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Health and Healthcare Perspectives of African American Residents of an Unincorporated Community: A Qualitative Assessment

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Abstract

Residential perspectives about health in unincorporated communities are virtually unexplored. In this study, we conducted focus groups to assess individual and community health status, environmental health mediators, and systematic barriers to healthcare among African American residents of the unincorporated town, Fresno, Texas. Residents described their individual health status as excellent, but depicted the community's health status as fair. Unaffordable healthcare, limited access to healthcare, and environmental mediators were perceived to impact the Fresno community's health status. Our findings suggest a need to begin to examine health outcomes for minority residents in other unincorporated communities.

Keywords

Unincorporated community; Perceived health status; Access to healthcare; African American; Environmental health

I. Introduction

African Americans living in rural and urban communities consistently report substantial health disparities compared to their white counterparts (Schulz, 2002). These disparities include poorer health status, less access to and utilization of healthcare services, and substandard medical care (Cagney, 2005; Murray, 1998; Murray, 1996; Mokdad, 2000; World Health Organization, 2002). As well, research has shown that African Americans are at a higher risk of morbidity and mortality than their white counterparts (Williams, 2001; Kreiger, 1993; Murray, 1998). To alleviate these commonly observed disparities and diminish their potential affect on a community's health status, certain social and physical environmental factors must be fully examined.

Minority and underserved communities are plagued by inadequate social services, such as local municipal and healthcare services, that if provided would enhance the residents' quality of life and well-being. In neighborhoods where there is consistent and convenient access to these

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social services, residents report lower mortality rates and healthier life spans (Lurie, 2007; Cardarelli, 2007; Schulz, 2002; Williams, 2001). Likewise, residents of minority and underserved communities suffer from the effects of physical environmental factors, such as exposure to industrial pollutants, uncontrolled toxic waste sites, hazardous waste landfills, and diminished neighborhood zoning regulations. Additionally, a lack of enforcement of environmental laws occurs more frequently in minority and underserved communities and may potentially affect the health status of the community by placing them at a higher risk for higher rates of morbidity and mortality (Brown, 1995; Northridge, 2003; United Church of Christ, 1987; Institute of Medicine, 1999; Lee, 2002).

Although a strong link between disadvantaged health and social and physical environment has been demonstrated among African Americans, the current literature is highly concentrated on research in urban and rural minority communities. This association has been virtually unexplored in the growing number of unincorporated minority communities. To begin to address this gap in knowledge, we examined the perceptions among African American residents of the unincorporated community of Fresno, Texas about their health status and well-being and about the effects that certain social and physical environmental factors have on health status.

1.1 Unincorporated Communities

There is strong evidence that disadvantages in health are correlated with place of residence (Macintyre, 1993; Ellaway, 1997; Ellaway, 2001; Cagney, 2005; Wen, 2006). However, there is limited information about the manifestation of this evidence in unincorporated communities. Generally, unincorporated communities have an implied unified social identity that stems from “belonging to a common geographic area,” yet these communities exist outside of a municipal-level government or official political designation; thus, unincorporated communities are typically governed by their own set of rules and regulations. Currently, over 5,700 communities in the United States are census-designated unincorporated entities. These communities range in size from fewer than 100 to more than 100,000 residents. Unincorporated communities tend to be slightly more ethnically diverse and are common in midwestern, western, southwestern, and southeastern states (Lang, 2003). In the state of Texas, there are thousands of unincorporated communities. Of the 23.9 million Texans, over five million live in unincorporated areas with only minimal services funded and overseen by the state, although the areas may be located near larger urbanized areas (Feldman, 2007).

Fresno, Texas, the site of this investigation, is a small, unincorporated town in southeastern Texas situated near the Houston, Texas metropolitan area. It has an ethnically diverse population composed of 6,603 residents, 49.9% of whom are Hispanic/Latino, 26.5% African American, 21.6% white non-Hispanic, and 2% other. Approximately 15% of the total Fresno population lives below poverty level, and the median family income is slightly less than \$49,000 (U.S. Census, 2000).

Before Fresno, Texas became a growing unincorporated residential area, agriculture was once the dominant industry. However, agriculture in Fresno, TX has been largely replaced with booming housing developments in the last decade. Today, this quickly expanding town is now faced with growing petrochemical-related industries, a remediated Superfund site, a long-standing landfill, and a nearby small airport. The proximity of Fresno residents' homesites to these entities has caused long-standing concerns about potential health-related risks associated with exposure to environmental toxins via air, ground, and water (King, 2006). As a result of these persisting environmental concerns, a grassroots organization, the Fort Bend County Fresh Water Supply District No. 1, was created to bring in safer and higher-quality public water and sewer services to Fresno.

Because of Fresno's unincorporated status, the community lacks a physical, social, and economic infrastructure. Some residents of Fresno receive limited city-sponsored fire and police services, waste disposal, and public drinking water and waste removal. Fresno also lacks public transportation, local shopping and entertainment outlets, and local private and indigent healthcare facilities. It is important to note that there is one privately owned healthcare facility located within the town that was established to serve low-income and uninsured patients. Additionally, residents only have political representation by county-wide elected officials, rather than locally elected city officials.

Previous qualitative work consisting of interviews with key informant and focus group discussions have highlighted Fresno's inadequate public water supply and possible groundwater contamination as potential sources of environmental exposures and thus, of harmful health effects (King, 2007; King, 2006). On the basis of input from a community advisory board and findings from the key informant interviews and focus group discussions, we assessed the perceptions about health status and potential mediators of health and well-being of the largely ethnic minority group of residents in Fresno.

