Assessing Public Health through Community Design in Low-Income Communities

A Senior Project

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Recently, professionals in the fields of city planning and public health have become interested in the relationship between the design of the built environment and health. This interest is accompanied by a concern regarding the higher proportion of negative health effects found within low-income communities. The objective of this report is to assess the relationships between community design and public health, particularly in low-income neighborhoods. From this assessment, a set of example policies and design approaches will be recommended to assist planners and public health officials concerned with implementing strategies for healthy community design in diverse communities.

Report Methodology and Organization

The methodology used for this report focuses on three objectives:

> *Understanding why low-income communities seem to be experiencing higher health effects;*
>
> *Understanding the relationship between community design and public health; and*
>
> *Developing a list of tools that planners and public health officials can use to design communities that promote better health.*

To accomplish these objectives, a literature review and interviews were completed. Chapter 1 provides a review of the existing and relevant literature regarding the relationship between community design and public health conditions in low-income neighborhoods. The literature review covers the status of health in low-income communities, the impacts of community planning on health, and the impacts of community planning on children's health.

Chapter two analyzes surveys of planners, planning graduates, and a public health official concerning their experiences with community design and health in low-income neighborhoods. A brief report and set of questions arising from the literature review was mailed electronically to planners, public health officials, and planning students who had diverse backgrounds and lived or worked in diverse communities. In Chapter two, the interviewees and their responses are reviewed and an analysis of findings are included.

Chapter three is a toolkit that includes general approaches to healthy community design. This toolkit was developed from both the findings of the literature review section and the surveys of planners and a public health official.

Microsoft Office Clip Art Collection

Chapter 1

Research and Literature

Purpose

This chapter reviews the existing and relevant literature on factors of community design of public health in low-income neighborhoods. The review includes sections discussing the status of public health in low-income communities, the impacts of community planning on health, and the impacts of community planning on children's health.

Introduction

Since the beginning of the 19th century in the United States, low-income communities have suffered many adversities related to public health and physical environment. According to researchers Frank, Engelke, and Schmid (2003) "Disease often originated and spread most rapidly in the industrial city's poorest neighborhoods…the theory of miasma held that 'poor atmospheres' caused disease" (p.12). Frederick Law Olmstead known for his design for New York's Central Park argued that elements of the physical environment, such as urban design:

> led to overcrowding, poor drainage, and lack of sanitation...open spaces were a necessary part of the healthy urban environment because they both helped to reduce the density of structures over a given area and because they created spaces within the confines of the city for trees and plants (as cited in Frank, F. D., Engelke, P.O., Schmid, T.L., 2003 p.15).

The field of city planning has recently begun to focus on its role in the development of healthy communities. Healthy community design is planning and developing communities that can improve and provide opportunities for community members to live a healthy lifestyle. Several important benefits of healthy community design have been identified, including the promotion of physical activity, the improvement of air quality, and lowering the risks of injuries. Before addressing the solutions to healthy community design, it is important to review the relevant literature associated with public health in low-income communities.

The Status of Health in Low-income Communities

Research has established a relationship between race, income and public health. In *Why Place Matters: Building Healthy Communities,* "[C]ommunities of color and low-income communities are plagued overwhelmingly by high crime rates, under-funded schools, insufficient services, poor transportation and housing options, and other harmful attributes that compromise individual and community health" (PolicyLInk and The California Endowment, 2007, p. 6-7). Therefore, Issues of

segregation, accessibility, and the location of adverse facilities affect low-income communities and their health.

Furthermore, research has confirmed that people with low socioeconomic status have worse health effects than people with higher socioeconomic status. Disparities in income along with segregation and race contribute to health impacts that can be frequently found in low income communities of color. A lack of sufficient income can prevent someone from regular health screenings, eating well, and exercising. In addition, many American communities are informally but thoroughly segregated by race as well as by income, which can lead to several negative outcomes including concentrated poverty, limited access to full-service grocery stores, poor air quality, and unsafe streets (PolicyLInk and The California Endowment, 2007, p. 20). Furthermore, communities of color—African Americans, Latinos, and some Asian Americans—"suffer disproportionately from certain health problems—diabetes, high blood pressure, obesity, and asthma" (PolicyLInk and The California Endowment, 2007, p. 6-7). Researchers state that racial and ethnic groups suffer poorer health outcomes than whites, regardless of socioeconomic status, because of the stress associated with being a person of color, including experiences of discrimination and institutional and internalized racism. These experiences can contribute to health disparities between low-income and high-income communities including depression, obesity, diabetes, substance abuse, and chronic conditions.

The Impacts of Community Planning on Health

The field of city planning influences the health of communities in several important ways. This section explores city planning's influences on the health of communities by reviewing research studies that document the relationship between physical design and land use and health impacts.

Research has demonstrated that community planning, through its influence on the built environment, can significantly impact health:

> The built environment has a significant impact on physical and mental public health.
> The ramification of life choices for where one lives, works, and plays directly affect
> one's immediate environment, the expanded environment, and the health of fellow
> and surrounding community members (Abbott, P. S., Carman, N., Carman and J.,
> Scarfo, B. (Eds.), 2009, p. 30).

Community planning impacts health in a number of ways. For example, land use planners are responsible for decisions regarding the types of uses and activities available to people (jobs, food,

parks), as well as the location of uses (for instance, the location of residential development adjacent to industrial uses that pollute). Both types of activities and their locations have been linked to health impacts, and research related to these topics can be found later this chapter in the following section: "Uses and Public Health."

By influencing the quality of services available to people (such as public transportation), planners also affect community members' access to opportunities outside their neighborhoods (see "Services and Public Health"). Low-income people are already financially limited, thus, when opportunities are limited, this contributes to several negative consequences such as difficulties acquiring stable jobs and receiving health screenings.

Moreover, many health practitioners and researchers are increasingly concerned with the design/layout of the built environment because of its connection to chronic health conditions, especially those that arise from a lack of exercise and poor nutrition. Several research studies have indicated that poor urban design contributes to the health disparity which will be covering in this chapter under "Physical Design and Public Health."

The following sections will cover the specific impacts that uses, transportation options, and physical design of a community have on public health, particularly in low-income and minority communities.

Uses and Public Health

In low-income communities, the types of uses, and their relative location to housing, have been found to have important consequences for health. The following sections discuss the impacts that incompatible uses have upon neighboring communities, and the negative consequences that result from nonexistent but important uses.

Chapter 1. Research and Literature

Incompatibility of uses. First, incompatibility of uses is a significant concern in city planning. Separating incompatible uses such as residential from industrial is considered to be efficient and healthy planning. However, several low-income communities have suffered from having unwanted uses in their backyard that lead to health effects. For example, polluting business and factories are frequently located in communities of color, which means a less healthy neighborhood with more air and soil contamination (PolicyLink and The California Endowment, 2007, p. 7). According to Lee (2002), "research shows that polluting sites are more likely to be built in low-income communities of color than in wealthier areas" (as cited in PolicyLInk and The California Endowment, 2007, p. 38). This outcome may be a result of the cost of land and other financial factors or even environmental injustice.

Lower-income housing is often located in areas of higher sources of air pollution such as freeways, ports, and other sources of diesel. Research demonstrates a connection between freeways and health. In the report *Why Place Matters: Building a Movement for Healthy Communities,* the report indicates that neighborhoods that were located near major highways suffered from respiratory problems in higher proportion than the general population. The proximity to freeways and airports brings additional toxins and produces asthma issues (as cited in Bell, J., & Rubin, V.,2007, p.40). Rates of asthma have been rising, most rapidly among preschool-age children. Asthma affects low-income people and people of color disproportionately (as cited in Bell, J. and Standish, M., 2005, p. 340).

