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Environmental Justice and the Role of Social Capital in an Underserved Urban Community

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ENVIRONMENTAL JUSTICE AND THE ROLE OF SOCIAL CAPITAL IN AN UNDERSERVED URBAN COMMUNITY

By

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ABSTRACT

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Results indicated that both focus groups exhibited a heightened level of social capital and were able to identify and solve some of their environmental health problems. This was verified through elements of: trust and cooperation; communication; and community support demonstrated through the focus groups. In addition, elevated participation and collective action manifested itself further in the civic league group as they actively sought ways in which they could make their neighborhood a better place to live.

Based on this study, it is apparent that social capital remains a theory that should be further researched in its contribution to environmental health. An understanding of why some groups exhibit more social capital than others is important to improving the public health system. What's more, the recognition that social and physical factors work together to create a healthy environment will enhance understanding of health inequalities and advancement of environmental justice.

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This thesis is dedicated to those who...

dream of a different world, where love is endless;

Where we never cast aside the reasoning of others;

Where we never forget to give a hand to those who remain behind;

And where whoever knows something offers to teach it to others,

Just so that everyone can know a little more about life,

And leave our world in better shape than when we arrived.

(Ruben Blades)

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CHAPTER I

INTRODUCTION

There is a growing interest on how environmental and social conditions affect the underprivileged as well as contribute to health inequalities. Environmental justice, i.e., environmental equality for all, is one of the most important and controversial issues in public health (APHA, 2004a). To illustrate this, the theme of the 2004 annual American Public Health Association (APHA) Meeting and Exposition, *Public Health and the Environment*, emphasized environmental health inequality. In their closing General Statement, the APHA spoke of Environmental Justice stating, "For years minorities and the underserved have had their concerns regarding pollution and environmental hazards ignored or minimized." Additionally, *The Joint Center for Political and Economic Studies* (an international research institution with special concerns for black Americans and other minorities), further states that community environments (social, economic, and physical) must be understood to have equal importance and can no longer be used as a mere backdrop for interventions designed to change individual health and health behavior (2004). In her testimony before Manhattan Borough President's Commission to Close the Health Divide, Bedell (2004) stated that, "Fundamentally, eliminating health disparities is about social justice [preventing human rights abuses], which is the underlying philosophy of public health."

The issue of health inequalities first emerged on the national policy agenda June 14, 1997, when President Clinton announced his Initiative on Race (The White House, 2004). In response, the National Institutes of Health (NIH) wrote the first official

definition of health inequalities/disparities declaring that, "Health disparities are the differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups in the United States" and identified specific population groups such as African-Americans (NIH, 2000; 2004). In accordance with the president's call to action, national organizations have made the elimination of health inequalities as a priority. The Office of the Surgeon General lists it as a public health precedence, and a concentrated focus on health inequalities/disparities is found in *Healthy People 2010*, a national health promotion and disease prevention initiative (2000).

Although an abundance of research exists on race and ethnicity, access to quality healthcare, reducing death and disease from preventable individual risky behaviors such as tobacco use, overweight and obesity, HIV/AIDS, and birth defects, the literature rarely mentions the environment as an instrument to diminish health disparities. Still, studies on the causes of morbidity and mortality in the United States suggest that improving healthcare and health outcomes in communities would be most successful with a simultaneous focus on their social and physical environments as well as their economics (Joint Center, 2004; McKenzie, Pinger, & Kotecki, 2002; WHO, 2003). Bedell (2004) states that the disparities in health status between diverse groups is primarily due to differences in the social, economic, and physical conditions in which people live. Therefore, it follows that populations that do not share the same level of living conditions will also experience disparities in their health status.

It is not the intent of this study to diminish the importance of access to quality healthcare, or the value of reducing risky behaviors in addressing health inequalities, but instead to emphasize that the environment within which people live is critical to health.

Effects of Poverty and Environmental Pollutants on Health

There are many different types of disadvantaged neighborhoods, but urban poor minority neighborhoods seem to be especially unhealthy (Epstein, 2003). People who live in urban low-income minority communities are more likely to be exposed to a higher incidence of air, water, and land pollution due to disproportionate placement of pollution-intensive industries as well as poor sanitation and waste disposal (NIEHS, 2004). Trash and other debris can attract vermin and other pests and collects stagnant water making an ideal environment for mosquitoes to breed. Additionally, these poor communities are more vulnerable to environmental threats such as residing in inadequate, older housing to which health problems such as lead exposure, respiratory complications, and exposure to life threatening mold and bacteria are attributed.

Inadequate Housing

Quality housing has a role in both physical and mental health (CRU, 1999). Conversely, inadequate and dilapidated housing exposes people disproportionately to environmental hazards. Those who live in poverty have a greater risk of environmental disorders such as respiratory and other diseases from living in older housing. Contact with lead, and allergens associated with cockroaches, rodents, dust mites, and mold can be an everyday occurrence (CDC, 2004b; CRU, 1999; NIH, 2004). Houses need to be free of pests because allergens from cockroaches, mice, rats, and other vermin can cause asthma episodes. Mold and mildew caused from structural problems in the home, also

can make asthma worse (CDC/NCEH, 2005). For example, if a child who has the proper treatment and medication for asthma returns to a neglected, damp and moldy home, the condition will persist. Additionally, vermin can spread disease through their urine and droppings and sometimes by a bite. They can also impair health by contaminating food, chewing through wood and plaster, as well as electrical wires, increasing the risk of fire and electrocution.

Lead Exposure

Studies show that the highest risk for lead exposure resides with low income minority families who live in pre-1978 deteriorated housing (CDC, 2004c; EPA, 2002). Even though lead exposure is one of the most preventable causes of poisoning in children, the Centers for Disease Control estimates that nearly half a million children aged 1-5 years, living in the United States have lead blood levels that are high enough to cause irreversible health damage (2004c). Minority children are at the greatest risk. For example, data from the CDC (2004c) calculates that 22% of black children living in housing built before 1946 have elevated blood lead levels compared with 6% of white children living in comparable types of housing (see Figure 1). The major source of lead exposure among these children is lead-based paint and lead-contaminated dust found in deteriorating buildings. Another common source is through water polluted by leaching lead pipes in older homes. Although at any age lead can be toxic, children are especially vulnerable because of the harmful effects to their developing nervous system. Lead poisoning can damage nearly every system in the body causing learning disabilities, behavioral problems, hearing loss and, at very high levels, can lead to brain damage, and even death (CDC, 2004c).

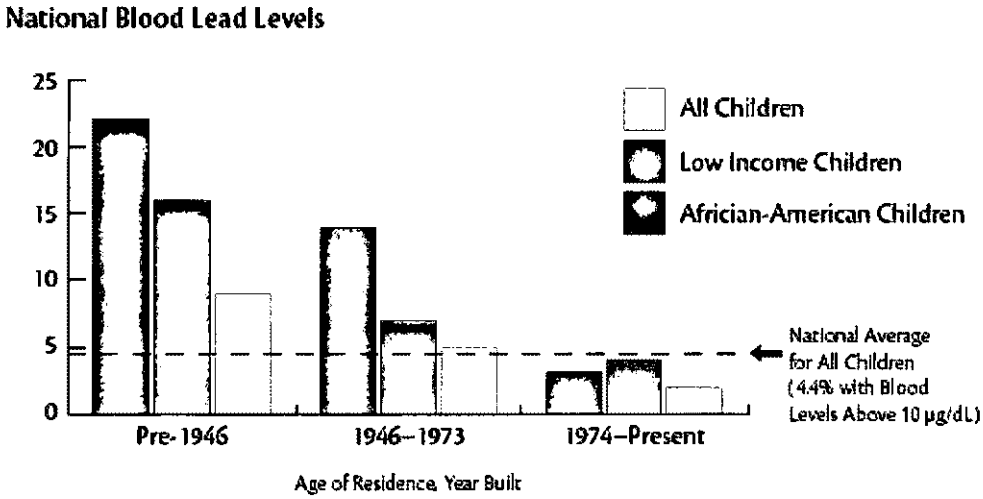

Figure 1. National Blood Lead Levels in Children, Pre-1946 to present
Third National Health and Nutrition Examination Survey (NHANES III), Phase 2, 1991-1994.

Chronic Obstructive Pulmonary Disease (COPD)

COPD, caused by environmental irritants, such as coal dust and other irritants such as mold and mildew, refers to a group of diseases that cause airflow blockage and breathing-related problems. Including such diseases as emphysema, chronic bronchitis, and asthma, COPD is a leading cause of death, illness, and disability in the United States (CDC, 2004b). The Commonwealth of Virginia reported COPD as the fourth leading cause of death in 1995 (VDH, 1997a) and the CDC (2004a) reported that annual rates of asthma between 1980 and 1999 were higher among certain racial/ethnic minority populations than among whites (see Figure 2). Among the possible reasons cited for the higher asthma prevalence variability, include demographic, socioeconomic, and environmental factors.

Another potentially fatal concern of living in damp neglected housing is the toxic effects of mold and bacteria. In addition to respiratory problems, outcomes not generally

associated with an allergic response include nervous-system effects, suppression of the immune system, intestinal and respiratory tract hemorrhage, arthritis, and loss of appetite (HPDP & IOM, 2004).

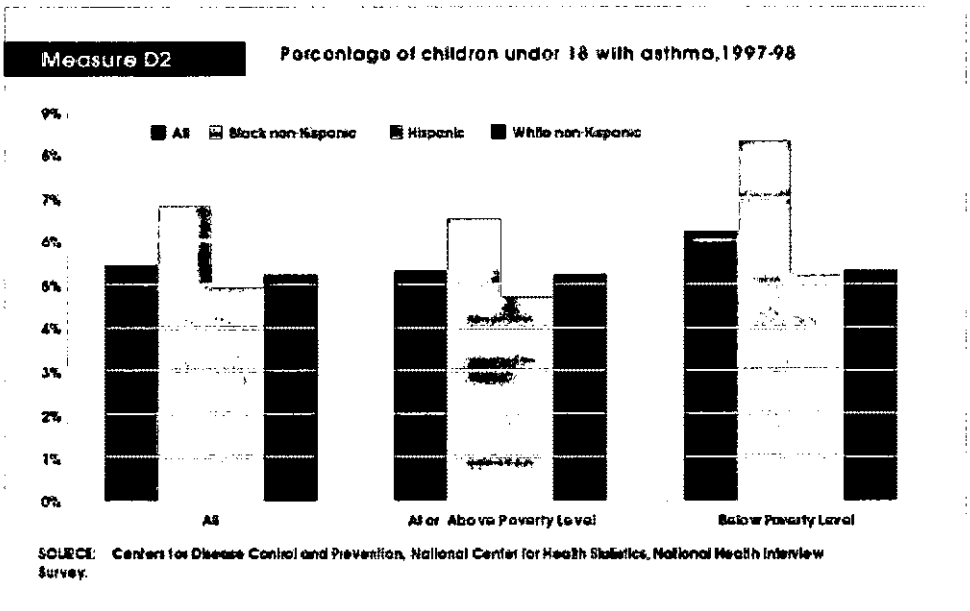

Figure 2. Percentage of Children under 18 with Asthma, 1997-1998. Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey.

West Nile Virus (WNV)

The urban poor are especially vulnerable to environmental health problems resulting from poor sanitation and waste disposal. Vermin and other pests thrive where there is an accumulation of weeds, garbage, trash, and stagnant water on premises (CDC/NCEH, 1979). Increased exposure to mosquitoes provides more opportunities for West Nile Virus (Brorson, 2000). West Nile Virus, which is transmitted through the bite of an infected mosquito, can cause encephalitis (an inflammation of the brain) or meningitis (inflammation of the lining of the brain and spinal cord) in humans and other

animals. The symptoms can be mild, ranging from a slight fever, headache, and body aches to more severe symptoms with a high fever, intense headaches, and confusion, and in rare cases death. The Virginia Department of Health recommends eliminating mosquito-breeding areas often found in the poorer urban areas such as old tires, garbage cans, and vegetation filled gutters and downspouts. Puddles and clogged ditches can also be important mosquito breeding habitats (VDH, 2004b).

Healthy Communities

Many factors determine the health of a neighborhood. These factors may be physical and dependent on economic conditions such as basic services of water supply and sanitation, access to health facilities, and the quality of the environment. They also include social relationships, individual behaviors, and the ability for a community to organize and work together as a whole (McKenzie et al., 2002; WHO, 2003). The World Health Organization (WHO) (2003) lists the most important elements for a healthy community as the *environment* and *social networks*:

- The environment meets everyone's basic needs.
- The environment is clean and safe.
- The environment promotes social harmony and actively involves everyone.
- There is an understanding of the local health and environment issues.
- The community participates in identifying local solutions to local problems.
- The historical and cultural heritage in a community is promoted and celebrated.
- Community members have access to varied experiences, interaction, and communication.