1.2 Theoretical Context

The Racial Segregation Conceptual Framework (RSCF) was used to guide this study (Schulz, 2002). The RSCF suggests that disparities in health are mediated by several factors, including race-based residential segregation, socioeconomic position, social and physical environment, community stressors, health behaviors, and social support (Schulz, 2002). An implicit assumption of the RSCF approach is that place of residence matters and that specifically addressing the factors that mediate disparities in health may potentially result in improved health status (Schulz, 2005; Schulz, 2002; Acevedo-Garcia, 2003; Lopez, 2002; Northridge, 2003; Diez-Roux, 2001; Williams, 2005; Williams, 2001).

Briefly, the RSCF was originally developed to draw on studies focused on urban neighborhoods in the Detroit metropolitan area, while examining relationships among race-based residential segregation, socio-economic status, and health. Use of the RSCF demonstrated that fundamental determinants of health potentially contribute to the racial disparities in health status observed among Detroit African American residents (Schulz, 2002). The fundamental determinants included in the RSCF are macrosocial factors, race-based residential segregation, and economic inequalities, and the physical environment and community infrastructure and social environment are discussed as intermediate determinants of health. Moreover, the proximate determinants of health disparities described in the RSCF are community or neighborhood stressors, health related behaviors, and social integration and support (Schulz, 2002).

Macrosocial factors and economic inequalities interact with the physical and social environment, as well as, with neighborhood stressors and one's health related behaviors to influence health and well-being in racially segregated communities. This is observed in the Detroit metropolitan area, where the declining tax base in high poverty African American neighborhoods has affected the ability of the residents to receive access to proper basic municipal services, such as, firefighting and police services, health care facilities, grocery stores, and retail establishments, as well as, enforcement of municipal entities and environmental regulations (Schulz, 2002).

For this study, we used the fundamental determinants of the RSCF (macrosocial structure, race-based segregation, and economic inequalities) to understand intermediate determinants of health and systematic barriers to healthcare among African-American residents in the unincorporated community of Fresno, Texas. To do this, we applied two important intermediate determinants of the RSCF model: physical environment and community infrastructure/social

environment. The physical environment construct of the RSCF comprises aspects of the “built environment”, which focus on conditions of the environment that may in turn mediate residential exposure to environmental contaminants. Racial segregation and socioeconomic factors influence the physical environment by disproportionately increasing potential exposure to rural and urban contaminants and by reducing political influence to impact changes that are occurring. The effect on the physical environment ultimately affects the health and well-being of individuals residing in the community.

The RSCF model also guided our explorations of the relationships between race-based residential segregation and a community’s social environment and their effect on health outcomes. A lack of adequate community infrastructure or social environment results in the withdrawal of local businesses, a low or declining property-tax base, an inability to maintain public safety or city regulations, and a higher burden to provide indigent healthcare in the community (Schulz, 2002).

1.3 Study Approach

We use community-based perspectives to gain insight regarding physical and social environmental factors that may influence residential health outcomes in the Fresno, Texas community. Our approach is drawn from the principles of community-based participatory research, which advocates for the inclusion of community members in designing and conducting studies that examine health outcomes (Payne-Sturges, 2006; Jones, 2006; Parker, 1998; Israel, 2005). Perceptions held by residents about their community’s overall health status have been shown to influence their perceptions of their own individual physical and mental health status (Franzini, 2005; Lurie, 2007; Poortinga, 2006; Wen, 2006). Thus, it is important to establish links between health and place by characterizing residents’ perceptions of the community and which factors affect their daily lives (Minkler, 2006; Minkler, 2003).

In this article, we present residential perspectives to explore the community’s concerns about health and well-being and access to healthcare in an effort to understand the interrelations between perceived physical and social environment and health outcomes in a minority unincorporated community. Specifically, we combined strengths of the RSCF and community-based participatory methods to (a) identify perceived individual and overall community health and well-being and (b) examine the effect of potential physical environmental and community infrastructure/social environmental mediators of health status in an unincorporated community.

II. Methods

2.1 Study Design

We conducted a qualitative study among 21 African American residents of the unincorporated town, Fresno, Texas. The RSCF was used as the theoretical framework in an effort to assess how physical environmental mediators (environmental exposures) and social environmental mediators (primary healthcare access) affected individual and community health status. Focus groups were used to specifically assess the residents’ perceptions of their individual and neighborhood health status, perceptions of health risks associated with potential sources of environmental exposure, and the availability and utilization of local healthcare services. Our use of the RSCF helped us to understand how residential segregation and limited access to community resources influenced health status in an unincorporated area.

2.2 Community Partnership

The development and utilization of the Fresno community advisory board occurred to inform and implement a community-identified project in the Fresno community. The community advisory board consisted of Fresno residents and local clergy and elected officials who were

involved in assisting with windshield tours, identifying and prioritizing the Fresno community's needs and concerns, developing effective recruitment strategies, collaboratively conducting a health education event, and in refining implementation strategies for the focus group discussions. The health education event was developed to address the needs identified by the community advisory board and key informants and were held at the local community center in Fresno. Representatives from the county's environmental safety division were present to discuss water quality, shallow wells and sewer and septic tank installation and maintenance, and waterborne illnesses. Additionally, representatives from the county health department and other agencies that focused on chronic diseases that disproportionately affect minority communities were also present to discuss access and utilization of healthcare services and disease prevention or maintenance. During the health education events, findings from the ongoing study were discussed with Fresno residents to gain additional insight and determine future projects.

