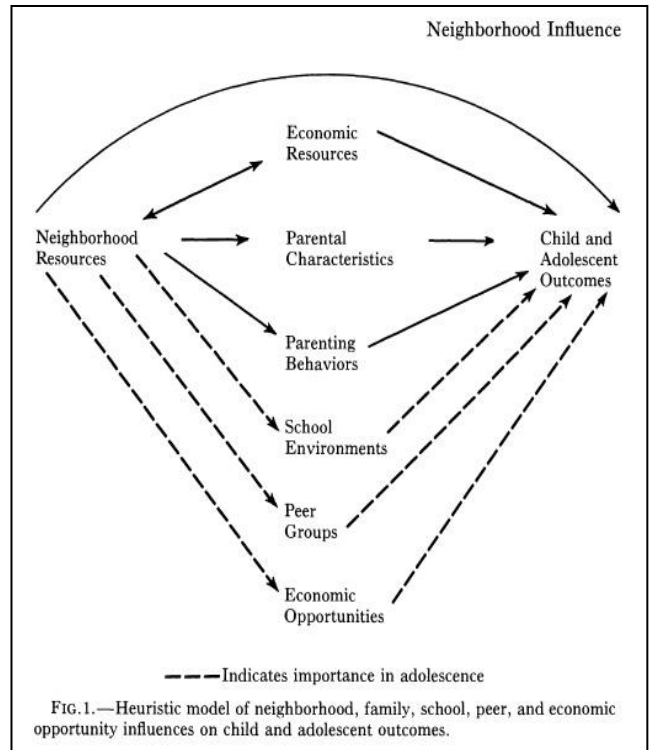


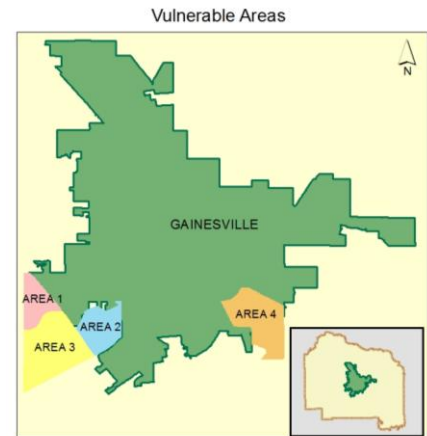
Figure from Brooks-Gunn et al., 1993

Variable 3: Socio-demographic Components

The final elements we added were to identify densely populated areas with the highest concentration of individuals under 18 years of age. This was an important aspect of our study as we consider children to be the most sensitive to vulnerability. Furthermore, we examined University of Florida student data to ensure that the vulnerable areas we identified were not skewed by a high concentration of college students, many of which do not have a reportable income of their own.

Results

Based on the developed 3-stage criteria for identifying vulnerable neighborhoods, four areas around Gainesville became apparent. A general observation of safety related violations (see *Variable 1: Safety Components*) shows that a circular area with a one-mile diameter has less than 500 instances. In contrast, the areas we discovered contain 1200 or more. This aided in clarifying that, by density of safety violations, the areas can be declared vulnerable.



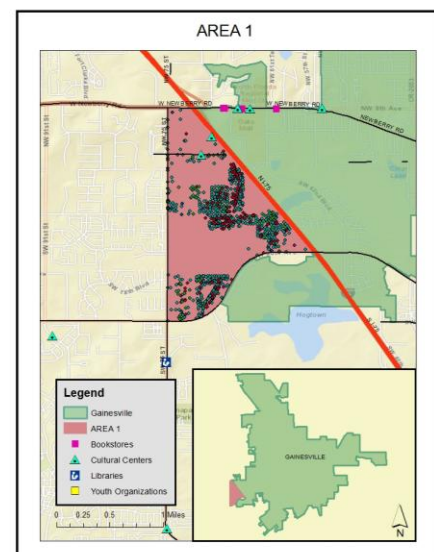
Given that vulnerable neighborhoods have common characteristics, these trends are also observable in our findings. One of the most notable traits is the amount of and proximity to major roads. These traffic arteries, meant to provide the automotive population a means of getting from one place to another, are detrimental to populations dependent on walking. Roads pose a safety hazard for youths and can act as a manmade boundary to what lies on the other side. Major roads also create undesirable areas for living because of noise, thus people who can afford to live elsewhere do so, and the ones who cannot live clustered together, often creating low-income neighborhoods. This is clearly evident in that three of our four areas lie along I-75.

Statistically, blue-collar crimes are more often committed by African Americans and Hispanics than other races. The population demographics of each of our result areas reflects this with the percentage of those two races contributing anywhere from 25 to 43 percent of the population. A second commonality is the availability of drugs. Areas 1, 2, and 3 are all located in close proximity to drug related crimes. This could largely be due to the close proximity to major roadways and highways (e.g. I-75) that cross through the zone, which allow for easy transportation of drugs. It has been shown that ease of access increases the number of people interested in taking drugs, which is especially dangerous when drugs are available in an area densely populated by children, like our vulnerable neighborhoods.