Environmentally healthy communities may already display the above factors suggested by the WHO. However, those from lower socioeconomic groups may be lacking in a number of them thereby resulting in environmental injustice. Those that seek to change the environmental health of a community may need to design interventions that will influence a number of those factors listed in order to achieve environmental justice.

Intervention Strategies

Intervention strategies are not universal; an approach that works well in one community may fail in other communities because they do not address the needs of that particular neighborhood. The Education Development Center (EDC), an international non-profit organization with more than 335 projects dedicated to enhancing learning and promoting health, adds that one of the key lessons learned in the last few decades of public health research is the importance of understanding the subtle unique characteristics of the communities in which people live and work (2004). The identification and incorporation of communities' unique cultural factors into intervention strategies may result in increased acceptability, use, and adherence. If change is to be sustainable, the entire community needs to support it. "Strong citizen participation, from all sectors of the community, is more likely to result in better and more creative approaches to community problems than those approaches attempted without such participation" (Schuler, 1996). For that reason, social capital may be seen as a concept related to environmental justice.

THEORETICAL FORMULATIONS

The theoretical framework for this study is the Social Capital theory. In everyday language, social capital is the glue that holds a community together (World Bank Group,

2004a). This *glue* is comprised of trust, reciprocity, networks, norms, and values within a neighborhood or other social groupings. With it's foundation in trust, social capital fosters cooperation and information exchange that can engage citizens in community-level decision making, thus harnessing the strength of community that is needed for community change.

PURPOSE

The purpose of this study is to assess beliefs, attitudes, and experiences regarding neighborhood environmental health issues and ways in which individuals utilize social capital to improve environmental health. Research questions for this study are:

1. What do residents believe are environmental health issues in their neighborhood?
2. What individual or group activities have occurred to address these problems?
3. What are the resident's suggestions to improve their neighborhood environmental health?
4. On whom do the residents rely to assist them if they have an environmental health problem they feel needs to be addressed?
5. To what electronic means of communication do residents have access?
6. What elements of social capital do residents exhibit in the focus group interviews?

PROBLEM

As previously stated, environmental health has typically focused on the quantitative measures of health disparities, such as morbidity, mortality, socioeconomic status, genetics, and individual behavior. However, few studies have attempted to explore the dimensions of environmental health disparity by qualitative analysis. It is the intent of this study to focus on the role social capital plays in environmental health rather

than its role in responding to personal preventable health issues. Therefore, this research will fill a gap in the existing body of knowledge on the role that social capital plays in approaching neighborhood environmental health problems within an urban community.

Investigating opinions about critical environmental health issues that need to be addressed, and ways to facilitate neighborhood health will provide insight into how urban low-income minorities feel about neighborhood environmental health. Understanding the opinions of the urban poor may clarify possible areas for intervention and planning for this population. The public health system has paid too little attention to the effects of social capital on environmental outcomes. Understanding the role social capital plays in poor, urban communities may suggest ways to improve the environmental quality experienced by its residents.

Definition of Terms

For the purpose of this study, the following terms are defined:

1. Environmental Justice: a state in which everyone, regardless of race, culture, or income, enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work (EPA, 2004).
2. Health Inequality / Health Disparities: the differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups in the United States (NIH, 2000, 2004).
3. Social Capital: assets of social organizations and networks such as: trust and reciprocity, informal networks (and participation in them), shared understanding

and accountability, alignment of values and actions that facilitate coordination and cooperation for the mutual benefit of the community (Norris, 2003). Degree of social capital present will be measured by evidence of trust, civic engagement, networks, and community support during the focus group discussion.

a. Trust: the trait of trusting; of believing in the honesty and reliability of others (WorldNet, 2004).

b. Civic Engagement: individual and collective actions designed to identify and address issues of public concern (Van Benschoten, 2001).

c. Social Cohesion: mutual trust among neighbors combined with willingness to intervene on behalf of the common good (*Neighborhood Social Cohesion*, 2004). The capacity of citizens living under different social or economic circumstances to live together in harmony, with a sense of mutual commitment (Dragojevic, 2000).

d. Collaboration: to work together especially to reinforce health promotion messages and programs (APHA, 2004b).

e. Reciprocity: mutual verbal or physical exchange and support between parties.

3. Environmental Health: those aspects of human health, including quality of life, that are determined by physical, chemical, biological, social, and psychosocial factors in the environment; the theory and practice of assessing, correcting, controlling, and preventing those factors in the environment that can potentially adversely affect the health of present and future generations (WHO, 2004).

4. Poor Neighborhood: geographic tracts in which at least 20% (poverty) or 40% (extreme poverty) of the residents are poor as measured by the poverty thresholds

(U.S. Census Bureau, 2004b). Poverty thresholds are the dollar amounts used to determine poverty status according to an intricate table of size of family and ages of family members. For example, poverty can be defined as a single person with an income of $8,501 or a couple with three children under the age of 18 with a household income of $19, 8882. These thresholds are intended for use as a statistical yardstick, not as a complete description of what people and families need to live (U.S. Census Bureau, 2004b).

Assumptions

The following assumption was made for this study:

Focus group participants will answer questions honestly and completely.

Limitations

The validity and reliability of the study is limited by the following factors:

1. Focus group participants were chosen from a convenience sample and therefore may not represent the views of the target community's residents as a whole.
2. A potential for low response rate existed. To compensate for this possibility, 15 people were invited to each focus group to ensure that at least five were in attendance.
3. Interracial trust barriers and the fact that the researchers represented a large working institution could be considered a threat to the citizens of the target community.
4. Proceedings of one focus group may influence another. To prevent this occurrence, members of the focus groups were requested not to share accounts of happenings of the groups until after a month had passed.

DESCRIPTION OF STUDY SAMPLE

The target community, to be referred from this point on as, The Neighborhood was chosen for this study because of its low socioeconomic status, specific minority status, lack of physical and human capital, environmental health concerns, and the relationship it has with The University. The Neighborhood looks like any poor urban neighborhood across the country, with boarded up abandoned buildings, empty lots with grass overgrowing old cars and heaps of rubbish, broken sidewalks, clogged sewage drains, and children playing on a concrete playground.

1. Over 55% of The Neighborhood's residents lived below poverty level in 1999 (U.S. Census, 2001).

2. About 65% of the community's residents are African American.

3. According to the 2000 Census Tract data (2004a), the median year housing was built in the target area was 1961, with 76% of residents living in housing constructed before 1978. (see Appendix B). Therefore, lead exposure, toxic mold, and chronic obstructive pulmonary disease are environmental health concerns. The Norfolk district which includes the target community, ranks as one of the highest in terms of Virginia children with lead poisoning in 1995 (VDH, 1997b). Additionally, coal dust produced by Norfolk Southern Railroad and the pollution and stagnant water produced by the junkyard may also be a concern. According to the Virginia Department of Health, the City of Norfolk reported five positive WNV cases compared to the State average of 1.8 in 2004 (VDH, 2004b).

4. There are no designated recreational areas for the Lambert Point children to play, only a vacant lot with old, donated, broken play equipment.

5. Compared to the Virginia average of 81.5%, 68% of residents in The Neighborhood obtained a high school education and only 9.4% have attended college (U.S. Census Bureau, 2004a)

6. Demographically isolated, The Neighborhood is bounded on the southwest by the Elizabeth River and by the Norfolk Southern Railroad to the south. The northern boundary follows Old Dominion University on 49th street and Knitting Mill Creek (a tributary of the Lafayette River), while the eastern boundary roughly follows Colley Avenue and the terminal which ends at Pier P (*Norfolk: 1911 annexation*, 2004) (see area delineated by red lines, Figure 3).

7. The Neighborhood has no defined economic business that serves the community, no community recreation center or meeting place, and no grocery store. The only location to purchase food in The Neighborhood is a small gas station.

8. The Neighborhood enjoys an ongoing relationship with The University. The University created the *Summer Program* in 1992 as a community outreach initiative for the community's children to participate in recreation, academics, scholarship and employment. The College of Health Sciences at The University sponsors health fairs and health screenings for the residents of The Neighborhood (Powers-Luhn, personal communication, May 25, 2004) (see Appendix B for further demographic data).

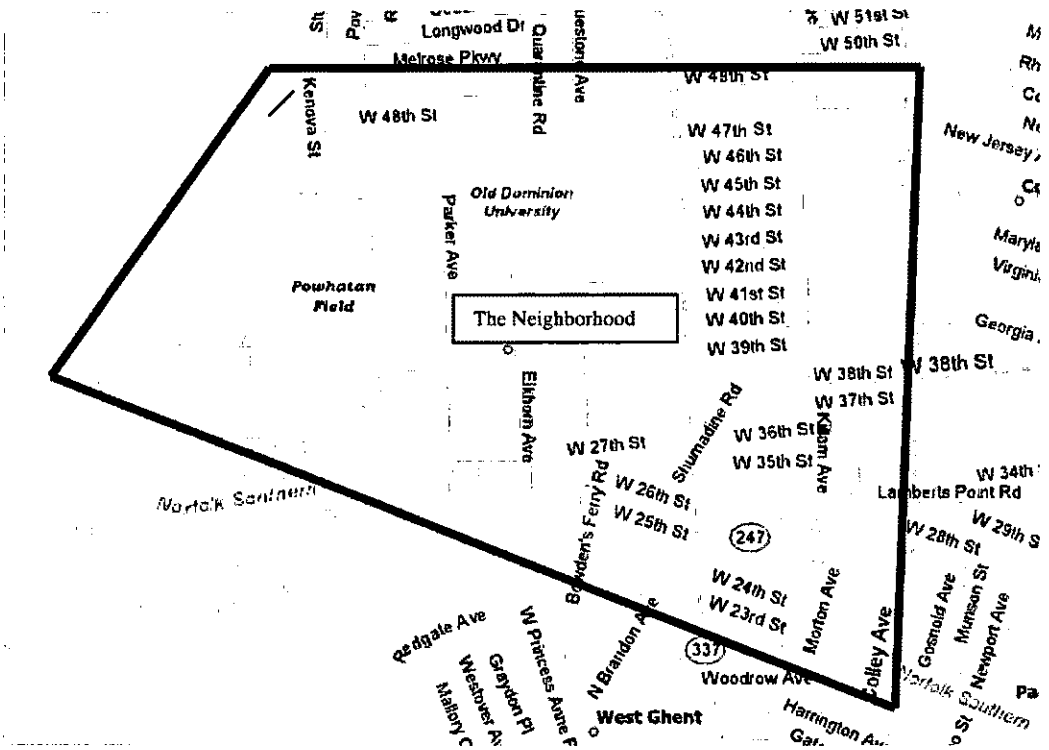

Figure 3. Geographic Area of The Neighborhood, Norfolk,VA.
Census Tract 25, Norfolk city, Virginia, www.census.gov.

CHAPTER II

BACKGROUND OF THE STUDY

Research findings from a variety of areas support the theoretical foundations upon which this study is based. Relevant literature is reviewed from social capital theory and environmental justice. In addition, trust, which is the principle of social capital, is a recurring theme throughout the literature review.

REVIEW OF THE RESEARCH

Social Capital Theory

There are many definitions of social capital. For the purpose of this section, the definition of social capital most closely resembles that of Putnam (2000), "The degree to which a community or society collaborates and cooperates (through such mechanisms as networks, shared trust, norms and values) to achieve mutual benefits." Due to the importance of virtual networks explored later in this study, Bourdieu and Wacquant's (1992) assertion that social capital can be derived from durable networks of institutionalized relationships, either *actual or virtual*, should also be recognized. Additionally, the term social capital is being used for this research for the reason that it has some characteristics of other forms of capital. For example, it is a resource one can build up and then draw on later; it can be discussed with other forms of capital such as financial capital (liquid currency or wealth), physical capital (buildings, roads, and housing), and human capital (education, skills, and training); and it is an understood and accepted term in research and policy discussion (Bullen & Onyx, 1999).

The theory of social capital has evolved since 1916 when Hanifan, an educator and social reformer, first coined the phrase, recognizing the importance of community participation for enhancing school performance. Describing it as, "Those tangible substances [that] count for most in the daily lives of people" that may bring about substantial improvement of living conditions in the whole community (Hanifan, 1916; Woolcock & Narayan, 2000). Until the present time, other notable authors have considered social capital a community asset and have used it as a means for the improvement of society such as Jacobs (1961), Coleman (1988), Fukuyama (1996), and Putnam (2000) who has most recently brought the theory of social capital into the core of research and policy discussion.

Trust

Social capital is referred to as a 'bottom-up' phenomenon because it originates at the level of individuals forming social connections and networks. Based on the principle of trust (see Figure 4) people come together for community change (Bullen & Onyx, 1999).