2.3 Study Recruitment

Information about the Fresno community was obtained from local elementary schools to identify major recruitment zones on the basis of residential race and ethnicity. After extensive involvement in community events and community-sponsored services by project staff, culturally tailored newsletters and flyers were then developed and used as recruitment tools, along with face-to-face solicitation. Participants were also recruited at the local elementary school and community center, local shopping and food establishments, and at local churches. To be eligible for the study, participants had to be African American residents of Fresno for at least 1 year and at least 18 years old. Interested residents were given an overview of the study, and informed consent was obtained from each participant on the day of the focus-group discussion. Prior to recruitment, the University of Texas M.D. Anderson Cancer Center's Institutional Review Board approved this study.

2.4 Survey Instrument

Before the start of each focus-group session, each participant completed a survey questionnaire designed to capture residential demographic information (self-reported race/ethnicity, age, occupation, and level of education completed), social environment variables (utilization of retail shopping and entertainment, as well as, healthcare), and physical environment variables (drinking water source and usage).

2.5 Focus-Group Sessions

Five focus-group sessions were conducted between June 2005 and September 2006. In each focus group, participants were asked to describe their individual health status and the collective health status of their community, any perceived mediators of health status, and where they obtain primary healthcare services. Each focus group met once for 1 to 1.5 hours at either the local community center or the elementary school library. The sessions were facilitated by an African American moderator trained in qualitative interviewing methodology. The facilitator followed a list of structured questions to guide the conversations. The focus-group sessions were tape-recorded to ensure accuracy of data collection, and the tapes were later transcribed verbatim. In addition, the facilitators kept detailed hand-written notes during each of the sessions. Upon completion of the focus group session, the participants received a \$20 Target gift card.

2.6 Data Analysis

Content analysis was performed by three independent coders to identify and code the transcripts. We also used fundamental determinants of the RSCF to inform residents' perspectives on residential segregation, as well as, physical environmental and social

environmental mediators of health and well-being. While analyzing the focus group transcripts, we routinely asked, “how does residence in a segregated, unincorporated area contribute to perceived health status?” Themes pertaining to individual health status, overall community health status and well-being, potential community stressors, mediators of health status, and access to primary healthcare were examined. The ATLAS.ti qualitative data analysis program (ATLAS.ti; ATLAS.ti GmbH, Eden Prairie, MN) was used to independently code themes that were categorized into main themes and sub-themes. Participants’ narratives were then grouped according to the defined topics and used to illustrate common responses and themes across the focus group sessions.

III. Results

3.1 Characteristics of Participants

Twenty-one African American residents living in the unincorporated town of Fresno, Texas, participated in this study. The demographic characteristics of the study population are summarized in Table 1. In addition to capturing demographic information, the survey questionnaire evaluated utilization of community services and access to healthcare. Sixteen of the participants indicated visiting a doctor when sick, whereas 3 participants choose to visit the emergency room when ill. Many of the participant’s primary-care physicians were located outside of Fresno, TX; 12 were located in Houston, Texas, 4 in Sugarland, Texas, 1 in Missouri City, Texas and Fresno, Texas (Figure 1). These two cities are located within 10 miles of Fresno. Three participants indicated “other” as the locations of their primary care physicians, but the exact location was not specified.

Regarding the use of community water services, 16 participants identified the local municipal utility district (MUD) as the source of their residential drinking water, while 5 reported obtaining drinking water from private shallow water wells. Eighteen of the 21 questionnaire respondents reported using the water in their homes. The remaining three participants reported using bottled water as their primary water source.

3.2 Summary of Focus Group Findings

Consistently, each focus group discussion resonated with participants’ descriptions of their individual health status as “excellent”. Still, when asked to describe the health of their overall community, nearly all of the residents described the health of the community as “fair”. Though participants did not specify health concerns in their community, residents perceived that there were mediators of the unincorporated community’s physical and social environment that could potentially affect their health and well-being. The residential drinking water was discussed by an overwhelming majority of focus group participants as a potential mediator of residents’ health status. In fact, participants expressed concern about the quality of the residential drinking water from both the MUD source and private wells. Lastly, Fresno residents were more likely to access care outside of their community. The lack of access to care, in particular for poor and indigent residents, was perceived to affect the health status of the community, and was of great concern to the focus group participants. Our results are consistent with the RSCF, suggesting that perceived physical and social environmental factors are determinants of health outcomes.

Perspectives of individual and overall community health and well-being—

Residents described their individual health status in various terms, ranging from fair to excellent. Overall, though, the participants were more likely to rate their individual health status as excellent. For example, some residents stated, *“I would say that my health is excellent.”* Even older residents described excellent health, declaring, *“I am 77 years old and I think [my health] is excellent for 77.”*

Though the majority of residents described themselves as having excellent health, some rated their health as fair. An older participant, for example, described the factors contributing to his fair health status: *“Well, I consider myself fortunate that, you know, at my age, the only thing I have is blood pressure, but it’s under control. So I mean I could be a lot worse off.”* None of the participants rated their individual health status as poor.

Although focus group participants indicated their individual health status as excellent to fair, the overall perception was that the Fresno community’s health status was only “fair”. Some participants described the overall community’s health and potential mediators of health status by stating:

“I guess I would rate the community’s health status as fair. You are not seeing anybody dying, but you wonder, because there’s always those that wouldn’t think to go to the doctor.”

