

The Cost and Consequence of Community Violence
The Center for Public Safety Initiatives

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Indirect Effects of Community Violence on Health-related Issues

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Overview

Obesity is on the rise and has been linked to over 100,000 premature deaths in the United States annually (Stafford et al., 2007); Loukaitou-Sideris, (2006) puts the figure at closer to 200,000 deaths. Over 30% of Americans fall under the World Health Organization's criteria for obesity (Black & Macinko, 2008). Obesity leads to a number of health problems, including diabetes, stroke, coronary heart disease, and some cancers (Black & Macinko, 2008; Stafford et al., 2007).

Stafford and colleagues (2007, p. 1884) explain obesity as the following, "obesity arises as an imbalance between energy intake and expenditure and as such a sedentary lifestyle and poor nutrition are key modifiable determinants of obesity development." As of recent, research in the health field related to obesity has been expanding to address the neighborhood-level factors associated with obesity, such as: the threat of violence, access to fresh vegetables and fruit, and availability of local parks (Black & Macinko, 2008).

There are noted racial disparities in rates of obesity in the U.S. as African-Americans have higher rates of obesity than their white counterparts (Black & Macinko, 2008; Lumeng, Appugliese, Cabral, Bradley, & Zuckerman, 2006). In Monroe County, 26

percent of the children are overweight or obese and in the City of Rochester, 40 percent of children are overweight or obese according to a recent study conducted by the Golisano Children's Hospital at Strong (Robert Wood Johnson Foundation, 2009).

Neighborhood crime has been shown to affect whether someone chooses to walk or use another mode of transportation (Black & Macinko, 2008). Consequently, neighborhoods with higher rates of crime and poverty are at increased risk of poor health than those neighborhoods with lower rates of crime and poverty (Ross & Mirowsky, 2001).

Safety can be thought of in two ways. One way considers crime and whether it is safe to walk to the particular activity, safe to play in the yard, safe to go outside of home, etc. A second view of safety is one which focuses on the play area. This refers to identified adult supervision (paid or volunteer), sign-in sheets, age restrictions, safety of equipment, etc. For this particular research, safety from crime and how fears and perceptions of crime play a role is what has been addressed here.

Link

Recent literature has shown that there is likely a link between environmental and social factors and health (Farley et al., 2007; Glass, Rassmussenn, & Schwartz, 2007; Lumeng, Appugliese, Cabral, Bradley, & Zuckerman, 2006; Stafford et al., 2007). Neighborhood social disorder has been linked to a number of negative outcomes, including obesity (Stafford et al., 2007). Neighborhood disorder includes vacant lots, drug activity, prostitution, and other socially deviant activities.

The link between the environment and obesity demonstrates the need for other sectors to become involved in reducing obesity (Stafford et al., 2007). The public health field is an especially important sector to get involved in this effort (Stafford et al., 2007).

Bowdoin (2008) commented on the members of the Expert Committee on Assessment, Prevention, and Treatment of Child and Adolescent Overweight and Obesity, which includes participants from the American Academy of Pediatrics, for their efforts on addressing obesity. Bowdoin notes that, “the recommendations fail to acknowledge the impact of poverty, neighborhood violence, and family stress on children’s dietary habits and physical activity levels” (p. 833). Bowdoin continues to state that the Expert Committee should advocate for increased funding and support for local public safety initiatives. Demonstrating that even with a substantial amount of research supporting the link to violent neighborhoods with negative health outcomes, there is still a lack of putting research into practice.

Previous studies on obesity and its link to perceived fear have shown that higher thoughts of fear are related to less physical activity and obesity (Farley et al., 2007; Lumeng, Appugliese, Cabral, Bradley, & Zuckerman, 2006; Stafford et al., 2007). People who feel less safe have reported walking less than those who feel safer (Parkes & Kearns, 2006). Further, studies have found that when parents rate the neighborhood as less safe, rates of childhood obesity are higher than in neighborhoods where parents rate the neighborhood as more safe (Black & Macinko, 2008; Lumeng, Appugliese, Cabral, Bradley, &

Zuckerman, 2006; Stafford et al., 2007). According to Ross (1993), people having fear of their neighborhood often leads to limited outdoor physical activity by the residents.

Some researchers have linked the “allostatic load” theory to obesity (Stafford et al., 2007). Glass, Rasmussen, and Schwartz (2007) inferred from their study that psychosocial hazards may lead people to an abnormal hypothalamic-pituitary-adrenal (HPA) response. The HPA response assists in controlling the body’s response to stress and it also aids in digestion. This abnormal response can affect how food is processed in the body. Thus, psychosocial stress, which is noticeably higher in urban crime-ridden neighborhoods with concentrated poverty, can increase body weight due to the ailing HPA response.

Studies

Some researchers have drawn on the “broken windows” theory to capture the social disorder that is often times prevalent in neighborhoods with higher rates of obesity (Stafford et al., 2007). Research has shown that violence impacts social disorder and that it can often lead to fear (Stafford et al., 2007). Stafford et al. (2007) found that neighborhood disorder, in their study of 5,384 participants in the UK, is positively related to overall and central obesity. They go on to discuss how the results are consistent with other studies that have found associations between environmental and social factors and health outcomes (Stafford et al., 2007; Griffin, Wilson, Wilcox, Buck & Ainsworth, 2008). Fear is important to capture in these studies because fear will often play a role in

whether someone walks for extracurricular enjoyment versus to get from point A to point B.