It should also be noted that a neighborhood comprises more than just houses. Parks, forests, cultural centers, public resources and amenities, etc. all contribute to a neighborhood's makeup and functionality. For this reason, our areas cover more than just a residential zone.

Area 1:

Area 1 is the most troubled of the four vulnerable areas we identified. It is a low-income area, about \$28,000 per year, and has limited recreational space. It is bounded to the east by I-75, and bounded in other directions by Newberry Rd, SW 20th Ave, SW 23rd Ave, and NW 75th Street. Although bookstores and cultural centers along Newberry Rd appear



to be geographically close, they are not accessible by this population because of the interstate. There are, however, two cultural centers within the neighborhood itself.

Area 2:

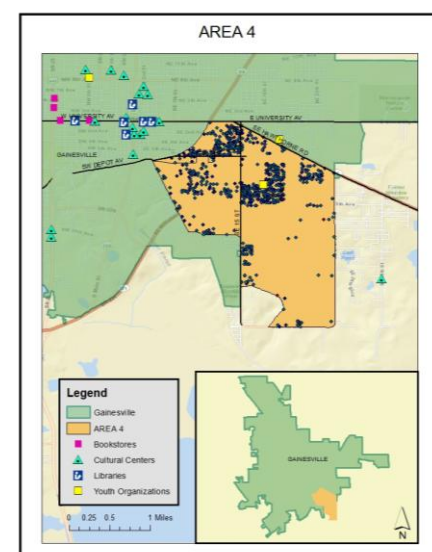
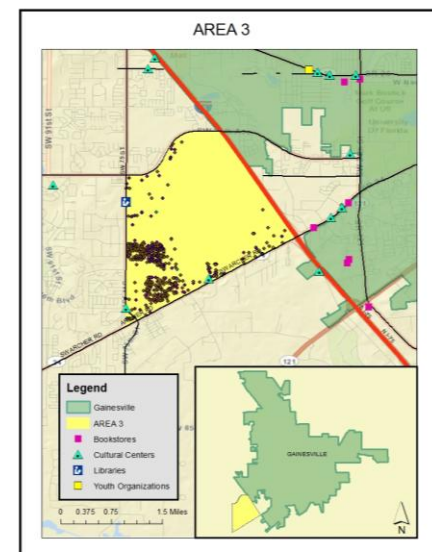
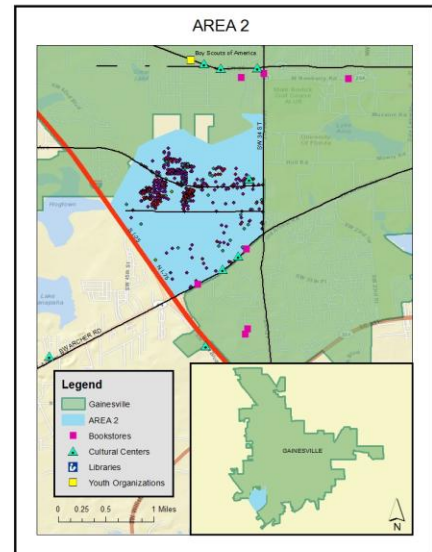
Area 2 is also located next to I-75, so similar problems to Area 1 are posed. This neighborhood is also affected by SW 34th St and Archer Rd, two of the most high traffic roads in the heart of Gainesville. The core of this neighborhood has limited to no accessibility to resources, with the exception of one cultural center, because SW 24th Ave and a forested area lie south of the residential area and a forest lies to the north. Area 2 has about five times the population of UF student residencies than any of the other areas. However, it is still densely populated with children, especially those dependent on meal assistance, and thus able to be included in our findings.

Area 3:

Area 3 is the third area located along I-75. Like Area 2, Archer Rd creates a boundary to the south. This area is unusual in that it has a high density of safety violations despite having a school next to the residential area, a library within walking distance to the north, and two cultural centers in the south. It is also unusual that there is a large amount of land designated for recreational type uses that remains undeveloped. This low-income population seems to be neglected, and has thus lost its desire to utilize what could potentially be available to them.

Area 4:

Area 4 differs from the other three in that it lies on the opposite side of Gainesville. A positive for the area is that it has two easily accessible youth organizations; one even lies in a residential area. Area 4 is an interesting area in terms of vulnerability. Since there are many resources nearby, a school next to the residential area, and most of the land south of the residential area is forest, one would think it should be able to thrive. Once you analyze it, however, some obvious problems emerge. Apart from the number of safety violations and roadways that cross through the area, information about the RTS bus system put up a red flag. Since this population's annual income is about \$35,000, it can be assumed that they are more dependent on public