“See, anytime you don’t have any clinics, you don’t have [any] hospitals in the area, that means the best your health could be is fair.”

Perceptions of physical environmental health risk factors: Environmental hazards—To examine the resident’s perceptions of potential health risk factors, the participants were asked, “Are there any health concerns in the Fresno community?” Overall residents responded that they were unaware of any health concerns in their community, with a few noting varied potential risk factors. This perception was demonstrated by comments such as,

“My family and I... communicate a lot with my neighbors...I haven’t heard anything major [regarding health concerns].”

“I’m not aware of any individuals having any severe health issues. Keep in mind I [have] been [living] here 10 years and I’m not aware of any [concerns].”

“I’m not aware of any type of health issues that anyone has spoken of to me.”

Most of the participants indicated that there were no health concerns in their community. Yet, other comments regarding the quality of residential drinking water, demonstrated concerns related to factors in the Fresno community that could potentially affect their health status. Several participants felt very strongly that the water was capable of compromising health status in the Fresno community:

“For some people, the biggest problem here as far as the health... is our water. A lot of the water is not really good to drink. We have to buy the drinking water, the cooking water...we have wells but [the water] is not fitting to drink.”

“There’s some kind of contamination to the water and it’s the reason why...it’s not healthy for us.”

“I mean, in the long run I think the water will affect my health because I don’t know, but where I stay, I can taste the chlorine in the water...And the smell of the water is at times too much.”

Participants also suggested that other environmental hazards, such as poor air quality, may potentially affect the health of members of the Fresno community. A participant described the air by stating, *“[The air] is bad for the people that [have] breathing problems. There’s a lot of dust and stuff around here.”* Other participants voiced concerns about potential harmful health effects based on their proximity to a hazardous waste site, chemical companies, and exposure to sewage.

“I think another thing is that we are not that far from a dump...I think over the long haul, stuff that’s been buried for [years] is going to come, it’s coming back.”

“There are some chemical plants down here [in Fresno,] I don’t know what they are doing, but some of it is dangerous, I think.”

“We have a lot of areas where they run sewage into the ditch... And any time you have that, there is a potential for severe health issues.”

Perceptions of social environmental health risk factors: Access to primary and emergency medical care—When asked by the moderator, “Where do you go when sick?”

most of the participants described visiting a physician. Only one participant stated that they would visit an emergency room. Participants were also asked, “Do you see a doctor in the Fresno area?” Overwhelmingly, residents responded that they sought care outside of Fresno in places like Missouri City, Sugar Land, Rosenberg, and Houston, which are at minimum 10 miles away. Only one participant described visiting a physician in the Fresno community. Overall, participants stated that they obtain medical care in Houston, Texas.

“For healthcare we use the Kelsey Seybold network, and I use all of them depending on where I am. Like if I work in Houston...I will go to the clinic that’s in Houston.”

“I go to Memorial Herman in Houston...my primary physician and my wife’s is in the Herman Professional Building in Houston.”

“I would go to Houston to the medical center.”

The moderator also asked participants about their preferences for emergency medical care. The hospitals most frequently visited for emergency healthcare were Memorial Herman Fort Bend Hospital in Missouri City and Methodist Sugar Land Hospital in Sugar Land, both located approximately 10 to 20 miles from Fresno. Participants described their experiences with these healthcare facilities by stating:

“My daughter fainted one night and we called 911. They took her to a hospital that I wouldn’t take my worst enemy there.”

“The Fort Bend Hospital...that’s the closest thing out here because I broke my foot one night and my husband had to take me over there in the middle of the night.”

Because Fresno lacks a public transportation system, residents indicated that access to these facilities is problematic. There is one healthcare facility located within the town of Fresno. The Fresno-Arcola Family Medical Clinic, which is independently owned, was established to serve low-income, uninsured, and elderly patients. Only one focus group participant reported visiting this clinic for primary care. Despite the availability of this clinic, several focus group participants voiced concerns about the lack of access to healthcare for indigent and immigrant populations in their community:

“I work construction and a few years ago...I didn’t have health insurance and I broke my toe...I [went to] the justice of peace for help, and they told me to go to the hospital down in Rosenberg.”

“We have a lot of low-income families out here in this area, and I don’t think there is adequate care.”

“If you have a family and you know they are working minimum wage and they have five or six kids, more than likely they are not going to have health insurance, and for them to go over to the Fort Bend Hospital, I don’t know if they would treat them there.”

“You have a lot of people [that] have come in here from other countries and many of these people are working minimum wage...so they don’t have access to medical care, and I think that a lot of them wouldn’t know who to ask or what to ask, either.”

IV. Discussion and Conclusions

In this study, we employed community-based perspectives and the RSCF (Schulz, 2002) to examine the role of the residential segregation and social and physical environment on health and well-being among African Americans in Fresno, TX. The RSCF was valuable to our understanding of disparities in health status and potential physical and social environmental mediators. In addition, our unique contribution of using community-based participatory methods was highly beneficial in uncovering insightful perspectives of African American residents in an unincorporated community. Overall, our study presents new evidence that race-based residential segregation influences access to healthcare resources, and subsequently, health status of African American residents living in an unincorporated community.