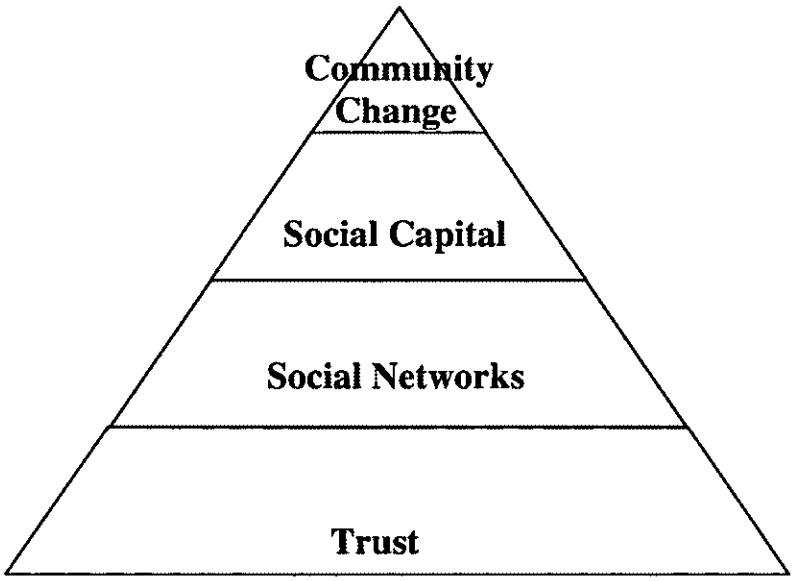

Figure 4. Social Capital

There is a universal agreement that social capital is based on connectedness with others with the concept of trust at its core. Putnam and many others believe that trust is related to social capital in that social capital generates trust and the expectation of reciprocity (Putnam, 2000), i.e., "I'll do this for you and you will do this for me or for someone else later on." The World Bank Group (2004a) supports that the basic premise of social capital is the interactions that enable people to build communities and to commit themselves to each other through trusting social relationships. The trust and understanding that ensues when one feels a sense of belonging and commitment to social networks can produce social capital. Putnam, a staunch supporter of the benefits of social capital, feels that people who have active and trusting connections to others develop or maintain character traits that are good for the rest of society. Those that trust in their fellow man become more tolerant, less cynical, and more empathetic to the misfortunes of others (Putnam, 2000). Building a collaborative climate and sustaining it demands a solid foundation of trust. Social policy commentator and associate investigator of

Australia's Health Development & Social Capital Research Project 1997-2000, Eva Cox, feels that people are fundamentally social beings that value social connections over competition. Cox (1995) states, "Accumulated social trust allows groups and organizations, and even nations, to develop the tolerance sometimes needed to deal with conflicts and differing interests."

Social Networks and Health

Though environmental health primarily addresses traditional factors in the environment such as chemical pollutants in air and water, contemporary environmental health sciences also look at social status. That is, how the neighborhood and home environment increase risk of disease, disability and premature deaths (NIEHS, 2003). The World Bank Group (2004a) advocates that social capital and the trust and cooperation that it promotes can impact health through a variety of methods including: health education and information access, designing better healthcare delivery systems, collectively acting to build and improve infrastructure, advancing prevention efforts, and addressing cultural norms which may be detrimental to health. Furthermore, in the 2000 Social Capital Community Benchmark Survey of self-rated poor health among 21,456 individuals within 40 US communities, higher levels of community social trust were associated with a lower probability of reporting poor health (The Roper Center, 2004).

Social capital is vital for a healthy community. Communities with, 'a good stock' of social capital are more likely to benefit from better health (Durkheim, 1951; Putnam, 2000; World Bank Group, 2004a). Studies have shown that belonging to social networks can be a very powerful asset to one's well being (Putnam, 2000; World Bank Group, 2004a). People who are actively involved in their communities, who volunteer, socialize,

and join organizations, are happier and healthier than people who are socially isolated. Research correlating social capital with health status shows that the higher the level of social capital in a community, the better the health. For example, (Kreuter, Young, & Lezin, 1998) Durkheim (1951) identified that suicide rates are related to ones' level of social integration. That is, those individuals not sufficiently bound to social groups and left with little social support or guidance tend to commit suicide on an increased basis. Additionally, to determine whether there was an association between social capital and effective promotion of health programs, Kreuter, Young and Lezin (1998) utilized, among other data, interviews and telephone surveys as a means to establish evidence of social capital such as, civic participation, trust, social engagement and reciprocity. A positive correlation between social capital and the efficacy of health promotion interventions was established.

Putnam suggests that people whose lives are rich in social capital cope better with traumas and fight illness more effectively (2000). He surmises that if you belong to no groups, you can cut your risk of dying over the next year *in half* just by joining a social group or organization. The most compelling support of these kind of relationships come out of the 1965 Human Population Laboratory Study which followed a random sample of 6,928 adult residents of Alameda Country in California through the late 1960s and 1970s. Researchers found that community social ties protected individuals from the onset of disease and death by increasing host-resistance, even after taking account of socio-economic status, health behaviors and differences in the use of health care services (Berkman & Syme, 1979; Ross, 2003).

Researchers believe that the link between social capital and better health may depend on a variety of factors such as, decreases in physiologic stress, promotion of healthier lifestyles, better advocacy for high quality healthcare, and a "safely net" that helps take care of people when things go wrong (*Health Canada*, 2004). To further this assertion, Buckland and Rahman (1999) compared the reactions of three communities who experienced emergency conditions due to the 1997 Red River flooding in Manitoba, Canada. Their research demonstrated that the two communities with a higher level of social capital, measured by their amount of assistance-related convergence, organized themselves faster and more efficiently in response to the catastrophe than the third, which had a lower level of social capital.

Everyday interactions between people are the embodiment of social capital. The stronger these networks and bonds between citizens, the more likely it is that members of a community will cooperate for mutual benefit. In this way, social capital creates health. Based on the previous research it is possible to suggest that social capital is important to resolving environmental health problems as well.

Socioeconomic Factors

Many health disparities can be avoided, especially when they are related to environmental and socioeconomic factors (St. Louis Health Department, 2004; VDH, 2004a). Putnam (2004) believes that social capital can be used as a means to reduce the insidious effects of socioeconomic disadvantage. Furthermore, the World Bank Group (2004) contends that social capital is especially important for the poor as it can be substituted for human capital such as education, skills, and training, as well as physical capital which may include schools and facilities (including health facilities). Strong

social capital is most crucial for families who have fewer financial resources, but unfortunately, oftentimes where such support systems are most needed, they are least likely to exist. People are happier and their children better taken care of in communities where people know and trust their neighbors. Yet, in poor underserved urban areas people are less likely to trust their neighbors or seek their support (Pridmore, 2001). The poor are also more reluctant than the more affluent to ask for help from a neighbor, exchange childcare, or allow their children to play with others in the neighborhood. However, these actions could relieve stress and increase social capital for the family who is already suffering from the stress of poverty.

> *There is no such thing as a poor community. Even neighborhoods without much money have substantial human resources. Often, however, the human resources are not appreciated or utilized, partly because people do not have information about each other and about what their neighborhood has to offer (Resnick & King, 1990).*

Some argue that since many community networks function on the basis of reciprocity that social exclusion can be a problem for those residents who have little to offer in return and risk rejection (Schilderman, 2002). It is often forgotten that all people, poor or not, have something to offer that is valued by other human beings even if it does not have a market value (Geiger, 2004). Harkening back to community "barn raisings" in times of need, communication through networks can create informal social support systems to help out a neighbor. For example, social support can include urban poor neighbors setting up a bartering system of individual skills from babysitting to fixing a

leaky faucet, which will allow neighbors to trade services, save money, and strengthen bonds within the community (Geiger, 2004; Schilderman, 2002).

Moser (1998) states that fluctuations in socioeconomic status associated with wider distributional ranges of incomes, opportunities, and access to services can act to weaken ties of trust and collaboration. To back up this claim, Kawachi, Kennedy, Lochner, and Prothrow-Stith (1997) found that the socioeconomic gap between the rich and poor in the United States can lead to a breakdown of social cohesion leading to a higher mortality rate. Social capital data, based on levels of civic trust and membership association, were obtained from 39 states from a survey conducted by the National Opinions Research Center between 1986 and 1990. Both civic trust and degree of association participation were highly correlated with the degree of income inequality in each state and were strongly correlated with overall mortality.

Community Empowerment and Health

Despite these recommendations, minimal material is found in the professional literature concerning the promotion and enrichment of social interactions as a method to engage citizens in the environmental health of their community. The individual needs of communities are rarely considered in identifying environmental health problems and devising appropriate intervention strategies (NIEHS, 2004). Additionally, what was found in the literature primarily addressed rural communities, individual health behaviors, and mental health. Limited information is due largely to the fact that rural areas are often isolated from resources available in larger metropolitan urban areas, such as health facilities, health labor, businesses, and public transportation. However, many urban poor living within metropolitan cities are isolated from these resources as well.

Furthermore, this spatial isolation of the poor is compounded by social isolation, because the rich and the poor rarely have social ties to one another. Lack of connections to those with resources, both physical and social, results in fewer opportunities for the poor and leads to health inequality (World Bank Group, 2004b).

Gaining the confidence and trust of the community is crucial to addressing neighborhood environmental issues, for without trust it is impossible to achieve social capital. In the absence of trust there can be no productive communication, without good communication, public health assessment might miss important information to help evaluate health issues and a community's environmental concerns could go unanswered. Given the complexity and magnitude of environmental health problems, the public health system can benefit from encouraging social capital and establishing collaborative relationships with communities experiencing environmental problems. Working together to address community concerns, these partnerships can facilitate the definition of important environmental health issues, the development of measurement instruments that are culturally appropriate, and the establishment of trust that will enrich the value of data collected (NIEHS, 2004).

To gain a better understanding of a community's needs and perceptions, all people must have a voice, including those of urban low-income, racial minorities. Getting at expressed collective beliefs and needs of these underserved urban neighborhoods will facilitate greater availability of services and planning for present, as well as future populations. Social capital fosters cooperation and information exchange, which can engage citizens in community-level decision making, thus harnessing the strength of community that is needed for community change. Studying social capital as it

relates to environmental health in a poor urban area may suggest ways to increase the health of their environment.

Community Empowerment and the Environment

The health of a community is determined by the health of its citizens; each member of the entire population must cooperate with one another if undesirable conditions are to be improved (NIEHS, 2004). The National Association of County and City Health Officials (NACCHO) states that environmental health should focus on health interrelationships between people and their environment which will promote human health and well-being and foster a safe and healthful environment (1995).

The National Institute of Environmental Health Sciences (NIEHS) has been a leader in understanding how poverty, environmental pollution, and health interrelate. They explore strategies to communicate and educate disadvantaged minority populations about the dangers and risks of some environmental exposures. Among the projects funded by the NIEHS are the Community-Based Prevention/Intervention Research (CBPIR) Project, the Community Outreach and Education Program (COEP), and the Environmental Justice: Partnerships for Communication (NIEHS, 2004). The latter program strives to create mechanisms that empower affected communities to have a role in identifying and defining problems and risks related to environmental health and in shaping future research approaches to such problems. For example, after discovering that there was a higher than expected incidence of nose bleeds in children living in a residential neighborhood near an outside ground-glass storage unit, the community contacted the NIEHS. The information assembled by grant-supported scientists, who collected and tested the dust, was instrumental in requiring that the company store its

glass waste in a more responsible manner (NIEHS, 2004). This example illustrates how communities can utilize their social capital by working together to identify and solve their environmental health problems.

Building Social Capital with the Internet. The Internet has the potential to improve the health and wellbeing of the underserved urban poor class. It can be an invaluable tool for communication and information exchange with the power to create and enhance social capital by increasing communities' abilities to share ideas, collaborate on projects, resolve problems, respond to opportunities, and to mobilize community resources (Ludgate & Shurman, 2004; Schuler, 2004; WorldNet, 2004).

Although the numbers of citizens with home computers and Internet access continues to expand, computer usage and ownership are associated with the more affluent. According to the latest Census, 28% of family households with incomes below $25,000 own a computer, and only 19% have Internet access (U.S. Census, 2001). These statistics suggest that people of a lower socioeconomic status would not utilize the Internet even if it were available to them. However, according to a survey on low-income Internet users, of the 45% of Californians living in households with annual incomes of less than $30,000, 66% report that their online health searches have improved their health services (*E-Health e-Data: Low-Income Internet Users Search For Health Information Online*, 2003). Recognizing the many advantages the Internet can provide, *Healthy People 2010*, lists increasing home Internet access for the urban poor as one of the objectives to accomplish by the year 2010 (2000). Schuler (2004) lists several reasons why people living in poorer neighborhoods, in particular, should be interested in

utilizing the Internet for communication and exchange of information, what is termed ICTs (Information and Communication Technologies):

- ICTs can nurture the potential for people living in more deprived communities to take charge and develop their own opportunities.
- Community based projects using ICTs in innovative and imaginative ways provide one of the most effective ways to unlock the latent talent and creativity that exists in every neighborhood.
- ICT's present opportunities for community development of minority cultures and languages, which promotes social inclusion.
- By using ICT's, people living in inner city neighborhoods can overcome deprivation and isolation, and acquire new confidence and skills that they may not be able to develop otherwise.