Insufficiency of important uses. *Economic opportunities in low-income and minority communities.* Uses such as housing, jobs, and retail within a community directly affect the decisions a person makes by prioritizing their needs and their access to these needs and uses. Over the last 50 years, as wealthier residents moved from the cities to the suburbs, disinvestment occurred in the central cities. As jobs and other economic activities moved to the suburbs, many low-income neighborhoods have become relatively isolated, leaving residents—especially those without their own cars—with limited employment prospects and inadequate access to services in their own neighborhoods. According to Acevedo-Garcia et al. (2003), this lack of access to opportunities places the entire community at risk for poorer health outcomes through socioeconomic disparities (as cited in PolicyLInk and The California Endowment, 2007, p. 37-38). The presence of a growing commercial sector, which employs local residents while serving the neighborhood with beneficial businesses, improves the health and wellbeing of the members of that community. Thriving and diverse businesses are "a protective factor that helps build financially secure and healthy neighborhoods" because new commercial development can attract additional economic activity while others capitalize on existing economic vitality. This provides opportunities for local employment and increases individual income and available disposable income (PolicyLInk and The California Endowment, 2007, p. 6). However, many low-income and minority communities lack a growing commercial sector, resulting in low occupational positions that tend to produce adverse effects on both physical and psychological health (PolicyLInk and The California Endowment, 2007, p. 18). The lack of presence of a vital commercial sector also affects the presence of healthy food options within the community.

Healthy food options in low-income and minority communities. The following are several case studies that include explanations of the difficulties of healthy food options in low-income and minority communities. In the case study, *Mobility Strategies and Food Shopping for Low-Income Families,* Clifton (2004) discussed that low-income households "organize their daily activities around the opportunities and resources available." If healthy food options are not available in a neighborhood, this means that the "acquisition of healthy and affordable food" is more difficult (Clifton, K.J., 2004, p. 420).

Furthermore, in Beyond *Food Deserts: Measuring and Mapping Racial Disparities in Neighborhood,* professors at the State University of New York (SUNY) in Buffalo tested a hypothesis that examined accessibility —walking, biking, driving, using public transportation— to food retail destinations that were located within a five-minute travel time. The data were adjusted for the area of a neighborhood, population, and median household income. The studies results showed predominantly African-American neighborhoods have about half of the supermarkets and 0.6 times fewer meat and fish markets compared to predominantly Caucasian neighborhoods. Even though three of the study neighborhoods in San Francisco Bay area contained small full-service food retailers that provided culturally affordable foods in minority neighborhoods, the availability and quality of fresh foods were not consistent. "While all supermarkets carried fresh produce, only 70 percent of grocery stores and 33 percent of convenience stores that were surveyed carried fresh produce," and as measures of availability and quality, the availability of whole grains in grocery stores and convenience stores were 34 percent less than supermarkets and a number of the smaller grocery and convenience stores did not post expiration dates on their items (Raja, S., Ma, C., Yadav, P., 2008, p. 479).

Another study conducted in 2007 by Johns Hopkins University's Bloomberg School of Public Health, showed that Baltimore residents that lived in predominantly African-American and low-income communities had "poor access to healthy foods, paid 20 percent more for basic food items (such as milk) in corner stores than in supermarkets, and lacked convenient access to healthy foods such as whole wheat bread, skim milk, and fruits and vegetables" (Hodgson, K., 2009, Planning Magazine). This disparity of healthy food options in low-income and minority communities impacts these residents because they are financially limited and are faced with unhealthy food options.

Research has demonstrated the negative health impacts associated with fast food outlets. A report conducted by the UCLA Center for Health Policy Research, the California Department of Health Services, and the Public Health Institute, compared communities that have a lower ratio of fast food restaurants with those that have a higher ratio. The study concluded that the communities with a higher proportion of fast food restaurants have a greater prevalence of health issues, regardless of income level *(Designed for Disease: The Link Between Local Food Environments and Obesity and Diabetes,*

2008, p.1). In addition, in poor and urban communities, fast food outlets are found more than grocery stores because grocery stores have minor interest investing a grocery chain in lower-income communities. The main reason of the lack of interest is the demographics of low-income communities do not meet the industry's ideal and large grocers want larger sites. This imbalance is due to the nation's centralized food distribution. For example, "the Central Valley grows the nation's fruit and vegetables, but there are communities that literally have no access to fresh foods" and this is due to the imbalance of the food system. California Center for Public Health Advocacy's Charlotte Dickson states; "You're not going to make the profit on an apple that you can on a bag of cheetos" (Shigley, P., 2009, p. 28). For example, the Retail Food Environmental Index (RFEI) is a ratio that defines the retail food outlets around an individual's home that are likely to offer inadequate healthy foods such as fresh fruits and vegetables. The RFEI ratio is calculated by dividing the total number of fastfood restaurants and convenience stores by the total number of grocery stores (including supermarkets) and produce vendors (produce stores and farmers' markets) within a radius around an individual California Health Interview Survey respondent's home (0.5 mile in urban areas, 1 mile in smaller cities and suburban areas, and 5 miles in rural areas). The higher the RFEI ratio the more fast-food restaurants and convenience stores are nearby compared to places that sell healthier options *(Designed for Disease: The Link Between Local Food Environments and Obesity and Diabetes, 2008,* p.3). Figure 1.1 illustrates the RFEI ratio between high-income and low-income communities. Low-income communities have twenty percent more fast-food places and convenient stores than high-income communities.

Figure 1

Average Retail Food Environment Index (RFEI) by Community
Income, Adults Age 18 and Over, California, 2005
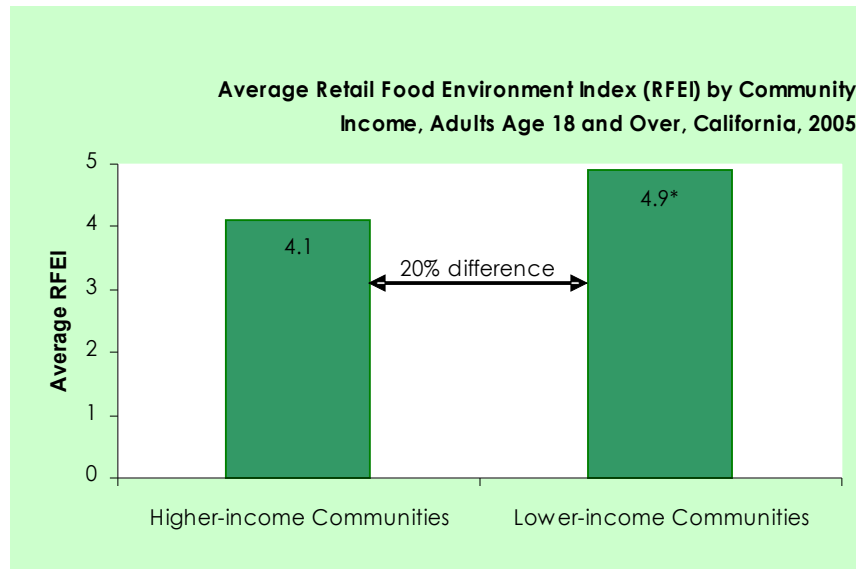
Adapted from Designed for Disease: The Link Between Local Food Environments and Obesity and Diabetes, 2008, p.5.

Transportation Options and Public Health

Another concern that impacts public health is access to services outside the community, which is significantly affected by the transportation options available to residents. Low-income communities lack certain uses such as grocery stores, but also face the lack of access to uses outside the community. In *Mobility Strategies and Food Shopping for Low-Income Families*, Clifton (2004) examined the impact of transportation problems that the country's low-income population have to their accessibility to healthy and affordable foods. The results of Clifton's study suggest that low-income households organize their daily activities based on the resources and transportation services that are available because many low-income families have one or no automobile (Clifton, K.J., 2004, 407). Gottieb et al. (1996) stated that "food shopping becomes a question of not what one would like to buy, but what is available, given mobility restrictions" (as cited in Clifton, K. J., 2004, p. 403). Therefore, the lack of public transportation services impacts these families from purchasing healthy and affordable food due to time constraints and budget (Clifton, K.J., 2004, p. 403). Accessibility challenges may be directly affected by the layout of the built environment.

Physical design and Public Health

The final impact to be discussed relates to how the built environment and walkability are significant to public health in low-income communities. The following section covers the concerns of sprawling communities, street connectivity, and pedestrian safety, all of which community planning can impact.