Use of the RSCF also allowed us to highlight the need to improve healthcare resources in unincorporated areas and may serve as a guide for future research. Our data, along with the emergence of a growing number of unincorporated communities in the US, suggests a need to begin to examine the risks and benefits of residence in these unique areas, which often lack the community infrastructure and social resources provided by other cities and towns. Therefore, residents living in unincorporated areas like Fresno, TX, are forced to obtain access to essential resources outside of their community. Additionally, without community infrastructure and local governmental representation, unincorporated areas are more likely to face barriers to enhancing and policing physical and social environmental factors. The interrelations between perceived physical environment and its influence on health and well-being have been examined in urban and rural minority communities (Morenoff, 2007; Lopez, 2002; Israel, 2006), but less attention has been placed upon unincorporated areas. Our study is one of the few to study health status and residential segregation in an unincorporated community.

4.1 Influence of Environmental Factors

According to the RSCF, factors directly related to physical environment can include air or water quality, land use and zoning, and access to public services and resources. All of these environmental factors exist in the unincorporated town of Fresno, TX. In particular, residents and community leaders identified poor-quality residential drinking water as a major health risk in the Fresno community. Previous findings regarding the perceived harmful effects of the physical environment in Fresno, Texas also included perceived poor water quality (King, 2007; King, 2006). A public water supply does not exist for all residents of the Fresno community. Instead private, shallow water wells supply drinking water, and waste is disposed via septic tanks for residents who reside outside of the master-planned communities. Residents of the recent expanding, largely African American master-planned neighborhoods in Fresno, are supplied with drinking water by the municipal utility district (MUD). Sixteen of the residents in this study reside in or near the master-planned neighborhoods and obtain drinking water from the neighborhood MUD, while only five residents utilize their private shallow water wells. Yet the perception of poor-quality drinking water appears to remain, despite the source of residential drinking water. More importantly, the significance of the harmful effect of this perceived physical environment mediator seems to have minimal influence on the residents’ decisions to use the water. Our findings revealed that 18 of the 21 participants use the water in their homes.

The Environmental Protection Agency denounces the disproportionate burden of environmental hazards by geography and place. However, county-based elected officials don’t

have the power to pass ordinances or enact zoning laws. They can only provide basic necessities as stipulated by the state of Texas. With unincorporated regions bearing a large proportion of racial/ethnic minorities and low-income residents, the question of equitable treatment is paramount particularly given the lack of power granted to such areas. As racially segregated regions are crippled by limited power to make decisions about quality of life, credence is lent to the Racial Segregation Conceptual Framework that was used to guide this study (Schulz, 2002). The framework suggests that disparities in health are mediated by race-based residential segregation, socioeconomic position, social and physical environment, community stressors, health behaviors, and social support.

Despite obvious systemic inequities and disparities, grassroots advocacy has been Fresno's most effective tool in pushing for better services and improving the quality of water, and may be an ideal model for other unincorporated areas and applicable to both issues in quality of healthcare, as well addressing environmental concerns. In the *Houston Chronicle* (February 25, 2007), it was reported that Ford Bend County Fresh Water Supply District No. 1, which has been trying to bring public water and sewer services to Fresno for 10 years, will finally see this appeal come to fruition in 2008 (Feldman, 2007). Approximately 60% of Fresno residents are expected to receive those basic services. Further, fire hydrants every 500 feet will be added to the area. What is significant about such changes is that the Ford Bend County Fresh Water Supply District No. 1 grew out of a grassroots movement by community members concerned about environmental hazards in their region. The chairman of the board stated that he was hopeful that such a movement on the part of ordinary citizens would transform the community and attract new developers.

Grassroots advocacy offers a way for community members to empower themselves in the fight for higher environmental quality in their region. However, the reduction or elimination of health disparities will most likely occur through the establishment of public policy and the provision of resources that improve health status, while enhancing physical and social environmental factors in minority and underserved communities. The perceptions and priorities expressed by the minority focus-group participants in this study can be used to inform policy and decision-making that address the specific needs of this and similar unincorporated communities. Our findings provide local and state officials with pertinent, regionally specific information that can be used for healthcare planning and development, and for resource allocation in unincorporated areas.

The sheer numbers of residents in unincorporated regions should be relevant to health policymakers, as well as local and state officials. In heavily populated states, such as Texas, they make up a significant portion of their population. Developers and city planners can only estimate population growth, but unincorporated areas continue to be the least predictable in terms of projected increases. The findings from the present study reveal that even new residents of the Fresno community perceive a threat from drinking water and share concerns over the air quality. The current literature offers very limited information concerning the magnitude of health concerns in unincorporated areas similar to Fresno, indicating that immediate attention from both researchers and policymakers is in order.

The perks of residing in unincorporated areas (tranquility, cheaper housing, greater independence) are accompanied by a number of drawbacks. Lack of political power, competing resources, and insufficient revenue number some of the reasons that unincorporated regions are commonly neglected by government officials at all levels, particularly in the delivery of basic water and sewer services, and protective ordinances covering environmentally hazardous exposures.

4.2 Access and Utilization of HealthCare

The RSCF and recent studies have indicated that local access to primary care physicians is an important feature when investigating neighborhood-level health disparities (Lurie, 2007; Cardarelli, 2007; Schulz, 2002). All but one participants in our study sought healthcare outside of the Fresno area. Fresno residents are faced with cumbersome travel burdens to obtain healthcare, which according to the RSCF, significantly reduces access to resources needed to promote health (Schulz, 2002). Likewise, a particular area of concern for residents was the lack of access to indigent healthcare in their community, particularly for immigrant, elderly, low-income, and uninsured residents. Decreased access to and utilization of healthcare are often observed in minority and underserved communities and can be attributed to employment, socioeconomic, and insurance status (Institute of Medicine, 2003; Williams, 2000; Rust, 2004; Hargraves, 2003). Individuals who lack access to a primary care physician typically arrive at the clinician's with substantially poorer health outcomes, and consequently experience unfavorable long-term health problems (Cardarelli, 2007).