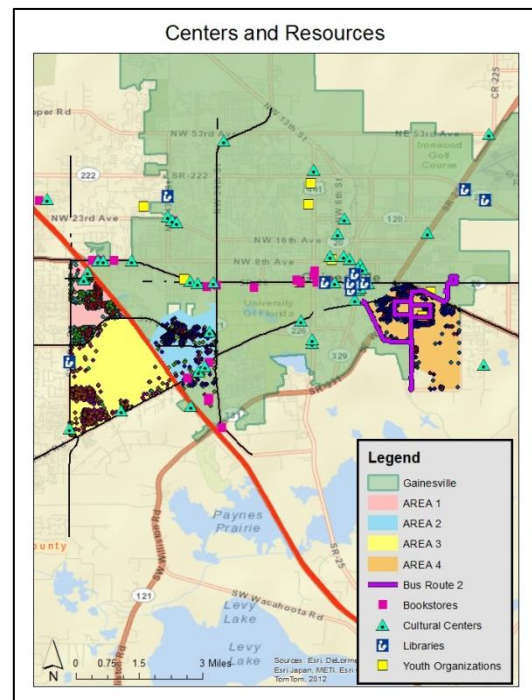
transportation than other populations with higher income. RTS bus route 2 is the primary route running throughout Area 4. What is notable is that it never travels into the area dense in resources and amenities. Thus, the neighborhood is close in proximity, but these features are not accessible, leaving the area with nothing to service the population.

Discussion

According to the Urban Model, there are four categories that should be considered when judging access to resources and quality of neighborhoods: home, school/work, recreation, and transport. Based on our analysis, we've identified several areas within Gainesville that suffer in regards to these four components.

Based on our analysis, the areas we identified suffer from heavy traffic, dense populations, crime and victimization, and represent some of the poorest residential areas in Gainesville. Studies of parenting have shown that low family income and maternal hardship often hamper children's cognitive and social competence, and parents in poor living environments have difficulty nurturing and protecting their children (Mechanic & Tanner, 2007). These family deprivations increase the probability of abuse and neglect of children, who then seek to escape the household early, associate with inappropriate peers and activities, and often replicate the pattern of inadequate parenting they experienced as children (Mechanic & Tanner, 2007). Vulnerability in these areas is exacerbated by stigma, prejudice, and discrimination, which in turn leads to segregation by race and class and high concentrations of devalued people, as demonstrated by the safety, financial, and socio-demographic data presented in our analysis. These patterns of hardship and vulnerability can persist for generations, resulting in a breeding ground for crime and poverty.

The physical location of vulnerable neighborhoods are often associated with underdeveloped or deteriorating infrastructure; lack of employment opportunities; inadequate medical, social, and educational services; poor transportation and communication facilities; high crime and victimization; economic deprivation; and limited opportunities in general (Mechanic & Tanner, 2007). Although many of these associations are accurate, they can also be surrounded by misperception. Community resources (libraries, cultural centers, parks, youth organizations, etc.) are commonly dispersed throughout the city of Gainesville. However, these resources are not being utilized by large portions of the community due to limited accessibility and convenience, as well as perceptions regarding the quality, cost, and



safety of local facilities. For example, many youths and parents assume that facilities located in low-income or otherwise vulnerable neighborhoods are low quality, too expensive, and/or less safe than those in other areas.

In addition to barriers created by the natural and built environment (e.g. forest, lakes, roads, major highways, etc.), household factors may also create barriers, especially in low-income neighborhoods. These obstacles may include availability of after-school programs, cost of programs, and convenient location (within walking distance or having reliable transportation), as well as a lack of free time because lower income youth may be more likely to have a job or increased household responsibilities (Romero, 2005). Studies have shown that the frequency of physical activity and participation in youth organizations increases with higher socioeconomic status, more qualified adults at facilities, more safe areas for facilities, and greater consideration of locations (Romero, 2005). In order to improve vulnerable areas, factors such as convenience and accessibility must be considered and local misperceptions (within and without the vulnerable areas) need to be addressed. By designing urban areas that benefit children, we will naturally design places of greater substance; places that everyone can benefit from (McLennan, 2011).

While careful and thoughtful design can help alleviate some of the problem, a real difference can't be made until these vulnerable populations, with little influence and power, receive substantial public support and funding. Many of the local and neighborhood level programs around the country, which help create and sustain a healthy community, lack stable funding and continuing political commitment. According to Mechanic and Tanner (2007), medical care, which has many formidable problems of its own, is our most sophisticated system of interventions for vulnerable people. Response to other areas of vulnerability – including poverty, welfare, child support, and community disorganization- is even less developed, less systematic, and has less stable funding.

A concerted effort to make these neighborhoods less vulnerable will require a sizable initial investment, but will have long-term effects on the community as a whole. By improving the quality of life and access to resources of today's children, we can help curb future crime, violence, and poverty. Serving the most vulnerable people and communities is not easy due to ideological differences in assessing responsibility, low public awareness, and low priority, but the lack of opportunity for large portions of our population intensifies problems for our entire society (Mechanic & Tanner, 2007). If we continue to ignore these vulnerable areas, it will only result in increased alienation, substance abuse, inappropriate behavior, and victimization of others. Not only will the members of these communities suffer, but the government will be forced to spend millions of dollars each year to incarcerate, convict, and rehabilitate criminals, support the families they leave behind, and combat other socio-economic issues. Addressing the vulnerable areas within our community, by putting children first, will recover our shared social environment, generally improving the safety and quality of life of the entire community.

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