Using the Internet for communication can also facilitate social capital. The Social Exclusion Unit (2000) revealed that the use of the Internet for communication and information exchange was positively related to three indicators of social capital; trust in others, engagement in community activities, and life satisfaction. Recently, a database of 50,000 respondents from over 48 US cities was used to determine if individuals who use the internet are more or less trustful than those who do not (Pierce & Smith, 2003). Higher levels of both social and personal trust were revealed in those that utilized the Internet.

Schuler (1996) believes that the most important aspect of virtual community networks is their immense potential for increasing participation in community affairs and empowering those in poor neighborhoods.

CHAPTER III

ANALYSIS OF DATA

The purpose of this study was to assess beliefs, attitudes, and experiences regarding neighborhood environmental health issues and ways in which individuals utilize social capital to improve environmental health. Focus group interviews were utilized to seek information from two groups in a lower socioeconomic neighborhood.

Participant Recruitment

A non-probability, convenience sample consisted of residents, at least the age of 18 who currently live in The Neighborhood in Norfolk, Virginia and who have resided there for a minimum of five years.

Focus Group I, Civic League Members

A Nursing Faculty member identified the current president of The Neighborhood's civic league, as a gatekeeper to the community. The president assisted the researchers in giving access to members of the civic league. The president invited the researchers to attend their monthly meeting and they agreed that at that time, the researchers would introduce themselves, briefly explain the study, and invite persons interested in participating in the study to stay after the meeting in order to recruit volunteers (see Appendix A). The focus group interview was then scheduled to take place at a convenient time and location for civic league members.

Focus Group II, Church Members

The researcher also recruited non-members of the civic league from the community through a neighborhood church. The gatekeeper, a Reverend, assembled a list of church members who were possible volunteer candidates. Via e-mail and verbal

communication a list of volunteers with their names, addresses, and telephone numbers was developed. The focus group interview was then scheduled to take place at a convenient time, as to not interfere with any church related activities, and a room in the church was selected.

Data Collection Procedures

At the time of recruitment, participants were informed of what to expect while participating in the focus groups. Participants were told the purpose of the interview session, topics to be discussed, how it would be conducted, and that it would be audio taped.

To increase response rate, approximately two weeks before the meeting a follow-up letter with a reminder flyer to which the participant could refer was mailed explaining the purpose and the importance of the interview, the location with directions, date, and time of the interview, and the approximate time commitment required (see Appendices C and D). Several days before the session, the researcher contacted all participants by phone to remind them of the location, date, and time.

Before the focus group session began the researcher requested that each participant complete a short anonymous demographic questionnaire (see Appendix F), which was used to develop sample profiles. All participants were encouraged to freely express their points of view and opinions without hesitation and were informed that they could terminate the interview at any time. Every effort was made to create a friendly, informal atmosphere. Using only first names as identifiers, allowing participants to leave for breaks as they felt necessary, providing light refreshments throughout the session, and small gifts and pamphlets of local numbers to address neighborhood environmental issues

accomplished this (see Appendix E). Key informants were sent a thank you letter for their assistance after data collection was completed (see Appendix G).

Data was collected to answer the following six research questions. By answering these questions, it was anticipated that elements of social capital would be recognized within the content of verbal exchange in the focus groups; elements such as trust, civic engagement, and community support.

1. What do residents believe are environmental health issues in their neighborhood?
2. What individual or group activities have occurred to address these problems?
3. What are the resident's suggestions to improve their neighborhood environmental health?
4. On whom do the resident's rely to assist them if they have an environmental health problem they feel needs to be addressed?
5. To what electronic means of communication do residents have access?
6. What elements of social capital do residents exhibit in the focus group interviews?

To establish content validity, these questions were examined and critiqued by members of the committee from Old Dominion University College of Health Sciences.

Focus group data was tape recorded and transcribed. The following criteria were used for selecting specific quotes from transcriptions. I chose the quotes which: (1) were clearly and distinctly heard from the recordings; (2) emphasized the main point of discussion; and (3) stated complete ideas and thoughts. Quotes were sorted into groups and labeled according to the themes that emerged utilizing the constant comparative method.

A second layer of analysis was applied to the data to determine the presence or absence of social capital in each group. Questions were taken or modified with permission of the World Bank and applied to the data (see request and permission Appendices H and I) from the *Instruments of the Social Capital Assessment Tool* (Krishna & Shrader, 1999).

Protection of Human Subjects. Subjects were informed that confidentiality would be preserved. Respondents' names and addresses were destroyed once the group meeting had taken place. All information that may identify them was removed from the transcript as it was transcribed. The tapes and transcript were stored in a locked filing cabinet at the researcher's residence and will be destroyed within three years. Subjects were informed that their comments would be reported in comprehensive form only and that the results of this study may be used in reports, presentations, and publications.

Potential Risks. The researcher guided the focus group discussion, encouraging participants, through interaction, to offer insights and opinions about the environmental health of their community. Although every attempt was made to explain what environmental health means, participants might mistakenly begin to talk about drugs and/or illegal activities. If this had occurred, the researcher would turn off the tape recorder, erase that section of the tape, and redirect the conversation. The questions might have made the participants uncomfortable or brought up unpleasant memories. They may have felt some invasion of their privacy, either directly or indirectly, as a result of the questions and discussion. Participants were informed of these risks and the researcher tried to reduce these risks by respecting the participant's right to refuse to

answer any questions or withdraw from the study at any time (see Focus Group Script, Appendix E).

Potential Benefits. Participants might become more aware of neighborhood environmental health issues and learn how others have dealt with problems. They may feel that by participating in the study that their information might help others understand what the public health system can do to improve neighborhood health and by offering their opinions and feelings that they may contribute to positive change in the health system. Discussing common neighborhood concerns may facilitate a sense of unity among the participants.

All perceived potential risks and benefits were presented to the Institutional Review Board to protect the human subjects and approval was granted to conduct the research (see Appendix J).

CHAPTER IV

RESULTS AND DISCUSSION

The purpose of this study was to assess beliefs, attitudes, and experiences regarding neighborhood environmental health issues and ways in which individuals utilize social capital to improve environmental health. This was accomplished by interviewing two specific groups who reside within the geographic boundaries of The Neighborhood in Norfolk, Virginia; adult members of the politically active civic league, and non-members of the civic league recruited via a local church.

Participant's Demographic Characteristics

The following descriptions of the focus group interview participants are based on their responses to the demographic questionnaires. The total N of both groups was 13 participants, 4 (31%) males and 9 (69%) females. The participants (observed) were predominately black; 9 out of 13 (69%) were of the Black race, while the rest seemed to be either Caucasian or of Hispanic origin.

Focus Group I, Civic League Members

The total N for Focus Group I, which consisted of members of the civic league, was 8 participants, 3 (38%) males and 5 (62%) females. The average age for the males and females, respectively, was 68 and 73 (see Table 1) with an overall age range of 66 to 82. Five (63%) of the participants were divorced, two were married, and one participant was never married (see Table 2).

Half (n=4) of the participants had graduated from high school, and 3 (38%) had some college education (see Table 3). In terms of employment status, seven (88%) were

retired and two were currently employed, as one came out of retirement back into the workforce (see Table 4).

All (100%) of the participants were active members of the civic league. Five (63%) were also involved with volunteer Block Security (a neighborhood watch group) and one was a *Swinging Senior*. Most, (88%) agreed that people in their community mainly looked out for their own interests and were not much concerned with the community (see Table 5).

All participants had access to telephone, radio, and television as communication devices, but only one had access to a computer (see Table 6). Two participants have used the Internet, none used it regularly, and half would use the Internet to obtain or share health information if one were made available (see Table 7).

In summary, the average age of the civic league participants was 66, most of whom were divorced. Almost all of the participants had graduated high school with several earning college credits and most were retired from employment. The majority believed that people in their neighborhood were not much concerned with its welfare even though all of the participants were actively involved in community organizations. All of the participants used and had access to telephone, radio, and television for communication, but only one had access to a computer. Though two participants had used the Internet, half (n=4) said that if a computer with Internet access were made available they would use it to obtain and share health information.

Focus Group II, Church Members

For the group recruited via a local church, the total N was five participants, one was male and the rest (80%) were females. Average ages for the males and females,

respectively, were 64 and 67 (see Table 1) with an overall age range of 58 to 77. Most were widowed (60%) with the rest married or never having been married (see Table 2).

All of the participants either had graduated from high school (80%) or had passed the General Educational Development (GED) test. The majority also had technical training, some college, or a four-year college degree (see Table 3).

In terms of employment status, most (80%) were presently employed or retired (see Table 4). All of the participants were involved in their church group. However, none reported involvement in other volunteer or community organizations. Four (80%) agreed that people in their neighborhood mainly looked out for their own interests and were not much concerned with the community (see Table 5).

All participants had access to telephone, radio, television, and computer as communication devices (see Table 6). Three (60%) have used the Internet and use it regularly, and 4 (80%) would use the Internet to obtain or share health information if one were made available (see Table 7).

In summary, the participants belonging to a local church with the average age of 70, were mostly widowed and had completed some college education. All were involved in their local church, but none was also involved in other social organizations, most felt that people in their neighborhood primarily look out for their own families, and are not much concerned with community welfare. All of the participants used and had access to general communication devices, but only three also had access to a computer that they used regularly for Internet access. However, most participants said that if a computer with Internet access were made available they would use it to obtain and share health information.

Table 1. Composition of Focus Groups: Average Age by Gender

COMPOSITION OF FOCUS GROUPS: AVERAGE AGE BY GENDER					
	Males N	**Males Average Age**	**Females N**	**Females Average Age**	**Total Average Age**
Civic League	3	68	5	73	70
Church	1	64	4	67	65
Total	4	66	9	69	67

Table 2. Composition of Focus Groups: Marital Status

COMPOSITION OF FOCUS GROUPS: MARITAL STATUS					
	Civic League Group I		**Church Group II**		**Total**
	N	**%**	**N**	**%**	**N**
Married	2	25	1	20	3
Widowed	0	0	3	60	3
Divorced	5	63	0	0	5
Separated	0	0	0	0	0
Never Married	1	12	1	20	2
Total	8		5		13

Table 3. Composition of Focus Groups: Level of Education

COMPOSITION OF FOCUS GROUPS: LEVEL OF EDUCATION									
	Civic League Group I				**Church Group II**				**Total**
	Males		**Females**		**Males**		**Females**		
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**
6-11 GRADES	0	0	1	20	0	0	0	0	1
GED	0	0	0	0	0	0	1	25	1
High school	3	100	4	80	1	100	3	75	4
Technical	0	0	0	0	0	0	1	25	0
Some college	1	33	2	40	0	0	2	50	5
2 or 4 yr. grad	0	0	0	0	1	100	1	25	2

Table 4. Composition of Focus Groups: Employment

COMPOSITION OF FOCUS GROUPS: EMPLOYMENT									
	Civic League Group I				Church Group II				Total
	Males		Females		Males		Females		
	N	%	N	%	N	%	N	%	N
Employed	0	0	2	40	1	100	3	75	6
Retired	3	100	4	80	0	0	1	25	8

Table 5. Composition of Focus Groups: Involved in Clubs or Organizations

COMPOSITION OF FOCUS GROUPS: INVOLVED IN COMMUNITY CLUBS OR ORGANIZATIONS									
	Civic League Group I				Church Group II				Total
	Males		Females		Males		Females		
	N	%	N	%	N	%	N	%	N
Involved	3	100	5	100	1	100	4	100	13
Types:									
Civic League	3	100	5	100	0	0	0	0	8
Block Security	1	33	4	80	0	0	0	0	5
Swinging Seniors	0	0	1	20	0	0	0	0	1
Church	3	100	5	100	1	100	4	100	13
Believe look out for own interests	1	100	6	75	0	0	4	100	11

Table 6. Composition of Focus Groups: Communication Device Access

COMPOSITION OF FOCUS GROUPS: COMMUNICATION DEVICE ACCESS									
	Civic League Group I				Church Group II				Total
	Males		Females		Males		Females		
	N	%	N	%	N	%	N	%	N
Telephone	3	100	5	100	1	100	2	50	11
Radio	3	100	5	100	1	100	2	50	11
Television	3	100	5	100	1	100	2	50	11
Computer	1	33	0	0	1	100	2	50	4

Table 7. Composition of Focus Groups: Internet Usage

COMPOSITION OF FOCUS GROUPS: INTERNET USAGE									
	Civic League Group I				Church Group II				Total
	Males		Females		Males		Females		
	N	%	N	%	N	%	N	%	N
Used Internet	1	33	1	20	1	100	4	100	13
Use regularly	0	0	0	0	1	100	4	100	13
Would use Internet	2	67	2	40	1	100	4	100	8

Similarities and Differences in Demographics

Both focus groups were comparable in age, the civic league group slightly older with an average age of 71, compared to 66 for the church group. However, focus group participants were much older, age 67, compared with the general population of The Neighborhood, which consists of 30% of 20 – 24 year old college students. Consequently, most of the focus group participants had been married, divorced, and/or widowed. Though the marriage rate was similar, 25% and 20% respectively, where all

marriages for the church group were either intact or broken by a death of a spouse (60%), over half of the civic league group had been divorced (63%).