Unfortunately, minorities and underserved populations have traditionally encountered less access to and utilization of healthcare than whites (Institute of Medicine, 2003; Williams, 2000; Rust, 2004; Hargraves, 2003). African American residents in this study discussed visiting their physician when ill and were not significantly affected by a lack of access to primary healthcare. Sixteen of the participants indicated on the study questionnaire that they visit a doctor when sick, while only three residents chose to visit the emergency room when ill. Access to and utilization of primary care physicians are important features in identifying neighborhood-level health disparities (Lurie, 2007; Cardarelli, 2007).

4.3 Comparison of Results to Rural Communities

The study of unincorporated areas, such as Fresno, Texas, is crucial, because it affords city developers a look into the distinguishing features of a region undergoing drastic transformation--a phenomenon that's applicable to many areas across the nation. The census-designated places, also known as unincorporated areas, are demographically heterogeneous by racial/ethnic background, immigration status, unemployment rates, levels of educational attainment, and length of residency. Unincorporated communities represent motley characteristics: some are rural and poverty-ridden, while others comprise master-planned communities with several housing projects simultaneously under construction.

Our findings on access to quality healthcare in an unincorporated community are consistent with those observed in rural minority communities, while other features of the community present a unique challenge to public health officials. The Office of Rural Health Policy, which is charged with overseeing a number of initiatives designed to reduce obstacles to accessing quality healthcare services provided to Americans living in rural communities, has recognized that the challenges faced by these communities are different from those of residents in urban settings. Additionally, the Office of Rural Health Policy and the Rural Task Force (2002) have pledged to implement policies that respond to reduce barriers to care in rural areas, including unincorporated regions. However, it is evident as residents of Fresno echoed in this study that these efforts have fallen behind, and disparities are observed and felt.

Moreover, the U.S. Department of Health and Human Services (2002) has convened a cross-department Rural Task Force to implement policies and respond to community priorities related to barriers to healthcare access for residents of rural regions, including unincorporated areas displaying programmatic deficiencies. Such efforts at the federal level may have important implications in the way these unincorporated areas are monitored and prioritized to improve key quality of care indicators.

To address issues related to access to quality healthcare at the state level, the Center for Rural Health Initiatives for the State of Texas (2000) implemented the Texas PRAIRIE DOC Program, which draws providers to rural areas, while reinforcing community efforts to develop an infrastructure appropriate to the support of a local healthcare delivery system. To date, it is unclear what reach and relief these programs have afforded unincorporated regions. Yet, it is clear that the establishment of a local public healthcare delivery system is critical to ensuring that minorities and underserved populations have access to adequate and affordable healthcare in unincorporated areas. Based upon this premise, we suggest that special targeted emphasis be placed upon the needs of unincorporated areas, just as in rural communities, which share much the same healthcare concerns and perhaps even more demands.

4.4 Limitations and Future Directions

In this study, we captured perspectives of health status and social and physical environmental factors of healthcare among African American residents of an unincorporated area that is slowly transitioning from a small to a larger community both in geographic spread and population density. Therefore, we have captured a snapshot of the African American residential perceptions of this quickly evolving unincorporated community. In future work, we will assess how perceptions of health and well-being, environmental exposures, and access to healthcare change as the community undergoes development and growth in Fresno, Texas.

4.5 Policy Suggestions

The Fresno, Texas community is located in Fort Bend County, Texas. In 2007, a community health status assessment was conducted to examine the health status of the Fort Bend County community in hopes of informing and mobilizing its' citizens (The Compass Project, 2007). The findings from the health status assessment demonstrated wide disparities in income and neighborhood characteristics, by illustrating dissimilarities in neighborhoods with great wealth and affluence and communities that lack access to services such as public water or transportation. More importantly, key informants from the Fort Bend County community health status assessment identified similar community concerns as those illustrated in our study by the residents of the Fresno community: (a) limited access to healthcare due to poor transportation, (b) limited access to healthcare because of lack of health insurance or affordable services, (c) poor air and water quality, and (d) inadequate sewage/waste disposal (The Compass Project, 2007).

To begin to address the physical and social environmental needs and concerns identified in our qualitative study, as well as the concerns brought for the in the Fort bend County Compass Project of 2007, we propose the following policy recommendations based upon feasibility and an existing mechanism for implementation:

1. The establishment of a local government-funded clinic or hospital that is easily accessible and provides healthcare for all, regardless of insurance and immigration status. This recommendation is applicable to many unincorporated communities that lack access to care based upon their jurisdiction status.
2. The development and enforcement of deed/zone restrictions to limit the placement of industrial companies and hazardous waste sites in or near residential neighborhoods and decrease the risk of exposure to potentially hazardous chemicals via airborne or drinking water exposure, particularly in minority unincorporated communities that lack proper infrastructure for safe, clean water access.
3. The institution of more stringent testing of residential drinking water and air quality monitoring for known health hazards and carcinogens in unincorporated communities by local officials. Environmental health testing is often conducted in urban cities,

failing to include unincorporated communities that continue to develop and expand near urban cities. The air monitoring and drinking water testing should be monitored by the local overarching government and reported quarterly to the residents of these unincorporated communities.