The built environment is considered to be the layout of a community that includes the location of spaces such as streets, recreation, housing, businesses, and other structures and services. Healthy community planning supports different compatible uses such as housing, businesses, and schools to be located closely to allow for residents to easily access the places they need to go to and not rely on their automobiles. Being able to conveniently and safely walk, bike, and use public transportation is considered to be healthy community design. However, many American neighborhoods are not focusing on healthy community design, but sprawling and non-walkable communities. Kelly-Schwartz, et al (2004) has concluded sprawling communities are a factor leading to less physical activity and air pollution, thus, contributing to health effects. Figure 1.2 below illustrates the probable health effects that include obesity, diabetes, and lung disease.

Figure. 2
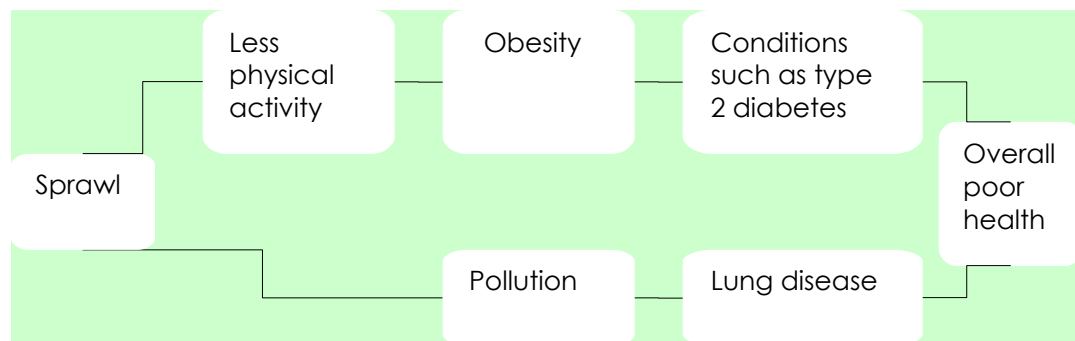
Adapted from Kelly-Schwartz, A. C., Stockard J., Doyle, S and Schlossberg, M. (2004). p. 185.

Furthermore, neighborhoods in central cities are deficient with respect to supporting exercise such as walkable blocks. Living in a safe and walkable neighborhood promotes a healthy lifestyle and encourages residents to walk or bike instead of drive from one block to the next block. In the article, *Is Sprawl Unhealthy,* is an analysis that examined sprawl and health by University of Oregon professors.

The article included a nationwide study that was conducted by the National Center for Health Science which examined sprawl and health connections using a larger set of data that included participants from randomly selected primary metropolitan statistical areas (PMSAs). The survey included personal interviews at participants' home and medical examinations. Some of the counties that were included in the analysis were counties that had higher populations of Mexican- and African-Americans were in Fresno, St. Louis, Los Angeles, Alameda, El Paso, and Providence. Significant findings the professors found that among respondents with chronic conditions, those that lived in areas with more connected street networks were healthier. The professors concluded that the impact of urban sprawl to the public's health is complex and multidimensional. A greater focus to street connectivity would promote better health and density related to overall health ratings (Kelly-Schwartz, A. C., Stockard J., Doyle, S and Schlossberg, M., 2004, p. 195). Street connectivity is significant because it affects walkability within a community. Street connectivity relates to an effective transportation system that has multiple routes and connections that links the public and provides access to different uses such as schools, grocery stores, and parks.

The Impacts of Community Planning on Children's Health

The impacts of community planning on the health of children are significant and particularly concerning. Planning healthy communities affects the future of children and their health. According to *Healthy Kids, Healthy Communities: School and Local Government Communities* (2007) report also suggested policy has a significant impact on children's health. For example, "limited access to affordable, healthy foods, land-use decisions that discourage physical activity, greater reliance upon fast food…all contribute to the escalation of childhood obesity rates" (*Healthy Kids, Healthy Communities: School and Government Collaborations*, 2007, p.1). Implementing healthy policies and design is crucial to children's health because healthy planning can improve and promote walkability and access to recreation, which can improve the health of children.

According to public health data reported in *Healthy Kids, Healthy Communities: School and Government Collaborations*, about 30% of children and teens are overweight or obese, which has doubled over the last 10 years (*Healthy Kids, Healthy Communities: School and Local Government Communities,* 2007, p.1). In addition, in a 2005 California Health Interview Survey conducted by

UCLA Center for Health Policy Research, the California Department of Health Services, and the Public Health Institute, rates of obesity and diabetes were higher and rapidly risen among people of lower-income communities and racial minorities. Residents in lower-communities state that "heavy traffic, unattended dogs, and air pollution from cars and factories" are some of the causes that prevented them from going outside to walk or run (as cited in PolicyLInk and The California Endowment, 2007, p.40). If the physical environment is not safe and walkable, parents along with their children will find it more difficult to go outside and exercise. According to a survey conducted by the Office of Highway Policy Information and Federal Highway Administration in 2001,   only a small fraction of children walk to school compared to the majority who once did so (as cited in PolicyLInk and The California Endowment, 2007, p. 37). Another significant community planning concern that impacts the health of children is accessibility to safe places for recreation.

In Los Angeles County, there are nearly two-thirds of children who have no local access to parks or playgrounds:

> Latino, Asian, and African American youth suffer most because existing parks are concentrated in predominantly white neighborhoods. The lack of play space, combined with high rates of obesity for Latinos and African Americans, points to an unhealthy future for low-income children and children of color in the county (PolicyLInk and The California Endowment, 2007, p.38).

Furthermore, researcher Lee (2002) concludes parks that are located in low-income communities are often "unsafe, poorly maintained, and much too small for the current population" (as cited In PolicyLInk and The California Endowment, 2007, p. 38). If there is a lack of safe and adequate recreational areas for residents, this makes it more challenging to live a healthy and active lifestyle. Accessibility to a range of recreational sports and activities can promote children to be more physically active. However, "poorer neighborhoods are likely to contain fewer amenities such as sports fields" (Frank, F. D., Engelke, P.O., Schmid, T.L., 2003, p. p. 93). Children in low-income communities are critically affected because they face diverse challenges preventing them to be outdoors and be active. As a result, community planners play a critical role in shaping the future health of children.

Conclusion

Based on the literature and research about the impacts of community design on the health of low-income communities, there is a better understanding of the definite relationship between the physical environment and public health. There is also a better understanding of the significant role city planning has on public health. This growing concern not only impacts the health of low-income residents but also significantly impacts the future health of children. The following is a set of relevant topics that reflect the data and findings of the literature:

Safety and walkability

Location of uses

Disparity of resources

Health education

Affordability

Community demand and investment

Health education

Community involvement

Based on the main topics, the following questions were developed to further analyze the assessment of public health through community design in low-income communities:

How does the built environment affect public health?

Why are there findings stating low-income communities have the highest level of health problems?

Why is there a lack of healthy food options in low-income communities?

What are policymaking decisions that can be implemented to address health in low-income communities?

These questions will be asked to survey participants in the following chapter to address the main findings and concerns concluded from the literature review.

Chapter 2

Survey Analysis

Purpose

This chapter is an analysis of collected responses from a public health official, planners, and planning graduates. The survey (Figure 3) was emailed to 17 planners, public health officials, and planning graduates with diverse backgrounds and lived or worked in diverse communities, and six participants responded. The survey was administered through electronic mail, and the responders electronically mailed their answers and concerns. To provide context, background data from the literature review was included with the survey questions. The background data and questions incorporate the concerns of the built environment, public health, and low-income communities. The survey questions were:

How does the built environment affect public health?

Why do you think there are findings that low-income communities have the highest level of health problems?

Why do you think there is a lack of healthy food options in low-income communities?

What are some policymaking decisions that can be implemented to address health in low-income communities?

Other thoughts?

The objective of this question is to expand any other ideas, concerns, and recommendations the participants may have that are relevant to this report.

The first part of this chapter describes the survey participants, and the subsequent sections cover the survey responses organized by question. After covering the responses to each question, an analysis of the significant and common ideas from the survey participants is provided. Finally, at end of this chapter is a summary of the major findings and recommended strategies for healthy community planning from the respondents.

Assessing Public Health through Community Design in Low-Income Communities
Survey

I am conducting research for my senior project. My topic is Assessing Public Health through Community Design in Low-income Communities. Through preliminary research, I have found a general consensus that there is a relationship among race/ethnicity, public health and low-income neighborhoods.