The majority of both groups were of the black race, 63% and 60 % respectively, which was almost identical to the racial composition of The Neighborhood. An average of 69% of the focus group participants were of the black race compared to 65% of the general population and 31% either Caucasian or Hispanic compared to 32% of the overall population. In terms of education, the civic league had obtained less education than the church group. Though members of the civic league had attained some high school education, not all had graduated or obtained their GED, compared to the church group getting either a GED or a high school diploma. Additionally, 38% of the civic league went on to college compared to 80% of the church group having some college or had graduated from a two or four-year college. The average focus group participant in both groups had achieved significantly more education compared to the general population of The Neighborhood. Ninety-two percent of focus group participants had graduated from high school or earned a GED and over half, 54% went on to a two or four year college, compared with 69% of the average population 25 years old and older graduating high school and only 9% having a college education.

Focus Group Responses

The following criteria were established for selecting specific quotes from transcriptions. I chose the quotes which: (1) were clearly and distinctly heard from the recordings; (2) emphasized the main point of discussion; and (3) stated complete ideas and thoughts.

Question One: What environmental health problems do you see as having the most serious consequences to your neighborhood? (see Table 8).

Civic league members. The primary environmental concerns that participants discussed were trash, pests, lead, and peeling paint from dilapidated housing, drainage problems, mildew, coal dust, second-hand smoke, and noise pollution. The following quotes reflect these findings.

Trash/debris and pests:

> A lot of guys hang around the Car Wash smoking and drinking wine and beer and they just throw their trash out all across the street and that's a health hazard.
> I'm concerned about pests...
>
> There is so much trash and garbage cans are so full and overflowing, and it is a concern for me that a child may be out playing and a rat could come up and they could get bitten.
>
> You don't know what they are going to do. They [rats] are wild animals.
>
> We have problems with garbage cans especially in the summertime with big flies that come from it.
>
> ...you have grass growing up around there and then the water stagnates and turns green. Then you have problems with mosquitoes and you got kids playing by this pollution, which is a health problem.
>
> Standing at the bus stop or children playing out there, the water brings mosquitoes and other bugs.
>
> ...on one of our streets people dump their trash, old furniture and stuff like that in the ditch. Where you find rotting wood you'll find raccoons, possum, and rats, which come up into the community and into houses and then you have a health problem, so that is my concern.
>
> A square cover leading to the drain was loose with chunks of concrete lying nearby and the sidewalks are so chewed up they're almost not there.
>
> And a dead cat lying on the sidewalk for a week – you're going to have maggots and all kinds of nasty stuff around here.

Lead and peeling paint from dilapidated housing:

I'm more concerned about these old houses where the kids go, just like this little girl this winter and their eating the paint off the old houses. That lead is really bad, deteriorates their mind and everything and makes them real sick.

You have health problems with people living in dilapidated houses with peeling paint...

Drainage problems:

They have paved the road over so much that in places the curb is level with the street and can't drain when it rains and the standing water creates potholes.

There is water standing by the door.

I'm concerned about the people who park their cars on the sides of the streets and leave them set there. Then debris clogs everything...

... and when it rains you have water standing for three or four days until it dries into the earth. There isn't anywhere for the water to go and that's a health hazard.

We need drainage.

You see a lot of hazards walking -- from the washed down dirt from the railroad bridge. There needs to be a drain coming down the slope.

Mildew:

Where does mildew come from?

Dampness is often from not getting enough light.

In mine I think it comes up through the floors...

Coal dust:

The coal dust gets in your body and turns your lungs black. We're right in the middle of it. I get it at my house and makes quite a mess.

In an apartment I lived in I was complaining about it being black, there was coal dust all over everything. Where you had a can setting against the

> wall there was an outline. If you moved the can it was white where it had been sitting and black all around it. It was all over my small appliances and even my clothes closet!

Second-hand smoke:

> A lot of homeless smoke.
>
> Yes, we have problems when they sit outside.
>
> A lot of people around here smoke so what I try to do is stay away from them.

Noise pollution:

> Oh yes, trucks go by and it's very loud.
>
> Buses.
>
> Speakers go by (car boom boxes).

Church members. The primary environmental concerns that participants discussed were crowding/high density, dilapidated buildings, coal dust, noise pollution, lack of safe playgrounds, high grass that attracts mosquitoes, and problems with The University students. The following quotes reflect these findings.

Crowding/high density:

> ...and if they could, they would tear down the home and put up apartment buildings. It got to be that there were so many apartment buildings here in [The Neighborhood] that you would have a private home and maybe within a six foot space or less you would have a four family apartment building and some of them they couldn't even put in straight across, so they put them in vertical just to get them in on a space when they really truly shouldn't have.
>
> [The community] is building, although you are pinched and cramped. So what is the purpose what are they trying to do?
>
> Slum Lords, because remember the insurance person? He had the inside track besides collecting insurance he was also collecting property.

Another man did the same thing. He took a garage and turned it into a four family apartment. He just put partitions in and it was my kitchen looked into your kitchen, "Loan me a bit of salt, loan me some pepper" as [your neighbor] looked over the partition.

There is an undercover surge of persons coming in not to purchase [but to rent].

And realize they got eight families in there. Hello?

Now when we're saying people are taking advantage of this neighborhood, people *are* taking advantage. People are coming in and buying it, they're really not fixing up a lot besides putting stuff up on the outside and saying, 'Ok, it's a real pretty house' go ahead and rent it out.

Dilapidated buildings:

One of the major problems with pollution and these dilapidated buildings is when the neighborhood began to be closed in; many of the homes that were able to survive were turned into apartments. Individuals came in at the beginning of the college year looking for low rent housing. Much of the property was purchased by outside interests. They converted anything that was two-story into as many rooms as they could for rent and those people that were coming in had no respect for the neighborhood because they were there primarily just to eat and sleep and to party, not understanding that their neighbors were persons that lived here year around. The houses eventually just began to deteriorate and deteriorate.

... we still find some homes in the area, right here on the back street, they're really in bad shape so they put vinyl on them and make people believe that we are renovating, when in fact the only thing they're doing is putting some vinyl and paint. When you open them up and look in such as that one across the street, what you see is all this mold and mildew and rats and everything else brought on for that reason. So I think it's just a fake that you run in and cover 'em up with new shingles, some vinyl, and a coat of paint and sell them to some unsuspecting person.

Coal dust:

Some of the coal dust has ceased with the more modern technology that they are now using down at the coalfield. Our fathers, and our grandfathers, great grandfathers and uncles worked untold hours down at the coalfield to give us the homes that we had. Many of them died from the coal dust in their lungs. But we still have coal dust.

It's on my mailbox. Everyday, I wash it off everyday!

You see, coal dust is silent. In other words, for a long period of time even this church here, the façade of the church, and in homes further over were covered with coal dust. You could see it, but environmentally it wasn't an issue, there didn't seem to be a concern, because it didn't happen overnight, like you look up one day and all of the sudden the blackness of it struck you. Even though it has diminished to some degree today it's still floating around even with all the new construction that they are putting back there. *Norfolk Southern* still moves coal along there.

You kinda smile when you can because most everybody in [the community] had plastic chair covers. Everybody's home had plastic chair covers, and that was in part because of the coal dust...

Noise pollution:

A couple of weeks ago on 43rd street they had a big party, it was the weekend the kids came back to school and I couldn't sleep in my bedroom on 41st because they were parking all up and down 41st street, on 40th street, on Elkhorn Avenue, people walking drunk in the neighborhood. I was sitting there on my porch at 1:30 in the morning wondering what was going on. I saw the police driving by, but I didn't hear nothing being stopped. No one was saying anything.

Lack of safe playgrounds:

... now the golf course that took over the only playground from us.

And the playground that we did have, they have fields [now] for the high school football.

They diluted the neighborhood. First [The University] got some and then when they started coming this direction, and the Powhatan field was basically a neighborhood playground, [The University] took that area and made it a soccer field...

Ya, a concrete playground! There is no meaningful safe place that I'm aware of.

It's nothing but concrete!

The closest place we have for children's recreation is Larchmont Schools and Monroe schools and Madison that are within walking distance.

Madison is private property because it belongs to the Norfolk Public Schools. You could actually get trespassing charges taking your children to the basketball court. Not that you really want to take your children there, it's nothing but concrete. They have two monkey bars out there, the basketball court and a big field where the kids play football. After dark you cannot be on the property.

High grass that attracts mosquitoes:

My daughter is allergic to mosquitoes and it got to the point where the grass was this high [holds her hand up to her waist] and I called her [landlord] and said, "My daughter can't go outside if she gets bit one more time by mosquitoes and I have to take her to the emergency room." My grass got cut the next day. Then it took another six weeks before she cut it again and I said, 'excuse me my daughter is allergic to mosquitoes I need my grass cut on a regular basis.' Now they come out every three weeks, not every week like they are supposed to, or every two weeks like they said.

If I waited for my landlord to do anything the grass would be over my window.

Problems with University students:

One of things another lady was telling me about is that it is normal for her to get up Saturday mornings and have to clean her front yard because of trash everywhere ...She had a flyer from one of the fraternities in her yard.

Nobody really seems to care of the younger generation. I've come home in the evening where the people are sitting on the street [in front of my house] and you're waiting for them to move and they are looking at you like, 'What 'cha going to do?

Another problem is with the parking. I have two of the yellow cones that the street workers use and I put them in front of my door so I have a place to park. They come and take up your parking spaces in front of your own door.

Table 8. Composition of Focus Groups: Primary Environmental Concerns

PRIMARY ENVIRONMENTAL CONCERNS OF FOCUS GROUPS	
Civic League Group I	**Church Group II**
Trash	Crowding/high density
Dilapidated buildings - lead exposure	Dilapidated buildings
Drainage problems	High grass which attracts mosquitoes
Mildew	Lack of safe playgrounds
Coal dust	Coal dust
Second-hand smoke	Problems with University students
Noise pollution	Noise pollution

Question Two-a: What do you personally do to improve your neighborhood's health?

Civic league members. The majority felt that if one kept their own property up that it would set an example others would follow, but that there needed to be more assistance from the City. Even though most long-time older residents participated in taking care of their community, younger transient residents did not. The following quotes reflect these findings.

Setting an example:

> You do what you can to keep your property up, mow your yard, pick up the trash and stuff like that. People don't pick them [garbage cans] up or keep them clean. I wash my cans out.
>
> I wash mine out too.
>
> If the garbage man passed before I went to work and I noticed some of the others had gone I would pull their garbage cans up in their yard. I know there were times when I used to go all the way down 37th street and pull the garbage cans up off the street.
>
> We do pick up neighbors cans like if they are sitting out 5:00 or 6:00 in the evening.

Some people really do a good job, this lady that used to work here I'd see her kids every morning sweeping in front of her house.

I talked to a young man whose bushes were growing across the sidewalk, "Can't you cut this back or get the City to come out." "No I'm not going to cut", so I took my hedge clippers and cut it for him, but I didn't take it up, I left it for him to get it up, so he did.

We have another family who would start on one block [picking up trash] and end up way somewhere else.

If we could get everyone on the same page. Like someone walking pass you and drop paper I say, here put that in this can. I do that a lot.

Younger transient residents:

Sure they [younger people] like beautiful houses. It just doesn't stop on that side of the sidewalk, it goes to the curb. That's part of your house; you got to keep it all clean.

One of things that I see is that most of the older people care about their property and try to keep it clean, but you got the younger people moving in they don't care what the curb side or the street looks like as long as they have a passageway in and out. It's not just our community, but other community's are the same way.