Although additional policy recommendations will be useful to the Fresno community, our use of the RSCF, in addition to the highly informative perceptions and priorities expressed by the African American focus-group participants in this study, provided a foundation to inform policy and decision-making that addresses the specific needs of this and other minority unincorporated communities.

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References

- Acevedo-Garcia D. Future directions in residential segregation and health research: a multilevel approach. *American Journal of Public Health* 2003;93:215–221. [PubMed: 12554572]
- Brown P. Race, class, and environmental health: a review and systematization of the literature. *Environmental Research* 1995;69:5–30.
- Cagney K, Browning C, Wen M. Racial disparities in self-rated health at older ages: what difference does the neighborhood make? *Journals of Gerontology Series B Psychological Sciences and Social Sciences* 2005;60:S181–190.
- Cardarelli R, Chiapa A. Educating primary care clinicians about health disparities. *Osteopathic Medicine and Primary Care* 2007;1:1–7.
- The Center for Rural Health Initiatives. Educational Fact Sheet: Health Care in Rural Communities. 2000 [January 15, 2008]. Available at: <http://www.rtis.com/nat/org/trdc/HEALTH2152000.doc>
- The Compass Project. Fort Bend County Community Health Status Assessment. 2007 [May 5, 2008]. Available at: http://www.co.fortbend.tx.us/upload/images/health_human_services/community_health_status_assessment.pdf
- Diez Roux A. Investigating Neighborhood and Area Effects on Health. *American Journal of Public Health* 2001;91:1783–1789. [PubMed: 11684601]
- Ellaway A, Anderson A, Macintyre S. Does Area of Residence Affect Body Size and Shape? *International Journal of Obesity* 1997;21:304–308. [PubMed: 9130028]
- Ellaway A, Macintyre S, Kearns A. Perceptions of place and health in socially contrasting neighborhoods. *Urban Studies* 2001;38:2299–2316.
- Feldman C, Hanson E. Straddling urban, rural: Deadly fire in unincorporated town highlights lack of services that some want. *The Houston Chronicle* 2007 February 25;:B1–B8.
- Franzini L, Caughey M, Spears W, Fernandez–Esquer M. Neighborhood economic conditions, social processes, and self-rated health in low-income neighborhoods in Texas: A multilevel latent variable model. *Social Science and Medicine* 2005;61:1135–1150. [PubMed: 15970226]
- Hargraves J, Hadley J. The Contribution of Insurance Coverage and Community Resources to Reducing Racial/Ethnic Disparities in Access to Care. *Health Services Research* 2003;38:809–829. [PubMed: 12822914]
- Institute of Medicine (IOM). *Toward Environmental Justice Research Education and Health Policy Needs*. National Academy Press; Washington, D.C: 1999.
- Institute of Medicine of the National Academies (IOM). *Unequal treatment Confronting racial and ethnic disparities in healthcare*. National Academies Press; Washington, DC: 2003.
- Israel B, Parker E, Rowe Z, Salvatore A, Minkler M, Lopez J, Butz A, Mosley A, Coates L, Lambert G, Potito P, Brenner B, Rivera M, Romero H, Thompson B, Coronado G, Halstead S. *Community-Based*

- Participatory Research: Lessons Learned from the Centers for Children's Environmental Health and Disease Prevention Research. *Environmental Health Perspectives* 2005;113:1463–1471. [PubMed: 16203263]
- Israel B, Schulz A, Estrada-Martinez L, Zenk S, Viruell-Fuentes E, Villarruel A, Stokes C. Engaging Urban Residents in Assessing Neighborhood Environments and Their Implications for Health. *Journal of Urban Health* 2006;83:523–539. [PubMed: 16739052]
- Jones L, Chilton J, Hajek R, Iammarino N, Laufman L. Between and within: international perspectives on cancer and health disparities. *Journal of Clinical Oncology* 2006;24:2204–2208. [PubMed: 16682740]
- King D, Hernandez-Valero M, Chukelu P, Jones L. An initial assessment of a forgotten minority community: Key informants' perceptions of environmental health in Fresno, Texas. *California Journal of Health Promotion* 2006;4:22–31.
- King D, Chukelu B, Freelon B, Lewis A, Jones L. Residential perceptions of environmental exposures and associated health effects in the Fresno, Texas community. *California Journal of Health Promotion, Special Issue (Health Disparities and Social Justice)* 2007;5:48–57.
- Kreiger N, Rowley D, Herman A, Avery B, Phillis M. Racism, sexism and social class: implications for studies of health, disease and wellbeing. *American Journal of Preventive Medicine* 1993;9:82–122. [PubMed: 8123288]
- Lang, R.; Simmons, P. Boomburbs: The Emergence of Large Fast-Growing Suburban Cities. In: Katz, B.; Lang, R., editors. *Redefining Urban and Suburban America Evidence from Census 2000*. DC Brookings, Institution Press; Washington: 2003. p. 101-116.
- Lee C. Environmental Justice: building a unified vision of health and the environment. *Environmental Health Perspectives* 2002;110(Suppl 2):141–144. [PubMed: 11929721]
- Lopez R. Segregation and Black/White Differences in Exposure to Air Toxics in 1990. *Environmental Health Perspectives* 2002;110(Suppl 2):289–295. [PubMed: 11929740]
- Lurie N, Dubowitz T. Health disparities and access to health. *Journal of the American Medical Association* 2007;297:1118–21. [PubMed: 17356034]
- Macintyre S, Mciver S, Sooman A. Area, Class, and Health: Should We Be Focusing on People or Places? *Journal of Social Policy* 1993;22:213–234.
- Minkler, M.; Hancock, T. Community-driven asset identification and issue selection. In: Minkler, M.; Wallerstein, N., editors. *Community-based participatory research for health*. Jossey-Bass; San Francisco, CA: 2003.
- Minkler M, Vasquez V, Tajik M, Peterson D. Promoting Environmental Justice Through Community-Based Participatory Research: The Role of Community and Partnership Capacity. *Health Education and Behavior* 2006;1–19.10.1177/1090198106287692
- Mokdad A, Marks J, Stroup D, Gerberding J. Actual Causes of Death in the United States. *JAMA* 2000;291:1238–45. [PubMed: 15010446]
- Morenoff J, House J, Hansen B, Williams D, Kaplan G, Hunte H. Understanding social disparities in hypertension prevalence, awareness, treatment, and control: The role of neighborhood context. *Social Science and Medicine* 2007;65:1853–66. [PubMed: 17640788]
- Murray, C.; Michaud, C.; McKenna, M.; Marks, J. U.S. Patterns of Mortality by County and Race: 1965–1994. Cambridge MA: Harvard Burden of Disease Unit; 1998.
- Murray, C.; Lopez, A., editors. *Global Health Statistics*. Cambridge, MA: Harvard School of Public Health, on behalf of the World Health Organization and the World Bank; 1996.
- Northridge M, Stover G, Rosenthal J, Sherard D. Environmental equity and health: understanding complexity and moving forward. *American Journal of Public Health* 2003;93:209–214. [PubMed: 12554571]
- Parker E, Schulz A, Israel B, Hollis R. Detroit's East Side Village Health Worker Partnership: Community-based lay health advisor intervention in an urban area. *Health Education and Behavior* 1998;25:24–45. [PubMed: 9474498]
- Payne-Sturges D, Gee G. National Environmental Health Measures for Minority and Low-Income Populations: Tracking Social Disparities in Environmental Health. *Environmental Research* 2006;102:154–171. [PubMed: 16875687]