The following are the significant findings I have found:

The built environment directly impacts physical and mental public health. Urban sprawl

Source: Kelly-Schwartz, A. C., Stockard J., Doyle, S and Schlossberg, M.,2004, P 185.

Supermarkets are meeting needs of the growing suburban population, and grocery stores located in low-income neighborhoods have been closed or sold.
Led to the creation of an "urban grocery store gap."

There is a relationship among race/ethnicity, public health and low-income neighborhoods. Low-income neighborhoods often have:
Insufficient services, poor transportation and housing options.
Lack of amenities (parks, sidewalks)
Location of adverse facilities
Polluting facilities
Freeways
Lack of accessibility:
To affordable and healthy foods
To services (jobs, retail)
Resulting health effects:
Obesity
Heart disease

I would greatly appreciate if you would answer the following questions and state any other thoughts regarding my senior project topic:

How does the built environment affect public health?

Why do you think there are findings that low-income communities have the highest level of health problems?

Why do you think there is a lack of healthy food options in low-income communities?

What are some policymaking decisions that can be implemented to address health in low-income communities?

Other thoughts?

THANK YOU!!!

Figure 3 *Example of survey administered.*

Survey Participants

The criteria for choosing the participants were to attain diverse information but confirm similar findings of the poor health found within low-income communities that were determined from Chapter 2 Research and Literature. It was important to choose participants that are directly involve in city planning, have substantial knowledge and experience of city planning, and/or involve in public health. It was also crucial to choose participants who lived in socio-economically different communities. The survey was then electronically mailed to public health officials, planners, and planning students. A total of six participants responded with their answers. At the end of this section are comparison tables of the survey participants' personal and community demographics.

Survey Participant 1

Survey participant 1 works for a California Central Valley county agency as a public health official. This participant is a white female and is in her mid 30s. According to the US Census Bureau, the county she is employed with had a population of 661,645 in 2000. About 16.9 percent of the people living in the county were foreign born while 33.4 percent spoke a language other than English at home. The 2000 median income for the county was $35,446 while 20.8 percent of people were in poverty. In addition, this county is a large agriculture producer for the country but has several low-income communities.

Survey Participant 2

Survey participant 2 works for a California Central Coast city agency as a Senior Planner. This participant is a white male in his 50s. According to the US Census Bureau, the city he is employed with had a population of 44,148 in 2000. About 9.5 percent of the people living in the county were foreign born while 3.9 percent spoke a language other than English at home. The 2000 median income for the city was $31,926 while 7.1 percent of families were in poverty.

Survey Participant 3

Survey participant 3 works for a Central Valley, California, city agency as a Senior Planner. This participant is a middle class white male in his 50s. According to the US Census Bureau, the city he is employed with had a population of 38, 981in 2000. About 38.2 percent of the people living in the county were foreign born while 72.5 percent spoke a language other than English at home. The 2000 median income for the city was $28,143 while 25.7 percent of families were in poverty.

Survey Participant 4

Survey participant 4 is a City and Regional Planning graduate from a California University. This participant is a middle class African American male in his 20s. According to the US Census Bureau, the city he grew up in had a population of 399,477 in 2000. 26.6 percent of the people living in the county were foreign born while 36.8 percent spoke a language other than English at home. The 2000 median income for the city was $40,055 while 16.2 percent families were in poverty.

Survey Participant 5

Survey participant 5 is a City and Regional Planning graduate from a California University. This participant is a middle class white and Hispanic male in his 20s. According to the US Census Bureau, the city he grew up in had a population of 128,161 in 2000. 13.8 percent of the people living in the county were foreign born while 25 percent spoke a language other than English at home. The 2000 median income for the city was $60,931 while 4.9 percent of families were in poverty.

Survey Participant 6

Survey participant 6 is a City and Regional Planning graduate from a California University. This participant is an Asian female in her 20s. She came to the United States to pursue her college education. According to Statistics of Bali (BPS), the Indonesian region she grew up in had a population of 3,216,881 and the city she grew up in had a population of 394 in the year 2000. There was no available data recorded for the people living in the region that were foreign born, percent of people that spoke another language than the native language at home, and percent of families that

were in poverty in 2000; however, there was data for the years 2007 and 2008—5.9 and 6.6 percent

of families were in poverty, respectively.

Table 1

Survey Participants' Personal Demographics			
	Gender	**Age**	**Race**
Survey Participant 1	Female	30s	White
Survey Participant 2	Male	50s	White
Survey Participant 3	Male	50s	White
Survey Participant 4	Male	20s	African American
Survey Participant 5	Male	20s	White and Hispanic
Survey Participant 6	Female	20s	Asian

Table 2

Survey Participant's Community Demographics					
	Population	**Median Income**	**% In Poverty**	**% Foreign Born**	**% Non-English at Home**
Survey Participant 1	661,645	$35,447	20.8	16.9	33.4
Survey Participant 2	44,148	31,926	7.1	9.5	3.9
Survey Participant 3	38,981	28,143	25.7	38.2	72.5
Survey Participant 4	399,477	40,055	16.2	26.6	36.8
Survey Participant 5	128,161	60,931	4.9	13.8	25
Survey Participant 6	394	N/A	5.9*	N/A	N/A

Source: US Census Bureau, 2000 and Statistics of Bali, 2008

Survey Questions and Responses

The survey questions were developed to be straightforward but cover the main ideas that are

relevant to assessing public health through community design in low-income communities. Each

survey responses are direct excerpts from the participants, and the excerpts represent the main ideas

that are relevant to the question and this report.

How does the built environment affect public health?

Survey Participant 1. "People know they should walk but if they don't feel safe when they head outside their door, it doesn't matter how well they are educated, if their environment doesn't make it easy to do so, they will not be more physically active."

Survey Participant 2. "Decreased residential density means increased dependence on automobile commuting; the explosion in the number of "fast food" restaurants; building designs that 'turn away' from the public street contribute to 'less defensible' space and detract from perception of physical safety."

Survey Participant 3. "The built environment affects public health in terms of locating different types of land uses (such as residential, commercial and recreational) so that they are within walking distance of each other, and separating residential areas from the effects of pollution-producing industries."

Survey Participant 4. "The built environment effects public health mainly through zoning/spatial planning, car dominated development, and a lack of public involvement/ awareness in development processes."

Survey Participant 5. "If uses are spread out from each other, more people will choose to drive their personal vehicles rather than walk, bicycle, or take public transportation. This then adversely affects the air quality."

Analysis

Safety. Survey participants 1 and 2 indicated that physical safety plays a role in being physically active.

Location of Uses. Participants 2, 4 and 5 explained:

The relative location of uses affects automobile use versus alternative modes of transportation such as walking or biking affect community members being physically active.

The zoning of incompatible uses is important in preventing poor air quality such as factories and highways. These incompatible uses should be located away from residential areas.

Community Involvement. Participant 4 expressed the importance of public involvement in the decision-making process within a community. It is important for community members to participate and be involved with planning, community events, and the decision-making process for challenges to be overcome.

Why do you think there are findings that low-income communities have the highest level of health problems?

Survey Participant 1. "One example is the disparity of resources invested in the built environment. For the Greenfield Walking Group, made up of parents that met in a Family Resource Center nutrition class, the obstacles to walking in their local park due to lack of positive investment were significant. They included aggressive stray dogs, speeding cars that would not yield to families trying to cross the street to the park, drug dealing, gang recruitment, stepping on hypodermic needles and broken liquor bottles, all of the light being shot out and everything covered with graffiti to name a few."

Survey Participant 2. The following is a list the participant provided for this question:

"Feelings of self worth and self image affect health habits and can be associated with income level, family cohesiveness, and cultural isolation felt by recent immigrants;

High frequency of single-parent households;

Lack of access to affordable, high-quality medical and dental care."

Chapter 2. Survey Analysis

Survey Participant 4. The following is the participant's list and two suggested case studies, Richmond, CA and Oakland, CA, for this question. I briefly researched the case studies and provided a brief description.

"Many times low income neighborhoods and communities are planned without adequate public participation. This may be due to lack of information, lack of education, or just lack of interest by the community's residents. Whatever the case, decisions are many times made without the affected community's voice. It is these communities who are subject to harmful development that affects the overall public health.