Glass, Rasmussen, and Schwartz (2007) looked at 1140 men and women aged 50-70 in 65 specifically community defined neighborhoods in Baltimore in studying obesity and the impacts of neighborhoods on the disease. The study measured income, education level, obesity, diet, and psychosocial hazards (i.e. vacant houses, single parent families, violent crimes, and number of liquor stores). The results found that those living in neighborhoods with higher psychosocial hazards had higher rates of obesity. After controlling for income, smoking and alcohol consumption, diet, and vigorous physical activity, neighborhoods with higher psychosocial hazards had a 52%-96% increase in persons with obesity. This shows that neighborhood characteristics (i.e. high crime) have an impact on rates of obesity. Therefore, food intake and physical activity may not be the only moderators in obesity. Further, "These data are consistent with the theory that prolonged exposure to environments that evoke vigilance, threat, and alarm, the a priori hypothesis, may be an important and modifiable contributor to the epidemic of obesity" (p. 460). Glass, Rasmussen and Schwartz go on to explain that it is important, then, to develop environmental strategies to reduce obesity, as well as proposing possible community-level interventions to obtain the desired outcome.

Lumeng, Appugliese, Cabral, Bradley, & Zuckerman (2006) looked at parental perceived safety and rates of obesity in children at ages 4, 5 and 7. Seven hundred sixty-eight children across ten U.S. cities were included in the study and the results found that

parents of overweight children in first grade perceived their neighborhood as significantly less safe than those who had children who were not overweight. It was found that only 4% of children with parents who perceived their neighborhood as having the highest perceived safety were obese. However, 17% of the children who were overweight in the group perceiving their neighborhood as the least safe were obese (Lumeng, Appugliese, Cabral, Bradley, & Zuckerman, 2006).

Boslaugh, Luke, Brownson, Naleid & Kreuter (2004) conducted focus groups with 27 African American residents living in a high crime neighborhood in South Carolina. The participants discussed safety as a primary concern regarding physical activity. A number of participants discussed concerns with drug trafficking, prostitution, muggings, and homicide. Further, participants felt that it was not that they did not want to walk, but that they could not, due to the lack of safety in the neighborhood. Thus, Boslaugh and colleagues (2004) found that there is a link between perceived neighborhood characteristics, such as neighborhood safety, and the viewed opportunities for physical activity by the community members.

Farley and colleagues (2007) conducted a study in New Orleans that looked at children in two similar low-income, minority neighborhoods and if their physical activity increased with the presence of a safe place to play. The intervention group was provided with the neighborhood school park for an extended number of hours during the week as well as a park attendant. The control group continued to have their neighborhood school park operate at its regular hours (locked any time school is not in session). The premise of this

study was that safety was defined as a paid adult watching and monitoring the children at all times as well as the presence and use of a sign-in sheet for the children. The results found that there was an 84% increase in physical activity in the intervention area among the children. The children were also surveyed in both schools regarding sedentary and physical activities. Over the course of the 2-year study, reductions were found in the intervention group in TV watching and video game playing.

Loukaitou-Sideris (2006) discussed in her research the built environment and its link to crime. Researchers in the planning fields have recently discussed the importance of space and how the buildings, roads, sidewalks, etc. can have a deterrent or promoting affect on crime. Environment crime is important to health because a growing body of research is linking poor health outcomes to urban neighborhoods, with high crime as an important factor. There is research that show specific building and neighborhood planning can deter and reduce crime while reducing fear. Things such as: fixing broken windows, eliminating neighbors that encourage antisocial behavior, installing lighting, and situating buildings and windows so that they face the street are some ways to improve the design and facilitate feelings of safety among the residents.

Other health impacts

Wright (2006) explains that research has shown that asthma disproportionately impacts children in poverty and non-white children living in urban areas. Research has also shown that those living in low socioeconomic, minority, segregated neighborhoods have a much higher health burden than those not living in those neighborhoods. Asthma is of

particular interest because irritants, pollutants, and indoor allergens which are more prevalent in urban areas that are socially toxic may be related to an increase in psychosocial stress among the residents. Further, life stress manifests differently in the lives of the urban population which may lead to disparities in health. Chronic social stress is a significant factor for these communities. As income inequality has continued to increase, the communities with higher disparities in material goods see a rise in crime and violence across the nation. Those who live in a violent environment are often around a chronic impression of fear and the perception that violence could occur at any time. Researchers are beginning to look at this constant state of fear and its impact on mental health and behavior in children.

People living in urban areas have a higher incidence of a number of respiratory illnesses, including asthma (Cagney & Browning, 2004). African Americans are 4-6 times more likely to die from asthma than whites (Cagney & Browning, 2004). In recent years, research has begun to look at the contributions of poverty on asthma. Cagney and Browning (2004) wanted to find out what in the lives of the disadvantaged living in urban areas plays a role in the development of asthma. They looked the collective efficacy as well as social and physical disorder in specific Chicago neighborhoods and their possible impact on asthma. The results of the 3,268 of the subjects living in 338 neighborhoods found no individual-level poverty effect. However, collective efficacy was found to be a significant and protective against breathing problems. Additionally, disorder and concentrated poverty had the most significant impact on breathing problems. The authors

go on to discuss the importance of accessible, local, high-quality health services for urban populations.

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