- Poortinga W. Perceptions of the Environment, Physical activity, and Obesity. *Social Science and Medicine* 2006;63:2835–2846. [PubMed: 16952415]
- Rust G, Fryer G, Phillips R, Daniels E, Strothers H, Satcher D. Modifiable Determinants of Healthcare Utilization within the African American Population. *Journal of the National Medical Association* 2004;96:1169–1177. [PubMed: 15481745]
- Schulz A, Williams D, Israel B, Lempert L. Racial and Spatial Relations as Fundamental Determinants of Health in Detroit. *The Milbank Quarterly* 2002;80(4):677–707.
- Schulz A, Kannan S, Dvorchak J, Israel B, Allen A, James S, House J, Lepkowski J. Social and Physical Environments and Disparities in Risk for Cardiovascular Disease: The Healthy Environments Partnership Conceptual Model. *Environmental Health Perspectives* 2005;113:1817–1825. [PubMed: 16330371]
- United Church of Christ Commission for Racial Justice. *Toxic waste and race in the United States: A national study of the racial and socioeconomic characteristics of communities with hazardous waste sites*. New York: United Church of Christ; 1987.
- United States Bureau of the Census. The U.S. Census Bureau American FactFinder Fact Sheet, Fresno CDP, Texas. [January 25, 2008]. Available at: http://factfinder.census.gov/servlet/SAFFacts?_event=Search&geo_id=01000US&_geoContext=&_street=&_county=fresno
- The United States Department of Health and Human Services (HHS). *One Department Serving Rural America HHS Rural Task Force Report to the Secretary*. 2002 [January 23, 2008]. Available at: <http://ruralhealth.hrsa.gov/PublicReport.htm#summary>
- Wen M, Hawkey L, Cacioppo J. Objective and perceived neighborhood environment, individual SES and psychosocial factors, and self rated health: An analysis of older adults in Cook County, IL. *Social Science and Medicine* 2006;63:2575–2590. [PubMed: 16905230]
- World Health Organization. *World Health Report 2002 Reducing Risks Promoting Healthy Life*. Geneva: World Health Organization; 2002.
- Williams D, Rucker T. Understanding and Addressing Racial Disparities in Health Care. *Health Care Financing Review* 2000;21:75–90. [PubMed: 11481746]
- Williams D, Collins C. Racial residential segregation: A fundamental cause of racial disparities in health. *Public Health Reports* 2001;116:404–416. [PubMed: 12042604]
- Williams D. The health of U.S. racial and ethnic populations. *The Journals of Gerontology B Psychological Sciences and Social Sciences* 2005;60:53–62.

Figure 1.
Map of Fresno, Texas and Surrounding Communities

Table 1

Characteristics of Focus Group Participants

Characteristics	Number of Participants
Mean age, years (range)	53 (27-80)
Years residing in Fresno	
0-2	10
3-5	4
6-10	2
11-20	2
>20 years	3
Highest level of education completed	
Elementary	1
High School	2
Technical	2
College	15
Unknown	1
Location of physician	
Fresno, TX	1
Houston, TX	12
Sugarland, TX	4
Missouri City, TX	1
Other	3
Where the resident goes when sick	
Doctor	16
Emergency room	3
Other	2
Drinking water source	
Private well	5
Neighborhood MUD water supply	16
Drink the water in the home	
Yes	18
No	3