Case study: Richmond, CA and the expansion of Chevron refinery. According to an article by the Asian Pacific Environmental Network:

> Communities in Richmond, particularly low-income and communities of color are severely overburdened with industrial pollution-related health problems, including high rates of asthma and cancer. Chevron's refinery is the largest industrial polluter in the region. The expansion would allow heavier and dirtier crude oil to be processed at the Richmond refinery, which would increase releases of mercury, selenium, toxic sulfur compounds, and greenhouse gases (Asian Pacific Environmental Network, 2008).

Also the lack of fresh fruit/vegetable grocery stores located in low income neighborhoods. In many communities, it is extremely convenient to walk to a liquor store or fast food restaurant and a lot more difficult to get to a grocery store.

Case study: East Oakland, CA According to Laurison and Young's (2009), *Oakland Food Retail Impact Study:*

> In 2008, the Food Marketing Institute reported the City of Oakland estimated that approximately $230 million in grocery store spending is   leaving the city.6 While Oakland's wealthier neighborhoods have recently seen the opening of two new Trader Joe's stores and a Whole Foods Market, liquor stores and corner markets continue to dominate in Oakland's low-income neighborhoods (as cited in H. Laurison & N.Young, 2009, p.3).

Survey Participant 5. "Environmental injustice is a big factor. I believe it is more so prevalent to race than it is to income level, but a lot of times these are the same. There is a high amount of fast food restaurants in these areas because it is inexpensive and high in demand. Chain Grocery stores are cheaper and do not sell the best quality food than a local grocery store would sell. Low-income communities drive more gas guzzling, environmental unfriendly vehicles because they are cheaper.

They are taken advantage of more so than wealthy neighborhoods because they feel inferior to their government and feel as though they lack power to lobby."

Survey Participant 6. "Lack of education about health, health is not their first priority, health is not affordable."

Analysis

Disparity of resources. Participant 1 expressed there is a disparity of resources that are invested in the built environment causing the risk of health problems within low-income communities. In addition, participant 3 explained that environmental injustice may be a factor in the disparity of important resources and the presence of more fast-food places within low-income communities because these communities are being taken advantage of and lack government support. Participant 4 provided the Richmond and Chevron case study that is an example of environmental injustice.

Socio-economic factors. Participant 2 provided a list of socio-economic reasons that may lead to the higher level of health problems found within low-income communities such as high frequency of single-parent households and lack of access to affordable, high-quality medical and dental care.

Community Involvement. Participant 4 and 5 discussed the issues of public participation and government support is possible causes of the health effects and healthy food-options disparity in low-income communities.

Community demand and investment. Participant 5 also explained the demand of healthy-food options and community characteristics of a community play a significant role in companies investing in communities because companies are less willing to invest in low-income communities and communities that lack government support.

Affordability. Participant 2 and 6 stated the quality health care is not affordable to low-income and this is a concern for low-income community members because they should have the opportunity to receive regular health screenings.

Health Education. Participant 6 also expressed that there is a lack of health education in low-income communities, and better knowledge of a healthy lifestyle can improve the health of low-income community members.

Why do you think there is a lack of healthy food options in low-income communities?

Survey Participant 1. "It cost more to eat healthy food and on a limited income families are just trying to have enough food for their family, much less healthy food."

Survey Participant 2. The following is a list the participant provided for this question:

"I'm not sure there is a "lack of healthy food options" in low-income areas. I'd like to see the research. For example, in some of the poorest areas of west Fresno, there are several Hispanic-oriented markets carrying a full range of fruit, vegetables, legumes, cereals and meats. Many of our poorest residents have the option to drive short distances or use public transit to do grocery shopping.

"Big Box" grocery markets target affluent communities; they're in business to make money and this is where profit margins are highest. However smaller markets can often be competitive in neighborhood settings by focusing more on service, specialty foods and local preferences."

Survey Participant 3. "The lack of healthy food options in low income neighborhoods obviously has to do with the lack of profit margins for businesses in such neighborhoods where residents don't have as much to spend. It is a challenge to overcome this economic discrepancy."

Survey Participant 4. "Lack of stores which carry more healthy food is due to the problematic extent of economic and social plight in low income neighborhoods. Lack of economic investment, centralized poverty and crime are large factors in why many stores (Safeway, Trader Joes, etc.) refuse to expand into low income communities."

Survey Participant 5. "Healthy food tends to be more expensive and I think that low-income families are not as educated on the importance of living a healthy life. I believe a lot of us would prefer unhealthy food if we weren't properly educated about the adverse effects of it. Low-income communities look for businesses that offer deals and businesses that serve healthier foods do not offer that good of deals. Thus, these businesses do not enter low-income neighborhoods because they won't get much business. It's unfortunate, but it is reality and it is becoming a significant problem in this country."

Survey Participant 6. "Healthy food is not affordable, not enough time to cook a good meal at home, and low income community is usually surrounded by fast food places."

Analysis

Disparity of resources and affordability. Participants 1, 5, and 6 indicated healthy food is often times not affordable for low-income families with a limited budget. However, Participant 2 is doubtful that there is a lack of healthy food options and lack of access to healthy food in low-income communities. This disagreement between Participants 1, 5, and 6 and Participant 2 may be based on the different communities they reside in or the direct experiences they may have relevant to this issue (explain).

Community demand and investment. Participants 2, 3, 4, and 5 discussed "big box" grocery stores (Trader Joes, Vons, Albertsons, etc.) that carry healthy-food options are reluctant to invest in low-income communities because of the lack of profit and common low-income community characteristics such as crime and centralized poverty.

Location of uses. Participants 5 and 6 agreed fast-food places are more likely to be located within low-income communities. Participant 5 and 6 also discussed that fast-food places are convenient and offer affordable deals to low-income community members compared to healthy food.

Health Education. Participant 5 also described how important low-income families receive the proper education on living a healthy lifestyle and the adverse effects of unhealthy food.

What are some policymaking decisions that can be implemented to address health in low-income communities?

Survey Participant 1. "See attachment (Attachment) regarding the story of the Greenfield Walking Group, the obstacles they faced and how they overcame them. They helped shape local policy to renovate their local park, advocated for regional air quality legislation and state and national health care policy."

Summary description of Greenfield Walking Group (See Attachment 1). The Greenfield Walking Group consisted of community members of a unincorporated area in Kern County who advocated for affordable health care, advocated for environmental and policy changes for healthier communities and traveled throughout the state to spread their message. In addition, the Group rallied for the passing of Senate Bill 719—expanding the board members of the San Joaquin Valley Air District to include two community members. The two additional members must be a physician with health expertise in health effects from air pollution and the second member must have scientific expertise of the problem.

Survey Participant 2. The following is a list the participant provided for this question:

Increased emphasis on <u>daily</u> physical education in all schools in all communities;

Increased advertising in the public interest focusing on healthy babies, healthy kids, and

healthy food and cooking tips in multiple languages (Spanish, Hmong, etc.);

Increased focus on family values, the family dinner, taking time for children, establishing a

"living wage" for all service and agricultural industries, and increased funding for primary and

secondary education; and

Land Use decisions should promote walking, bicycling and public transit. Drive-through

restaurants should be restricted or prohibited. Park and open spaces should emphasize

physical activity and the media should take responsibility to promote physical activity

(exercise is "cool" campaign) among kids and teens.

Survey Participant 4. "Possibly pursuing avenues of regulating the amount of "fast food" businesses in communities by labeling those establishments as "harmful" to public health. Make fast-food restaurants and liquor store businesses subject to an evaluation on the impacted public health of their establishment. Then propose new zoning changes (or form based code initiatives) which would regulate "harmful businesses" in a category much like adult businesses. This would be an effort to <u>increase the access of healthy food and decrease the access of harmful establishments</u>."

Survey Participant 5. "Subsidies for businesses that have a reputation for serving healthy options to enter into a low-income neighborhood. These subsidies would go first to give them an incentive to come into the community and also, allow them to lower the prices on their items. Also, subsidies for communities that are promoting uses that promote healthy life styles. There could be some sort of a tax on meals that are deemed unhealthy. There needs to be better education of the importance of living a healthier life with every purchase of a meal from these restaurants. Government subsidies for transit and cheap wages for the low-income population and increase in routes. Mandatory health meals at elementary schools. Ban the sales of soda, chips, etc. It needs to start at an early age."