City assistance:

Like the bushes here out front, the Crape Myrtle - - the City finally came and cut them, now they are coming back up again. They'll let them grow until they block our view and then there are dangerous turns in and out of the parking lot. But you keep on them all the time. They don't keep up with it.

... we asked the City awhile back and they were supposed to give us drainage, but we haven't got it...

... a dead cat lying on the sidewalk for a week, finally they came out and picked it up...

Kind of like the coal dust, things are okay for a while then go downhill and you kind of have to keep on them.

Church members. The majority kept their own property up and helped others as well. The focus of the discussion quickly became an environmental project taken on by church member volunteers. This project encompassed potential problems of a neglected older home – pests (rats, cockroaches), mildew, and coal dust. The City was credited with assisting in the project. The following quotes reflect these findings.

> We cut grass and pick up trash and try to help one another out and keep our own places up.
>
> One thing that we did last year, as a church we took on this one lady's house that was really falling apart. We actually what? Totally renovated that thing? It was an older lady that could hardly do for herself anymore and nobody really knew because she was so private and really didn't want to say anything to anybody.
>
> I still believe you can look at the residence from the outside and still be mislead. No one would ever dreamed that once you entered the inside that things were of that status, so I believe that right now, in this neighborhood, that there is a possibility that the person living there may not be able to economically keep the property up and they may do certain things on the outside to keep it hidden. I'm really praying that no one else in the neighborhood has one [a house in such a dilapidated condition] like that.
>
> There were cats in the walls; there were roaches in the walls... I've never seen so many roaches in my life and I've seen some roaches! We pulled the paneling off the wall and you couldn't see the wall because it was covered with roaches. Then you pull the carpet up and they were in the carpet and then you go into the bathroom and it had evidently had not been used as a bathroom for a *long* time! You can't visualize. You can't imagine you couldn't save the television, you couldn't save the radio – everything was just filthy. Anything you took out had some of them fellows [roaches]. So you talk about mold and mildew and pests and coal dust, that house had all that!
>
> They [roaches, rats, and other pests] started running and they were all in the grass. We had to burn all that we took out. The City gave us two big dumpsters to put everything in.

Question Two-b: Has there been any group activity to address environmental issues?

Civic league members. Three main entities were mentioned who assist residents in neighborhood environmental health, an unnamed preacher, The University, and the Norfolk Zoo. The following quotes reflect these findings.

> We have a preacher that's coming in now to help everybody who can't do it, like wash windows and help clean up.
>
> Yes, it's very nice.
>
> He does a good job.
>
> Cares about the neighborhood.
>
> The University comes out and helps us clean up the area, pick up debris and bag it up.
>
> [The University] is our... sister.
>
> They come out and do a very good job at it.
>
> The same ones do it each and every year.
>
> The Zoo's Commission does different things to help the people.

Church members. Only the civic league was mentioned as an entity that assists residents in neighborhood environmental health. The following quotes reflect these findings.

> We sometimes work with the civic league on issues.
>
> Most of the mom & pop businesses are gone and those that are still here don't have the money or influence to do anything. The big corporations don't care.
>
> What businesses?

Question three: What are your suggestions to improve your neighborhood's environmental health?

Civic league members. The need for more assistance from the City was the primary topic. A suggestion was made to have more forums where citizens and City officials from various departments, i.e., Public Health, Public Works, and business, e.g., *Norfolk Southern*, could openly discuss concerns and solutions. In addition, it was felt that local business including The University and individual citizens should take more responsibility in the community. The following quotes reflect these findings.

Assistance from the City:

> Sometimes I wonder what the upper levels of the government think. If we could get this area cleaned up it would be a very nice place to live in.
>
> People [local government] see the structural problems, but seem to lose interest in taking care of them.
>
> If we could put on more of these open sessions like this and bring in City officials from the various departments; the environmental, health department, public works and others, we could tell them what needs to be done.
>
> We do know we need better drainage and better street sweeping. When the sweeper comes here once a month there shouldn't be a car parked in the street. That way you could keep the grass and debris from being on the walkway. Post signs as a notice that the sweeper is coming by.
>
> Have them cut the vacant lots on a monthly basis.
>
> When a house is closed down, boarded up and empty, make sure the lot is clean to keep the health problems down. If the house is burnt out, why should it stay up for four or five months?
>
> Well you know I'm listening to [participant] talking and the City has a budget like we have a budget and right now they have not completed their budget to decide what to do. They have to get their money straightened out and it takes money for everything. You don't have enough people to tell them what they need.

Taking responsibility:

Individuals:

> One of things that I see, a lot of people will talk about what the community needs, but when it comes time to talk about these issues when the City has open sessions for the public to come down and voice their concerns, you only see the same people that are bringing up the issues what is wrong with the community while the others only talk amongst themselves.
>
> Some people need to be pushed to the wall before they will participate.
>
> Don't worry about those people. After you do the best you can, that's all you can do. I don't let them worry me. I tell them and if they pay me no mind, I call the authorities then they make them move.

Business:

> I feel the businesses could do more. There is maybe one or two that help out. The others don't care. I feel if the businesses would get more involved in what's going on in this community it would be better. It's not like it used to be over here.
> This community used to be a family community and it's not what you would call *family* anymore. [The University] has grown in size enormously over the years and that added a lot of people that only temporarily live here. A thousand people make a difference.
>
> Well [The University] has come a long ways and [the community] has come a long ways because of [The University].
>
> Yes, they are *part* of the community now. So they contributed to positive and negative.

Church members. Reminiscing about the past and how The Neighborhood used to be, the participants realized that the community would never regain what it had lost and were concerned, but hopeful that it could once again be a "family neighborhood". Praying was mentioned several times as a means for a solution. The following quotes reflect these findings

One of the things that I have seen in this neighborhood is that it is coming together. Slowly, but surely it is coming together. When I hear the old residents saying how [The neighborhood] used to be, it's not like that anymore. If the community was to get back together like it used to be and take pride in the community it might be able to get back the way it used to be. Maybe with the new people coming in, the new development, people taking pride in their possessions and their community. Then maybe it could get back that way.

I love [The Neighborhood]. It was everybody cared for each other. It was a neighborhood where everybody knew your name, knew your mother's and father's name. If you got out of line you had to answer to... everybody. They'd tell you, "I'm going to call your mother and father and let them know how you acted," so we had to stay in line. We were just all family here and I'm so glad to see it coming back, but there are a few things that aren't nice, but I'm praying to God to change that 'cause I know he will.

I've lived here all my life and have seen a lot of changes, a lot of changes. We had families, lovely families, anything that I needed according to the work I was doing they pitched in and helped, which I'm not seeing it now in the younger group coming in. If their children did something wrong, we had a center, a recreation center, all I had to do was call the family and they'd call the child to the phone and say, "bring it on home, you don't know how to behave." I've lived on 39th street for 49 years, but before that I began to enjoy [The Neighborhood]. A lot of folks I went to [elementary] school that lived in [The Neighborhood]. We were friends then, we are friends now. A lot of them have gone on and this new generation coming up, I don't know. They're acting like, 'I have overcome' but they're really just getting in to what needs to be done. They don't want you to say anything to the children. We've got kids hanging out on the corners all hours of the night that should be home, doing everything. They don't do it at home; they go to someone else's house. We have a lot of kids hanging out on the street and I really think something needs to be done about it.

I found such a tremendous group of individuals [in The Neighborhood]. One of the things that disturbed me most was that the area really changed when [The University] chose to expand and it destroyed a very unique neighborhood. To some degree it was a good idea for some owners, there were a lot of individuals that rented. It will always be [The Neighborhood] by name, but it will never be the way it was forty years ago.

> [The neighborhood] was a wonderful place to grow up in. But, in every community things change. There are a lot of young children now, what I see today is a tragedy, God is out of the picture, no more prayer... I have a question about the stores in the neighborhood, about the paraphernalia that they sell. You can't go in another neighborhood and find those things sold, you find them sold here. When there are murders and shootings here in [The Neighborhood], 40th street, 42nd street, Hampton Blvd. You don't hear it on the news. When there are shootings on 38th [street] or Colley Avenue it's on the news.

Question Four: Whom do you rely on to assist you with environmental neighborhood health problems?

Civic league members. Most members of the civic league had been to classes presented by the police department to learn whom to contact for assistance with environmental and other health problems. Members felt that the City Government was accessible and responded to their concerns. The following quotes reflect these findings

> A lot of us have been to classes on who to contact. Monday evening a group of us were at the Police Operations Center to learn who to call when we need them.
>
> ...when I contact them they put me in touch with someone who knows more about the problem.
>
> You have to be polite and have patience and you have to put yourself in their position and then you can get more help.
>
> I have never had a problem in getting someone from the City to come out and do what I asked them to do, or to come and be a part of our programs and things like that. If you heard me talking earlier this evening, I had no more than sent a letter, when they were on the phone telling me that they would be glad to help me.

Church members. Since the pastor of the church formerly worked for the City, members seemed confident about whom to call for assistance with environmental health issues. Additionally, in the past, members had formulated a group to express their concerns to government. The following quotes reflect these findings

> We know who to call.
>
> [consensus of agreement].
>
> Our new pastor worked for the City and he knows how the City Government works, so he's made a big difference.
>
> We have made fine progress because when [The University] made that they were taking all the homes in [The Neighborhood], we formulated a group and went to the general assembly. They were taking homes in this area, some people left who didn't have money. We hardly had money to pay a deposit on the house and rent, so a busload of us went to Richmond and had them incorporate fair housing, 'If you want my house your going to have to pay me fair market price' and they heard us. That slowed [The University] from coming in and grabbing property and people selling their property from little to nothing.

Summary of focus group responses

When identifying environmental problems that had the most serious consequences in The Neighborhood, several primary topics were agreed upon. Both groups identified dilapidated housing, coal dust, and noise pollution as concerns within The Neighborhood. Other matters addressed by the civic league group were trash, pests, lead, and peeling paint resulting from dilapidated buildings, drainage problems, mildew, and second-hand smoke. Although trash was mentioned as a threat to environmental health along with the imminent pests, church members were preoccupied with problems resulting from overcrowding and high density of the area, which resulted in the lack of safe playgrounds for their children as well as "slum lords" and transient renters who neglect the properties.

Steps taken by individual participants in both groups to improve their neighborhood's health was to first take care of their own property and then to help others in the community by doing such things as mowing neighbor's yards, picking up trash, bringing up the garbage cans from the curb etc. It was the hope and expectation that once

civic league members set an example, then others in the neighborhood would follow suit. They also expressed a need for more assistance from the City. When asked if there had been any group activity to address environmental issues, participant responses varied greatly. The civic league mentioned a local preacher, The University, and the Norfolk Zoo, but failed to mention any activity taken on by the group itself. The concentration of the church group quickly became a charitable environmental project taken on by church member volunteers for another needy member. Interestingly, the only outside entity mentioned that they sometimes worked with on environmental issues was the civic league, yet the researcher was told that the City had assisted in a cleanup project without being asked.

Specific suggestions were made by the civic league members to improve their neighborhood's environmental health. The need for more assistance from the City was the primary topic. A suggestion was made to have more forums where citizens and City officials from various departments, i.e., Public Health, Public Works, and business, e.g., *Norfolk Southern*, could openly discuss concerns and solutions. In addition, it was felt that local business should take more responsibility in the community. Church members seemed to feel that, "big corporations don't care" and did not offer any tangible ideas on how to improve their neighborhood. Reminiscing about the past and the way things used to be some subtle suggestions in which the target community could once again be a "family neighborhood"was to"take pride in the community, and bring prayer and God back into the teachings of the community's children.

Members of both groups seemed confident regarding whom to contact for assistance with neighborhood environmental health issues. This, because civic league

members had instruction presented by the local police as well as previous experience and church members received guidance from their pastor who had worked in local government.

In addition to the formal questions asked, there appeared to be themes brought out during the focus group discussions. While the civic league considered The University the target community's "sister", the church group seemed to think that The University contributed to many of The Neighborhood's environmental problems, stating that, "the area really changed when [The University] chose to expand and it destroyed a very unique neighborhood." In addition, the church group was concerned that the renovations that are seemingly being conducted within the neighborhood are "just a fake" that in fact, the houses are really "reallyin bad shape", and that the vinyl and paint is used as a cover up to make homes more appealing to "sell them to some unsuspecting person".

Social Capital Demonstrated

Social capital is difficult, if not impossible to measure directly. Therefore, for empirical[1] purposes the use of proxy indicators[2] is necessary. In order to provide evidence that social capital was demonstrated by participants, the following questions were taken verbatim or modified with permission of the World Bank and applied to the data (see request and permission Appendices H and I) from the *Instruments of the Social Capital Assessment Tool* (Krishna & Shrader, 1999). The impact of social capital is manifested through trust and cooperation, improved exchange of information, higher participation and collective action (Grootaert & Van Bastelaer, 2002).