Survey Participant 6. "Limit the number of junk food places, provide more healthier options for food places and groceries shopping, more sidewalks, rideshare to reduce pollution."

Analysis

Community Involvement. Participants 1 and 2 discussed the importance of community awareness and involvement. Community unity and advocacy is significant in facing issues, voicing the messages to decision-makers, and finding solutions to these community issues.

Health Education. Participants 2 and 5 further emphasized physical education within low-income communities. Participant 2 also stressed that physical education should be taught and practiced daily within schools.

Location of uses and role of planners and local government. Participants 2, 4 and 6 discussed the direct role of city planning and local government. The participants stated land use decisions should promote walking, bicycling ,and the use of public transportation; regulate the number of fast-food places; and provide more places for physical activity such as parks and open spaces and healthy-food options. Participant 4 also suggested regulating fast-food places subject to an evaluation on potential public health impacts of their establishment.

Government subsidies. Participant 5 proposed communities provide subsidies for businesses that serve healthy-food options to enter low-income neighborhoods. The participant also proposed government subsidies for transit that would increase routes and be affordable to low-income communities.

Other thoughts?

Survey Participant 1. The most effective way to make policy and environmental changes to improve health in communities is to listen to the solutions that people in the neighborhood have and to help them implement the solutions.

Analysis

   Community involvement. Participant 1 further emphasizes the significance of community involvement. It is crucial to hear the voices of the communities in order to properly assess the issues, develop
policies and changes, and successfully make improvements within a community.

Analysis of Findings

Based on the responses, the significant concerns and recommendations that were mentioned frequently included:

Safety and walkability

Recommendations

Developing and implementing a built environment that locates different types of land uses within walking distance of each other to encourage the public of using alternative modes of transportation—walking, biking, using public transportation etc.—instead of using their automobiles.

Land-use decisions should focus on walkability and using public transit, and parks and open spaces should promote diverse activities.

Location of uses

Concerns

Fast-food places are located more within low-income communities and are a convenient and affordable option.

Recommendations

Regulate fast-food places by requiring these businesses to evaluate the impacts on public health of their establishment.

Socio-economic factors

Concerns

Environmental injustice plays a role in the factors of poor health in low-income communities.

Disparity of resources

Concerns

Disparity of resources including; affordable medical and dental care, maintenance of public areas, public assistance programs, and educational programs

Community involvement

Concerns

Lack of adequate public participation and involvement in decision-making process.

Recommendation

Increase public participation in decision-making process.

Community demand and investment

Concerns

Lack of investment such as jobs and businesses.

Businesses are less likely to invest in low-income communities because of factors that include centralized poverty and crime.

Health Education

Recommendations

Increase awareness of physical education in schools, healthy food, and promote healthy lifestyle to all community members.

Increase education of the importance and the benefits of a healthy lifestyle.

Affordability

Concerns

Healthy food is not affordable to low-income people.

Recommendations

Provide subsidies for businesses that serve healthy food options.

Conclusion

Based on the survey responses, the data collected confirms community planning plays a significant role in public health, and there is a critical concern on the impact of community planning on the health of low-income communities. From the survey analysis, one of the major recommendations was to increase awareness of living a healthy lifestyle and making healthy choices through education. Another major recommendation was to implement land-use decisions that regulate fast-food establishments, encourage businesses to invest in healthy food options, create parks and open spaces for physical activity, and increase walkability. A final recommendation that is significant to improving health in low-income communities is public participation. By collaborating with community residents, planners and decision-makers would be able to find solutions to developing a healthier community.

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Chapter 3

Planner's Toolkit:

General Approaches to Healthy Community Design

Purpose

This chapter is a compilation of strategies and approaches to implement a healthy community design. The following approaches address the major concerns and findings from the literature and surveys. The first section discusses policy approaches while the second section discusses physical design approaches. These recommendations can be used for implementation or further research in developing a healthy community. The final section includes relevant resources that provide helpful information, case studies, and recommended strategies for improving public health within a community.

Policy Approaches

From the literature and survey analysis, the major policy concerns included: insufficiency of important uses such as disinvestment in low-income communities and   lack of access to opportunities; lack of healthy food options; the need to educate the public of healthy living; regulate fast food establishments; and emphasis on public participation. The following list consists of potential policies that aim to find solutions to the above concerns:

Health Impact Assessment

Health Impact Assessment (HIA) is a preliminary approach to examine the health effects of land use and development decisions within a geographical area. Local governments can use the HIA for analysis, educational tool, and increase public participation of low-income residents. The HIA is beneficial in targeting a community's health issues and improve the process of developing solutions.

Collaboration amongst different organizations

Local government and community organizations should collaborate together in community planning events and decisions. Forming community partnerships amongst diverse organizations is valuable in analyzing community needs and concerns. Collaboration can also delineate responsibilities and leaderships in city projects, and can promote policy changes including advocating to improve employment status, develop health programs, and programs to improve economic situation, and increase public involvement (PolicyLInk and The California Endowment, 2007, p. 29)

Incentive programs

Local governments could develop incentive programs that would support and encourage local businesses to offer healthy food options while educating local residents of health benefits and adopting a healthy lifestyle. The incentive programs could be aimed to target areas that are most impoverished by supporting grocery stores with equipment that enables the store to sell healthful foods. Economic development budget would be used to set up grants or loan programs for the purchase of the equipment (Raja, S., Ma, C., Yadav, P.,2008, p.480). Incentive programs can benefit low-income communities by closing the healthy-food options disparity and encouraging community members to eat healthier.

Zoning Regulations

Local government can implement zoning regulations intended to limit fast-food restaurants in overburdened communities. There should be balance of retailers that support the health of the community residents (California Center for Public Health Advocac*y, 2008,* 7). In addition, local governments can implement city zoning ordinances that would allow for farmers' markets within appropriate residential areas. Zoning regulations can also improve the accessibility and walkability of different uses such as jobs, commercial, housing, and parks to encourage community members to be physically active and use alternate modes of transportation.

Health Education

Local governments and organizations, schools, and the public should collaborate together to develop programs that would educate the community of healthy living and its benefits. There should be an emphasis on educating children in schools about making healthy choices and the importance of being physically active in order to reduce the chronic health effects such as obesity and diabetes that is a growing concern within the country.

Healthy Food Options

Encouraging food business to purchase local produce within their community would be affordable to both the businesses and consumers. In addition, local governments can allow neighborhoods to grow community gardens that would encourage community unity and healthy eating.

Figure 4. The location of the high school is a great example of healthy city planning. The high school is located within a neighborhood and a transit stop is located in front of the high school.

Figure 5. There are different accessible options for students to attend school—biking, walking, using the school bus, or using public transportation.

Physical Design Approaches

From the literature and survey analysis, the major policy concerns included: incompatibility of uses; issues of sprawl and zoning; issues of walkability and safety; and the lack of maintained parks and open space. The following list consists of potential policies that aim to find solutions to the above concerns:

Parks and Open Spaces

The location of parks in neighborhoods is a beneficial alternative for adults and children to be physically active. Local parks should provide a wide range of activities for people to enjoy; secure playground structures, baseball and football fields, and basketball courts (Flournoy, R, 2002, p.19).

The location and maintenance of parks and open spaces can encourage community members to be active and involved within their community.

Schools

School sites can be used as community centers to increase opportunities for physical activity and other community events. The school sports fields and playground areas can be open to the public after school hours and on the weekends (Flournoy, R., 2002, p. 21). This recommendation is beneficial to low-income communities because school sites are being used as dual purposes if low-income communities lack the budget to add or maintain a park.

Housing

Community design and planning can improve the health of community members by locating housing away from incompatible uses such as industrial factories, freeway, and other polluting sites. Locating housing away from polluting sites can significantly reduce respiratory problems that are found within low-income communities. In addition, housing density can be increased to allow for compact and walkable communities. Street Connectivity

Through community design pedestrian safety can be improved. Maintaining street lights, crossing areas, stop signs, and other traffic calming measures can be enforced through community design policies. Through land use policies,   local governments can apply mixed zoning where housing, stores, transportation, and other destinations are designed to be close together. In addition, transit-oriented development is another strategy where uses such as housing, offices, and businesses are clustered around transit stops (Flournoy, R, 2002, p21-.22). Mixed use zoning can promote walkability and encourage community members to use public transportation.

Infrastructure

Low-income communities often have challenges to proper infrastructure systems and maintenance is crucial because water and sewer services, sidewalks, and streetlights are essential to good public health. Communities who lack these basic investments need to be advocated by community members, local organization, and local government in order for the disparity to be addressed.

Figure 6. A safe playground, open space, and basketball court promotes an active lifestyle and provides a variety of outdoor activities.

Figure 7. The park is conveniently located within a neighborhood but is accessible to the public.

Figure 8. This park is a multi-use park centrally located adjacent to an elementary school and is within a neighborhood. The park area may be used by the students, but still open for public use on the weekends.

The following recommended resources are helpful informational guides about healthy community planning. These resources contain numerous and different case studies and recommended policies that are intended for the development of healthy communities.

Healthy Food, Healthy Communities: Improving Access and Opportunities through Food Retailing by Flournoy and Treuhaft (2005) is a scholarly report that focuses on the disparity between the accessibility of nutritious and affordable food in low-income communities of color. This report provides several case studies, strategies, and implementation policies that will create a better healthy community in low-income neighborhoods and communities of color.

In *Why Place Matters: Building a Movement for Healthy Communitie*s produced by PolicyLink and The California Endowment (2007), examines class, race, ethnicity, and health, and the aspects of a framework for healthy communities. The report also provides numerous case studies that deal with various challenges and implementation strategies.

Local Government Commission is a nonprofit, nonpartisan, membership organization that assists local governments in establishing and developing key elements of healthy and livable communities. The organization's website offers relevant information, recommendations, resources, and links to planning and developing a healthy community design.

PolicyLink is a national research and action institute advancing economic and social equity. One of PolicyLink's focus areas is health and place. The organization's website provides significant information and resources that is relevant to improving the built environment and access to healthy foods in communities.

Conclusion

Purpose of Healthy Community Design

Healthy community design promotes safer and friendlier environments. Creating healthy, connected, and compact neighborhoods can promote physical activity. Neighborhoods that have various clustered developments such as parks, commercial centers, public transportation, and other recreational facilities encourage people to be active. According to California's public health officer Dr.

Richard Jackson, "cities should be designed to entice us to walk and connect with other people. We need to have the choice of spending less time in our cars" (Corbett, J., & Hollander, M., 2004). Integrated uses such as housing, commercial, transportation hubs, public facilities, and parks allow people to use the outdoors.

Benefits of Healthy Community Design

Health benefits can be achieved through community design by decreasing the dependency on the automobile through mixed-use and compact developments, providing opportunities for people to be physically active and socially engaged, and allowing people to live in a community that reflects their changing lifestyles. Compact and clustered communities and a reliable public transportation system allow for walkable communities and lessen the dependence on automobiles. For example, TODs can "reduce dependence on fossil fuels, lower resident's transportation costs, promote walking and health, eases traffic congestion, and improves environmental quality" (*Equitable Development Toolkit: Transit Oriented Development*, 2008, p.1). Healthy and walkable communities promote healthier lifestyles and allow community members to be more aware of the significance of living healthy.

Attachments

Attachments

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Policies

Per your request I wanted to list some of the state wide policies and national attention the Greenfield Walking Group has affected:

They participated in a rally at Assembly member Nicole Parra's office with the Central Valley Air Quality Coalition to help pass SB 719 that put a doctor and a scientist on that Air Resources Board. The legislation passed after a five year effort, organizers credited the success to their efforts in engaging resident voices like the Greenfield Walking Group. Many of the group member's children have asthma so on bad air days they cannot go out and walk because they are inside caring for their children who cannot go out and play. Additionally, one of the walking group members serves on the county Asthma Coalition.

They partnered with the "It's Our Healthcare Coalition" to advocate for affordable healthcare. They took Polaroid's of themselves and wrote a story about what their family's life has been like without access to affordable health care for Senator Florez's office who responded to each one of them. Many of the group members suffer from diabetes and no matter how proactive they were in the walking group, without health insurance, their prevention efforts could not take the place of insulin or other health care necessities. They lead a walk to raise awareness of the need for accessible healthcare and called the offices of Senator Florez, Assembly member Parra and the Governor to share their stories and advocate for AB8.

They worked with the Health Department to send letters contributing to the passing of Menu Labeling legislation SB 120 which requires chain restaurants in California to post nutrition information on menus and menu boards. Walking group members felt like it would be easier to make healthy choices for their families at these restaurants if they knew calorie information.

The San Joaquin Valley Blueprint Process in Kern County held two special meeting sessions with the Greenfield Walking Group to share their vision for future planning of the region. This was the second largest attended phase two blueprint meeting in Kern County with resident attendees engaged in prioritizing phase one visions for the future of Kern County and the Central Valley.

Golden Empire Transit sought the group's insight on how to improve public transportation for area residents to be included in the Kern Council of Government's Coordinated Human Services Transportation Plan.

The walking group partnered with the Kern Health Consumer Center in their outreach regarding Kaiser Permanente expanded health coverage for children 6-18. This provided members an excellent opportunity to reach out to neighbors for a rare opportunity to have their previously uninsured children covered. Group members also provided personal accounts to the Children's Health Initiative in their search for health care access success stories.

Gema Perez was named Hero Mom of the Central Valley as part of the Network for a Healthy California's Champions for Change initiative. Gema was selected for her work with the Greenfield Walking Group in organizing residents and partnering with organizations to create change.

The walking group also partnered with their school district to advocate for a district wide afterschool soccer program for K-3. The group members knew it was important for children to have physical activity as young as possible and there were no existing physical activity programs at that time for that age group.

The Greenfield Walking Group travels throughout the state inspiring others to advocate for environmental and policy changes for healthier communities. Group members spoke on expert panels at the California Convergence Conference that brought together 42 communities and 7 different funders who working to strengthen this movement.

The group was sought out by the Kern County Recreation and Parks Department as they created their master plan

CCROPP just received a Healthy Communities grant from the Robert Wood Johnson Foundation, one of nine areas in the country to receive funding to spread the model of resident leadership begun by the Greenfield Walking Group to seven other counties throughout the Central Valley.

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Attachment 1 from Survey Responder 1 relating to the Greenfield Walking Group

Survey Responses

Attachment 2 from Survey Responder 1

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- How does the built environment affect public health?

    One example is in walking. People know they should walk but if they don?t feel safe when they head outside their door, it doesn?t matter how well they are educated, if their environment doesn?t make it easy to do so, they will not be more physically active.

- Why do you think there are findings that low-income communities have the highest level of health problems?

    One example is the disparity of resources invested in the built environment. For the Greenfield Walking Group, made up of parents that met in a Family Resource Center nutrition class, the obstacles to walking in their local park due to lack of positive investment were significant. They included aggressive stray dogs, speeding cars that would not yield to families trying to cross the street to the park, drug dealing, gang recruitment, stepping on hypodermic needles and broken liquor bottles, all of the light being shot out and everything covered with graffiti to name a few.

- Why do you think there is a lack of healthy food options in low-income communities?

    It cost more to eat healthy food and on a limited income families are just trying to have enough food for their family, much less healthy food.

- What are some policymaking decisions that can be implemented to address health in low-income communities?

    See attachment regarding the story of the Greenfield Walking Group, the obstacles they faced and how they overcame them. They helped shape local policy to renovate their local park, advocated for regional air quality legislation and state and national health care policy.

- Other thoughts?

    The most effective way to make policy and environmental changes to improve health in communities is to listen to the solutions that people in the neighborhood have and to help them implement it.

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Attachments

Attachment 3A from Survey Responder 2

- How does the built environment affect public health?

This is a broad topic and urban design literature is rich with examples suggesting that the built environment affects public transportation patterns and attitudes. A few examples: decreased residential density means increased dependence on automobile commuting; the explosion in the number of "fast food" restaurants; building designs that "turn away" from the public street contribute to "less defensible" space and detract from perception of physical safety.