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[1] Based upon observation or data, not on a theory.
[2] Indirect measures of a target.

1. Trust and Cooperation

a. Do participants seem to trust one another?

In observing the dynamics, both groups seemed to know one another well within their group and had worked and cooperated with one another to solve problems.

b. Do participants seem to trust local government entities to assist them with environmental health problems?

The civic league group seemed to trust as well as rely on governmental agencies to assist them with environmental health issues and problems. Members felt that the city government was accessible and responded to their concerns and most members had taken advantage of classes offered by the City to learn whom to contact for assistance with environmental and other health problems. However, the civic league did not have much faith that they would perform regular duties needed to keep the community environmentally healthy. The City had informed the civic league that drainage would be put in, but to date it had not been and therefore members felt the City needs to be consistently prodded. Additionally, the City's solutions to the community's environmental problems may be inadequate. For example, the road was paved over so much that in places the curb is level with the street and cannot drain. As a possible solution, it was suggested that there be more meetings with government entities where community members could voice their concerns and discuss ideas. At least one member of the focus group was empathetic recognizing that the City had not yet assessed their budget and decided where to allocate funds.

Even though members of the church group had success in the past when they spoke to the General Assembly for enactment of fair market housing, they seemed suspicious and distrusting of local government. This could be in part due to their unsuccessful attempt in closing an overcrowded housing unit, because of favoritism in their opinion. There also may be incidences of ignoring problems as when police were aware of a noisy celebration coinciding with a new University year, but chose not to stop it. Members expressed knowledge of whom to contact for assistance in local government, but preferred to at times work with the civic league on issues. Subsequently, when taking on a charitable project, the group did not ask for assistance from the City, though once word got out the City donated dumpsters to the project without being asked.

c. Did the participants agree or disagree that people in their community mainly look out for their own families and are not much concerned with community welfare? (see Questionnaire, Appendix F).

Both groups agreed for the most part, 88% of the civic league and 80% of the church group, that their neighborhood mainly looks out for their own families and are not much concerned with community as a whole. The civic league expressed that the younger generation, for the most part, do not care about the community as much as the older generation. Despite these statistics, the civic league did recognize that some members of the community who are not members of the civic league genuinely seem to care about their neighborhood and participate in keeping it clean as well as involving and teaching their children these habits.

The church group also had misgivings about the community and echoed the sentiments that most of the younger members of the community, especially transients were not concerned about their or other's property.

2. Communication

a. What communication devices do the participants have access to, e.g., telephone, radio, television, and/or computer?

b. Have participants ever used the Internet?

c. If participants have used the Internet, do they use it regularly?

d. If a computer with Internet access were made available to participants, would they use it to obtain and/or share health information?

All of the participants from both groups used and had access to telephone, radio, and television for communication. While church members utilized the Internet regularly, civic league members clearly had less access to computers and exposure to the Internet (see Table 9). All of the church members declared that they would use the Internet for information and even though only two civic league members had used the Internet, half said that if a computer with Internet access were made available they would use it to obtain and share health information.

Table 9. Demonstrated Social Capital of Focus Groups - Communication

DEMONSTRATED SOCIAL CAPITAL: COMMUNICATION					
	Civic League I		Church Group II		Total
	N	%	N	%	%
Telephone	8	100	5	100	100
Radio	8	100	5	100	100
Television	8	100	5	100	100
Have access to computer	1	13	3	60	31
Used Internet	2	25	5	100	54
Use Internet regularly	0	0	5	100	38
Would use Internet for formation	4	50	5	100	69

3. Community Support

a. Are participants currently involved in community clubs or organizations? (see Questionnaire, Appendix F).

All participants of the civic league were not only members, but belonged to various churches, five (63%) were also involved with volunteer block security (a neighborhood watch group) and one was in the *Swinging Seniors*.

b. Have participants joined together with others in the neighborhood to address a need or problem?

There were several projects that the civic league addressed such as working together with The University to clean up their neighborhood during The University's annual *Community Care Day* and collaborating with the Norfolk Zoo. The projects taken on by the church group, which were facilitated by their pastor, appeared to be church oriented to the exclusion of others and did not involve other entities.

c. Was the initiative successful?

Since the civic league did not address a specific need or problem, other than joining The University to pick up trash from The Neighborhood this question cannot be fully answered. However, The University has had a successful partnership with the civic league in conducting *Community Care Day* for three years. From speaking with the members, the researcher understood that the charity project taken on by the church group was successful.

d. How would the participants rate the spirit of participation in their neighborhood?

Both the civic league group and church group felt that the older citizens who had lived in the community most of their lives had a tendency to keep participating in the welfare of the community as they had done for years, but it was very difficult to involve the younger people and that most of the local business either couldn't help financially or chose not to.

e. How much influence do the participants seem to think they have in making their neighborhood a better place to live?

The civic league seemed to believe that they could exert influence over others in their community by setting an example. They also recognized that this method might not always be enough and that some people in the community may need more convincing. However, if setting an example and pushing to make changes did not work, at least one member would not let that deter them and stated that she would call the authorities if needed. Additionally, the civic league group actively sought ways in which they could make their neighborhood a better place to live. Not only had they attended classes on whom to contact, but appeared confident that they had influence

in getting the local government to assist them. The researchers were looked upon, as well, as a means of environmental improvement and were invited to return to address a larger group, so they could voice their concerns and have their neighborhood environmental issues recognized.

Though seemingly not as strongly convinced that they had influence in making their neighborhood a better place to live out side of the church, the church group seemed to prefer to deal with them individually and approached citizens in a slightly more forceful manner. They also felt they were more influential in numbers rather than individuals.

f. What are the main actions that participants felt could be taken to improve environmental conditions in the community?

Ideas varied greatly between focus groups. The civic league felt that the City, local business, and individual citizens should take more responsibility in the community. A suggestion was made to have more forums where citizens, City officials from various departments, and local business, could openly discuss concerns and solutions. In the spirit of cooperation, members also felt that if the City involved the citizens more that environmental maintenance could be more productive. For example, posting signs as a notice that the sweeper is coming by, so citizens could clear the way.

The church group was more concerned about the younger citizens. Though no concrete solutions were mentioned, the members felt that if pride could be reinstated in the community then maybe it might be able to get back the way it used to be and that praying would help.

Table 10. Demonstrated Social Capital of Focus Groups - Summary

	Civic League I	Church Group II
Trust and Cooperation within group	P	P
Trust and Cooperation outside of group	P	LP
Communication	P	P
Community Support	P	NC

P = Present
LP = Less Present
A = Absent
N = Not clear

CHAPTER V

CONCLUSIONS

In this qualitative study, the beliefs and attitudes of the community's role in neighborhood environmental health were assessed along with ways in which social capital can assist in civic engagement involving citizens to identify and solve their environmental health problems. The study was accomplished by comparing a convenience sample of two specific groups who reside within the geographic boundaries of The Neighborhood in Norfolk, Virginia: members of the politically active civic league, and members from a local church. A qualitative method, the focus group interview was used for data collection. A demographic questionnaire was used to collect information on each participant. Transcriptions of tape-recorded interviews were categorized and systematically coded and data was analyzed using the constant comparative method[3]; commonalities and differences between the two focus groups were identified. Then the World Bank's Instruments of the Social Capital Assessment Tool was applied to the data to identify the presence or absence of Social Capital.

Both focus groups seemed to have a good awareness and were able to identify their neighborhood's environmental health problems. However, Civic League members took more active individual roles in suggesting possible solutions while the Church group seemed to take a less individualized response and acted primarily as a group lead by their pastor's requests. The fact that the civic league members belonged to more community clubs and organizations than the church group may have contributed to their being

[3] The information obtained through interviews is constantly compared to emerging themes as more of an encompassing theory.

involved with more environmental projects. This higher participation and collective action manifested itself as the civic league group actively sought ways in which they could make their neighborhood a better place to live. This pronounced social club and organizational activity exhibited by the civic league may have been in part due to that most (88%) were retired. This fact may have contributed to members seeking social contact and being able to devote more time to social groups compared with church members who are mostly employed (80%) and belonging to no other social group other than the church.

The trust that is integral to social capital continued outward for the civic league group since they seemed to trust as well as rely on governmental agencies to assist them with environmental health issues and problems. However, evidence of social capital was contained as members of the church group seemed more likely to mainly rely on their own group, occasionally on the Civic League and had a more distant relationship with the government. Both groups agreed that most members of the community mainly look out for their own interests and not the interests as the neighborhood as a whole.

Both groups were amicable to improved exchange of health information and utilized basic services such as telephone, radio, and television for communication and even though not all have access to the Internet, the entire church group and half of the civic league would use it if it were available for health information. This fact reinforces one of *Healthy People 2010* goals to increase home Internet access for the urban poor as one of the objectives to accomplish by the year 2010 (see *Virtual community networks*).

As explained, social capital is evidenced through trust and cooperation, improved exchange of information, higher participation, and collective action. Based on the analysis

of the data, both the civic league and church focus groups demonstrated a heightened level of social capital, which seemed to echo their awareness of The Neighborhood's environmental health problems.

Future Research

This study originally set out to gather feelings and opinions from the general population of The Neighborhood. Due to sampling methods, both groups were already active in the community. Individuals who were willing to attend the focus group interviews may have been different from others in the community who would not have shown up. Because of participation, one would expect social capital to be higher in both focus groups than in the general population of The Neighborhood. It is important to understand that each focus group in this study had a designated leader, the Civic League Group's president and the Church Group's pastor. The leader of a group can have a great influence on how and why a group will act. Interviewing other community members who had no connections to social groups might provide different information in terms of the effects of social capital.

Members of the focus groups were not representative in age and education of typical citizens of the target area. According to Census 2000, the majority of adult citizens, 50%, are within the 20 to 24 age group and only 5% are between the ages of 65 and 74 as were most of the focus group participants. The fact that only elderly people participated in the focus groups may be attributed to the younger community members either being too busy, working, or both. Previous generations may have a different concept what "community" is. This closely resembles Putnam's (2000) belief that there

is a growing decline of social capital and community involvement due to the modernization and resulting fragmentation of America.

All focus group participants had graduated from high school compared with 69% of the population and many had gone on to attain college degrees, whereas only 9% of the population has done so. A sample taken from 20 to 24 year olds with less educational achievement may yield different results. It would be important that future research seek information from a more diverse sample.

The members of the church focus group may also not have been representative of the total church population. They may have been more prominent in the church since during the focus group interview, half of the volunteers (the original count was ten) left due to a private emergency meeting conducted by the pastor. Interviewing two or more random samples of church members might yield different results.

Based on this study, it is apparent that social capital can be an asset to one's environmental health. Social capital can assist in civic engagement involving citizens to identify and solve their environmental health problems. An understanding of why some groups exhibit more social capital than others is important to improving the public health system and interventions designed to promote health must integrate these essential factors for a healthy neighborhood. Furthermore, the recognition that social and physical factors work together to create a healthy environment will enhance understanding of health inequalities and advancement of environmental justice. Social capital remains a theory that should be further researched in its contribution to environmental health.

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Appendix A. Focus Group Introduction and Invitation

On May 17, 2005 at the invitation of Ms. Harvey, president of The Neighborhood's civic league, the principle researcher stood in front of the members and delivered the following script:

"Hello my name is Lorraine Dillon. I am a graduate student at Old Dominion University (ODU) in the Community and Environmental Health program. Ms. Harvey was gracious enough to invite me to talk with you tonight so I can ask you to participate in a research study involving the collection of information in the form of a discussion group. The purpose of this research project is to examine your beliefs, attitudes, and experiences regarding your neighborhood environmental health issues. For example, unsafe conditions, dilapidated buildings, a safe place to play for your children and the like.

If you agree, then your participation will last for approximately one and one half hour or as long as you would like to discuss this subject. The discussion will be audio taped. Taping the session will substitute for taking notes and leaves me to freely moderate the focus group. It will also be co-moderated by Dr. Clare Houseman who is the Chair of the school of Community & Environmental Health at ODU.

In order to participate, there is criteria that must be met - you should be no younger than 18 years of age, currently reside in the community and have lived in the neighborhood at least five years.

I want your decision about participating in this study to be absolutely voluntary. Yet I recognize that your participation may pose some inconvenience, so as appreciation for your participation, light refreshments will be served.

Reasonable steps will be taken to keep private information, such as any health history that you may accidentally divulge, confidential. The interview tapes will also be stored in a locked filing cabinet at my residence prior to its processing. When the tapes are transcribed, any identifying information will be removed and the tapes and other written documentation will be destroyed in 3 years. The results of this study may be used in reports, presentations, and publications; but I will report all results as a group and will not identify you.