Physical design is only one of several factors affecting public health, and there's a tendency among some writers to overstate the importance of the built environment to explain a plethora of public health issues. Suburbia began in the 1920s with its roots in Levittown and similar developments, yet issues of obesity, diabetes and other health concerns are of much more recent origin. Be careful in your discussion to discuss alternative explanations and allow for the possibility that there is not a direct "cause and effect" for physical design and obesity, for example, or that there are multiple causes, including, but not limited to:

1) societal changes (more single parent households, increased # of 2 wage earner families, less emphasis on physical fitness in primary and secondary schools, and increasing cultural diversity.
2) Income and diet. Healthy foods can be affordable and easily accessible (fresh vegetables, dried legumes, potatoes, lean meats); however these usually require time to prepare; low income households may be focused on working outside the home to afford housing so that there's less time available for preparing a home-cooked meal and a "sit-down" family dinner.
3) Environmental health. In low-income areas, degraded air quality or crime may affect peoples' ability and/or desire to walk, bicycle and enjoy parks.

- Why do you think there are findings that low-income communities have the highest level of health problems?

1) Feelings of self worth and self image affect health habits and can be associated with income level, family cohesiveness, and cultural isolation felt by recent immigrants.
2) High frequency of single-parent households.
3) Lack of access to affordable, high-quality medical and dental care.

Attachments

Attachment 3B from Survey Responder 2

- Why do you think there is a lack of healthy food options in low-income communities?

  I'm not sure there is a "lack of healthy food options" in low-income areas. I'd like to see the research. For example, in some of the poorest areas of west Fresno, there are several Hispanic-oriented markets carrying a full range of fruit, vegetables, legumes, cereals and meats. Many of our poorest residents have the option to drive short distances or use public transit to do grocery shopping.

  "Big Box" grocery markets target affluent communities; they're in business to make money and this is where profit margins are highest. However smaller markets can often be competitive in neighborhood settings by focusing more on service, specialty foods and local preferences.

- What are some policymaking decisions that can be implemented to address health in low-income communities?

1) Increased emphasis on daily physical education in all schools in all communities;

2) Increased advertising in the public interest focusing on healthy babies, healthy kids, and healthy food and cooking tips in multiple languages (Spanish, Hmong, etc.)

3) Increased focus on family values, the family dinner, taking time for children, establishing a "living wage" for all service and agricultural industries, and increased funding for primary and secondary education.

4) Land Use decisions should promote walking, bicycling and public transit. Drive-through restaurants should be restricted or prohibited. Park and open spaces should emphasize physical activity and the media should take responsibility to promote physical activity (exercise is "cool" campaign) among kids and teens.

Attachments

Attachment 4 from Survey Responder 3

Hope your research is getting off to a good start! As far as your questions are concerned, they appear to be the chief subject of your research in order to find answers and to make conclusions about! I would just observe that the built environment affects public health in terms of locating different types of land uses (such as residential, commercial and recreational) so that they are within walking distance of each other, and separating residential areas from the effects of pollution-producing industries.   The lack of healthy food options in low income neighborhoods obviously has to do with the lack of profit margins for businesses in such neighborhoods where residents don't have as much to spend. It is a challenge to overcome this economic discrepancy.

I'd also suggest that you add diabetes and hypertension to the "resulting health effects" in your outline, as you did in the diagram.

Attachment 5A from Survey Responder 4

- How does the built environment affect public health?
  The built environment effects public health manly through zoning/spatial planning, car dominated development, and a lack of public involvement/ awareness in development processes.

- Why do you think there are findings that low-income communities have the highest level of health problems?
  Many times low income neighborhoods and communities are planned without adequate public participation. This may be due to lack of information, lack of education, or just lack of interest by the community's residents. Whatever the case, decisions are many times made without the affected community's voice. It is these communities who are subject to harmful development that affects the overall public health.
  ~Case study- Richmond, CA and the expansion of Chevron refinery

  Also the lack of fresh fruit/vegetable grocery stores located in low income neighborhoods. In many communities, it is extremely convenient to walk to a liquor store or fast food restaurant and a lot more difficult to get to a grocery store.
  ~Case study- East Oakland, CA
  (if you did an area study of a walking distance radius map around all grocery stores in East Oakland, you would find that fresh/healthy food stores are dramatically disproportionate to the amount of liquor and convenient stores.)

  There are also many arguments out there on the relation of public health to the effects of sprawl and the job/housing balance…

Attachments

Attachment 5B from Survey Responder 4

- Why do you think there is a lack of healthy food options in low-income communities?
  Lack of stores which carry more healthy food is due to the problematic extent of economic and social plight in low income neighborhoods. Lack of economic investment, centralized poverty and crime are large factors in why many stores (Safeway, Trader Joes, ect) refuse to expand into low income communities.

- What are some policymaking decisions that can be implemented to address health in low-income communities? Possibly pursuing avenues of regulating the amount of "fast food" businesses in communities by labeling those establishments as "harmful" to public health. Make fast-food restaurants and liquor store businesses subject to an evaluation on the impacted public health of their establishment. Then propose new zoning changes (or form based code initiatives) which would regulate "harmful businesses" in a category much like adult businesses. This would be an effort to <u>increase the access of healthy food and decrease the access of harmful establishments</u>.

Attachment 6A from Survey Responder 5

- How does the built environment affect public health?
  If uses are spread out from each other, more people will choose to drive their personal vehicles rather than walk, bicycle, or take public transportation. This then adversely affects the air quality. Also, the demographics of the neighborhood also determine what businesses are going to come in. For example, Trader Joes will only be built in middle to upper class communities and Trader Joes sells healthy, organic food as opposed to chain grocery stores.

- Why do you think there are findings that low-income communities have the highest level of health problems?
  Environmental injustice is a big factor. I believe it is more so prevalent to race than it is to income level, but a lot of times these are the same. There is a high amount of fast food restaurants in these areas because it is inexpensive and high in demand. Chain Grocery stores are cheaper and do not sell the best quality food than a local grocery store would sell. Low-income communities drive more gas guzzling, environmental unfriendly vehicles because they are cheaper. They are taken advantage of more so than wealthy neighborhoods because they feel inferior to their government and feel as though they lack power to lobby.

- Why do you think there is a lack of healthy food options in low-income communities?
  Healthy food tends to be more expensive and I think that low-income families are not as educated on the importance of living a healthy life. I believe a lot of us would prefer unhealthy food if we weren't properly educated about the adverse effects of it. Low-income communities look for businesses that offer deals and businesses that serve healthier foods do not offer that good of deals. Thus, these businesses do not enter low-income neighborhoods because they won't get much business. It's unfortunate, but it is reality and it is becoming a significant problem in this country.

Attachments

Attachment 6B from Survey Responder 5

- What are some policymaking decisions that can be implemented to address health in low-income communities? Subsidies for businesses that have a reputation for serving healthy options to enter into a low-income neighborhood. These subsidies would go first to give them an incentive to come into the community and also, allow them to lower the prices on their items. Also, subsidies for communities that are promoting uses that promote healthy life styles. There could be some sort of a tax on meals that are deemed unhealthy. There needs to be better education of the importance of living a healthier life with every purchase of a meal from these restaurants. Government subsidies for transit and cheap wages for the low-income population and increase in routes. Mandatory health meals at elementary schools. Ban the sales of soda, chips, etc. It needs to start at an early age.

Attachment 7 from Survey Responder 6

- How does the built environment affect public health?
  - healthier community is define by the mobility and easy access to public places, walkable, interaction among the people in the community that is using the sidewalk to socialize/interact with others.

- Why do you think there are findings that low-income communities have the highest level of health problems?

  -lack of education about health
  -health is not their first priority
  -health is not affordable

- Why do you think there is a lack of healthy food options in low-income communities?
  - healthy food is not affordable
  - not enough time to cook a good meal at home
  - low income community usually surrounded by fast food places

- What are some policymaking decisions that can be implemented to address health in low-income communities?
  - limit the number of junk food places
  - provide more healthier options for food places and groceries shopping
  - more sidewalks
  - rideshare to reduce pollution

- Other thoughts?
  - get help from NGOs, community workshop about healthier & smart choice to choose healthier food
  - farmers market

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