Even if you say YES now, you are free to say NO later, and walk away or withdraw from the study at any time. I'll pass this around [held up a tablet], so you can write your contact information – again, this is completely confidential. I just need this information in order to get a hold of you and confirm your participation for the next meeting.

Thank you SO much. Are there any questions?" [The researcher's phone number was requested and wrote down on the tablet. As there were no further questions, the tablet was passed to the nearest person with a pen and it went around the room.]

Appendix B. Target Community's Demographic Information

TARGET COMMUNITY, UNIVERSITY #25
CENSUS TRACT DATA FROM CENSUS 2000

POPULATION TOTAL	3,320

RACIAL COMPOSITION		
	N	%
White Alone	967	29.1
Black Alone	2,160	65.1
American Indian & Alaskan Native Alone	14	0.4
Asian Alone	65	2.0
Native Hawaiian & Other Pacific Islander Alone	14	0.4
Other Race Alone	32	1.0
More than one Race	68	2.0
Hispanic or Latino	86	2.6

AGE BREAKDOWNS		
	N	%
5 to 19 (children)	1,294	39
20 to 24	1,007	30.3
25 to 34	315	9.5
35 to 44	261	7.9
45 to 54	181	5.5
55 to 59	57	1.7
60 to 64	41	1.2
65 to 74	93	2.8
75 to 84	57	1.7
85 and up	14	0.4

EDUCATIONAL ATTAINMENT		
	N	%
Population 25 Years and Over	1,108	
High School Graduate (Or Higher)	760	68.6
College Degree (Or Higher)	104	9.4

LABOR FORCE, UNEMPLOYMENT AND ARMED FORCES 2000		
	N	%
Total persons 16 years and over	2,918	
Persons in the labor force	1,870	
Civilian labor force	1,749	
Unemployed	316	18.1
Armed Forces	121	6.5

CIVILIAN OCCUPATIONS OF NORFOLK RESIDENTS 2000	
	N
Total	1,433
Management, professional, and related	195
Service occupations	379
Sales and office occupations	577
Farming, fishing, and forestry	0
Construction, extraction, and maintenance	130
Production, transportation, and material moving	152

INDIVIDUALS BELOW POVERTY 1989 AND 1999		
YEAR	N	%
1989	1691	55.4
1999	1518	55.4

MEDIAN HOUSEHOLD INCOME 1989 AND 1999		
YEAR	AMOUNT	
1989	$13,923	Adjusted $18,713
1999	$20,284	Change 8.4%

FAMILIES BELOW POVERTY 1989 AND 1999		
	N	%
1989	190	40.7
1999	131	26.9

MEDIAN FAMILY INCOME 1989 AND 1999		
YEAR	AMOUNT	
1989	$12,064	Adjusted $16,214
1999	$25,795	Change 59.14%

PER CAPITA INCOME 1989 AND 1999		
YEAR	AMOUNT	
1989	$5,412	Adjusted $7.274
1999	$7,102	Change -2.4%

HOUSING UNITS BY YEAR STRUCTURE BUILT (Median year built 1961)		
	N	%
Total Units	1,104	100
After 1989	126	11.4
1980 to 1989	140	12.7
1970 to 1979	127	11.5
1960 to 1969	186	16.9
1840 to 1959	392	35.5
Before 1939	133	12

HOUSING UNITS AND TENURE 2000		
	N	%
Total	1,024	
Owner Occupied	220	24.9
Renter Occupied	665	75.1
Vacant	139	13.6

HOUSING VALUE 1990 TO 2000	
	AMOUNT
1990 Median Value	$45,200
2000 Median Value	$63,900
Percent Change	41.4%

Appendix C. Focus Group Confirmation Letter

[Name]
[Address]
[City, State, Zip]

[Date]

Dear [Name],

Thank you for agreeing to participate in our focus group and for sharing your opinions on the environmental health of your community and your suggestions for its improvement. Your participation is important because we will be submitting the findings to local groups and displaying them at National Health and civic league meetings. The focus group meeting will be held on [date], from [time] p.m., at [location]. Light refreshments will be served.

Please arrive around [earlier time] p.m. to register, as we will begin the focus group promptly at [official start time] p.m. Enclosed you will find directions by car and public transportation to [meeting site]. Please confirm by [date of confirmation] if you are able to attend. We can be reached at (757) 810-0042 or e-mailed at ldill003@odu.edu.

If you have any questions, feel free to contact us.

We look forward to seeing you.

Sincerely,

Lorraine A. Dillon, Graduate Student
Clare Houseman, PhD, RN CS
School of Community & Environmental Health
Old Dominion University
Norfolk, VA 23529

Appendix D. Focus Group Flyer (included with letter)

Focus Group Meeting

[When]

[Where]

[Time]

Light refreshments will be served 

See you there!

Appendix E. Focus Group Script

Script for Focus Group

- Arrange furniture for focus group.
- Set up tape recorders & mikes and test them.
- Set up refreshments.
- Set out pencils, questionnaire, and nametags.
- Greet and chat with people as they come in.
- Offer refreshments.
- Encourage them to fill out questionnaire and forms while they wait.
- Draw room map and seating chart.

Opening Section - *Welcome*:
Thank you for coming and taking time for today's focus group and for filling out the questionnaire. My name is Lorraine Dillon and this is Dr. Clare Houseman, who will assist in conducting the focus group today. Clare is the Chair and Director of Community Health Professions at Old Dominion University, my mentor and friend.

First, I want to explain what a focus group is, why we are doing this focus group and what we hope to learn. A focus group is a controlled discussion that gathers detailed information about a certain topic. We are here to learn from you – you are the experts – we really want your thoughts, feelings, opinions, experiences and attitudes about your neighborhood's environmental health. I want you to understand that we won't be talking about personal health problems today, such as high blood pressure, diabetes, or violent or illegal activities, but about the health of your neighborhood, what you see and are affected by daily, such as dilapidated buildings, unsafe conditions, pollution and the like. I plan to share my findings with local groups and at professional meetings so that they may be aware of your concerns and ideas.

The tape recorder is here to allow us to tape the discussion so that we won't miss any important things that you will say. Everything you say is strictly confidential – your real names will not be used in any report and while we're not using last names, I think it would be a good idea not to discuss what is said today outside the group. Please try to

speak one at a time so that we can all hear what is being said and so that we'll be able to follow the conversation on the tape. We hope everyone will take part in the discussion, but you don't have to answer any question that you don't want to and you can leave the group at any time. You are also free to withdraw from the study at any time.

***Icebreaker*:**

Let's relax and get to know one another a little. To get acquainted, let's go around the room to introduce yourselves by first name only, tell us how long you have lived in this community and what you like about the neighborhood. Then we'll go around the table and give each one of you a chance to talk. Are there any questions? (Gesture to someone to start and continue until all have participated).

Question Section:

That was fun! Now, for the next set of questions, we won't go around the table. You may ask questions or volunteer your ideas at any time. My first question is: (Use moderator prompts of environmental health issues with example illustrations of dilapidated buildings, mold, and lead paint, continue until all questions are asked. If participants deviate from environmental issues, redirect).

1. What environmental health problems do you see as having the most serious consequences to your neighborhood?
2. What do you personally do to improve your neighborhood's health? Have there been any group activities to address these issues?
3. What are your suggestions to improve your neighborhood's environmental health?
4. Who do you rely on to assist you with environmental neighborhood health problems?

Closing Section – *Thank You*:

Our time is about up. You've all been very helpful and we've learned a lot. Is there anything else someone would like to say or ask? I'll have a summary of your discussion ready in about a month; if you would like a copy just let me know.

Thank you all so much. You've been great!

(Pass out small parting "thank you" gifts and pamphlets of local numbers to address neighborhood environmental issues).

Appendix F. Demographic Questionnaire

To keep your information confidential, we ask you not to write your name on this questionnaire

PLEASE REPLY FOR EACH OF THE FOLLOWING:

1. GENDER: Male _____ Female _____

2. BIRTH YEAR: _____

3 MARITAL STATUS:

Married _____

Widowed _____

Divorced _____

Separated _____

Never Married _____

4. EDUCATION (Check all that apply):

Highest Grade Completed _____

GED _____

High School Graduate _____

Technical Training _____

Some College _____

Community or Four Year College Graduate _____

5. EMPLOYMENT: Presently employed: YES _____ NO _____

Retired: YES _____ NO _____

6. Are you currently involved in community clubs or organizations? YES _____ NO _____

   If yes, please list: _____

   _____

7. Do you agree or disagree that people in your community mainly look out for their own families and are not much concerned with community welfare.

   Agree _____ Disagree _____

8. What communication devices to you have access to?

   Telephone YES _____ NO _____

   Radio YES _____ NO _____

   Television YES _____ NO _____

   Computer YES _____ NO _____

9. Have you ever used the Internet? YES _____ NO _____

10. Do you use the Internet regularly? YES _____ NO _____

11. If a computer with Internet access were made available would you use it to obtain and/or share health information? YES _____ NO _____

Appendix G. Key Informant Thank You Letter

[Name]
[Address]
[City, State, Zip]

[Date]

Dear [Name of Key Informant or Director],

I appreciate your assistance in compiling a list of names of participants for my focus group interview on the neighborhood environmental health beliefs and needs of the Community. The participants provided me with data that gave interesting insights into their neighborhood health beliefs. This is important because I will be sharing my findings with local groups and displaying them at National Health and civic league meetings.

I could not have completed my study without your helpful suggestions and assistance. It has been a pleasure working with you. Thank you again for your time and effort.

Sincerely,

Lorraine A. Dillon, Graduate Student
Clare Houseman, PhD, RN CS
School of Community & Environmental Health
Old Dominion University
Norfolk, VA 23529

Appendix H. Permission to Copy or Reprint Request

Dear Sirs:

I am a student at Old Dominion University in Virginia and am writing my Master's Thesis, Environmental Justice and the Role of Social Capital in an Underserved Urban Community. I have selected a portion of the community that I would like to survey using your Social Capital Assessment Tools (SOCAT) (verbatim or modified to fit my study). I am writing to request your permission to use SOCAT, All 5 – The Community Profile and Asset Mapping Interview Guide, Community Questionnaire, Household Questionnaire, Organizational Profile Interview Guide, and the Organizational Profile Score sheet, as I am not sure what questions I would like to use as of yet. I would also like your permission to use the information obtained from the Annotated Questionnaire, The Field Manual, and The Analytical Manual.

I appreciate your consideration and know that the utilization of your tools will greatly enhance my Thesis. If you have questions or would like to discuss this matter further, please contact me at ldill003@odu.edu or call, 757-810-0042, please feel free to leave a detailed message.

Respectively yours,

Lorraine Dillon

136 Barn Swallow Ridge
Yorktown, VA 23692

Appendix I. Permission to Copy or Reprint

To: "LORRAINE A DILLON" <ldill003@odu.edu
To: "pubrights" <pubrights@worldbank.org>
Subject: permission to copy or reprint
05/13/2004 07:50

Lorraine Dillon

Dear Lorraine Dillon,

Permission requested in your email below is hereby granted free of charge.
Please acknowledge the World Bank as the source.

Thank you for your interest in World Bank publications.

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Fax: 202-522-2422
Tel: 202-458-1673
Email: amohamed1@worldbank.org

Appendix: J. Institutional Review Board Approval Letter

From: David Swain/PE/EDUC/ODU 05/12/2005 06:06 PM

To: Clare Houseman/DO/HS/ODU@ODU

cc: Lorraine Dillon/ldill003@odu.edu

Subject: IRB #05-043

Clare Houseman,
Your proposal, "Environment" #05-043, is now fully approved as exempt. Research may begin. I will send you a copy of the Notification of Exempt Research in campus mail.

David P. Swain, PhD, FACSM
Professor, Exercise Science Dept.
Chair, Institutional Review Board
Old Dominion University
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VITA

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Education and Certification:

Master of Science in Community Health
Health Care Management, Old Dominion University (05/2006)

Bachelor of Science in Health Science
Old Dominion University (05/2001)

Certified Health Education Specialist (CHES), 10/2004

Current Professional Role:

Health Education Program Manager
Spectrum Healthcare / Langley Air Force Base, Hampton, Virginia (Dec/2005)

Accreditations and Licensure:

Practical Nurse, Commonwealth of Virginia Department of Health Professions, 1992

Dental Assitant, American Dental Association, 1987

Presentations:

Oral presentation - Environmental Justice: Recognizing The Problem To Forge A Solution, Session #4307.0, American Public Health Association (APHA) 133rd Annual Meeting and Exposition (12/2005)

Poster Award third place finalist - Environment Section Student Poster Session, #3231.0, APHA 133rd Annual Meeting and Exposition (12/2005)