THE IMPACT OF STRESSFUL NEIGHBORHOODS ON THE MENTAL HEALTH OF EMERGING ADOLESCENTS

by

VICKI WINSTEAD

CASEY BORCH, COMMITTEE CHAIR
SUSAN DAVIES
MARK LAGORY

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VICKI WINSTEAD
MEDICAL SOCIOLOGY

ABSTRACT

Life within the ecological context of a disadvantaged and disordered neighborhood is characterized by daily exposure to chronic stressors which are often outside the realm of control of the individual and have negative consequences for the mental health of its residents and in particular, adolescents. Using data from Healthy Passages, a multilevel, multi-method longitudinal study which examines health trajectories of adolescents over a ten year period, this paper examines whether daily exposure to a threatening environment in disadvantaged and disordered neighborhoods lead to depression in young people who are on the verge of adolescence. The current study tested the relationships between neighborhood disadvantage (measured by percentage of single female-led households) perceived neighborhood disorder (measured by how safe or threatened a child feels in his or her neighborhood), and depressive symptomology. Regression analyses indicated that the relationship of neighborhood disadvantage to preadolescent depression is mediated by perceived neighborhood disorder after controlling for maternal depression and individual disadvantage.
DEDICATION

To my husband, Mark, thank you for all the encouragement, for always making my life easier, your unconditional love and support and just listening when I am frustrated. To my parents, sons, daughters-in-law and my friends, thank you for encouraging words and helping me to always have a little fun in the midst of all the hard work.
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CHAPTER ONE
INTRODUCTION

Life within the ecological context of a disadvantaged and disordered neighborhood is characterized by daily exposure to chronic stressors which are often outside the realm of control of the individual and have negative consequences for the mental health of its residents and in particular, adolescents (Hill, Ross and Angel 2005; Natsuki et al 2007). Characterized by factors such as poverty, low numbers of homeowners, and single parent (female) and relatively less educated residents, a disadvantaged neighborhood results in “collective or environmental disadvantages” which exceed personal, social, or economic disadvantage (Ross and Mirowsky 2001:258).

As children enter adolescence, and thus puberty, physiological changes coupled with exposure to an increasingly complicated environment produce new stressors. These stressors are both personal and a result of the physical and social environment living environment which can put adolescents at risk for poor mental health outcomes (Aneshensel and Sucoff 1996). For the younger residents of disadvantaged neighborhoods, the resulting forms of disorder, both social and physical can initiate feelings of having no control over their own lives as well as trepidation not only of daily life, but also of the future (Xue et al 2005). Both adults and children are affected by social and physical disorder and experience poor mental health as a result (Ross 2000; Xue et al 2005; Hill et al 2005).
Perceptions related to the signs of social and physical disorder associated with neighborhood disadvantage are particularly salient for adolescents as they are beginning the process of engaging the larger world outside of home and family (Natsuki et al 2007). Neighborhood disadvantage has been associated with mental health outcomes in the form of externalizing behaviors particularly in adolescents. However Xue et al (2005) cite the lack of studies which examine the effects of neighborhood context on internalizing disorders. In addition, Franzini et al (2009) assert that while there have been numerous studies on the neighborhood environment and adults, little has been done to examine the relationship of youth to neighborhood social environment. Previous studies that have examined the effect of stressful neighborhoods on children have found an association between feeling safe and depressive symptoms (Latkin and Curry 2003). However, most research has focused more on physical environment with less attention given to the social environment. Adolescents who reside in areas of collective disadvantage experience the physical and social manifestations of neighborhood disadvantage in neighborhood disorder.

Physical disorder in a neighborhood consists of visual cues such as graffiti, abandoned buildings or homes, and litter. Social disorder describes a lack of social control and social organization which results in criminal activity, public drug and/or alcohol use, apathy and conflict (Ross and Mirowsky 2001; Ross 2000). These neighborhoods are often located in areas with close proximity to noxious environments with poor air quality, factories, and high levels of noise, and stressors to which residents are exposed daily (Ross 2000). Disadvantaged and disordered neighborhood characteristics create a climate of instability due to social disorganization and a lack of
social cohesion which adds to the stress burden of residents. Social disorganization and the resulting lack of social cohesion and collective efficacy inherent in these neighborhoods, produces chronic or ongoing stressors for its residents (Ross 2000). Acute stress is produced by characteristics of social disorder which may result in violent crime or conflictive situations (Latkin and Curry 2003). The impact of these types of stressors is lessened in a more stable neighborhood where greater social organization and cohesion are present within the community (Boardman 2004). Latkin and Curry (2003:34), in explaining the association between low socioeconomic status, residence and stress, refer to the resulting higher levels of stress as “a social distribution of stress.”

Within this framework of neighborhood disadvantage and disorder, a discussion of the spatial attributes of neighborhoods is foundational for understanding the effects of neighborhood disadvantage on the mental health of the residents. High spatial concentrations of poverty often associated with ethnic minorities tend to be found in more urban areas and has been referred to as the “ghettoization of poverty (Fitzpatrick et al. 2005). In their discussion of how place impacts the health of disadvantaged individuals, Fitzpatrick and LaGory (2000:135) note, “this process of isolating poverty and concentrating risk, hazard, and protection produces place-based health effects.” Browning, Cagney and Wen (2003:1221) found that much of the research on neighborhoods tends to ignore the spatial context in which discussions of neighborhood effects take place. Often surrounded by similar concentration of poverty, this “spatial clustering” can result in a collective “spatial penalty” due to lack of resources that can further exacerbate the problems inherent in poverty (Browning et al. 2003:1222). Disadvantaged neighborhoods have the potential to become these places of isolation
where social and physical disorder creates spaces of risk for the residents. As Ross (2000) points out, “disadvantaged neighborhoods are where disadvantaged people live.”

These are environments of disintegrating physical structures, noise, lack of parental control over youth in the community, visual evidence of substance abuse, and often located near toxic industries. Cumulative stress leads to poor mental health outcomes for the individual residents. (Hill et al 2005). Youth, in particular, who live in areas of concentrated disadvantage and disorder and, who face constant exposure to these types of stressors are at a much higher risk for poor mental health outcomes (Dubow et al 1997). While studies have examined the impact of the neighborhood context on the mental health of adults, few studies have examined the link between neighborhood structural processes and internalizing disorders in adolescents (Natsuki et al 2007).

Research Questions

The purpose of this paper is to answer the following questions: Does daily exposure to a threatening environment in disadvantaged and disordered neighborhoods lead to depression in young people who are on the verge of adolescence? If so, does the lack of social organization within disadvantaged neighborhoods facilitate this relationship? The next section will review previous research relevant to the neighborhood context, the inherent stressors in disadvantaged and disordered neighborhoods and their relationship to adolescent depression.
CHAPTER TWO
NEIGHBORHOOD DISADVANTAGE AND DISORDER

The environment of poor neighborhoods can be considered one of many “social influences” on health. In contrast to sole consideration of only individual level characteristics as determinants of health, Diez-Roux (2001) points to an increasing discourse of how ecology is associated with risk. Neighborhood context has become an area of study of “how does where you live affect your health?” Historically, the importance of place as an influence on physical and mental health has been recognized by social scientists. However, research in this area was intermittent until the 1980s with most previous research devoted to examining determinants of health at the individual level rather than examining social influences on health that are place-based such as neighborhood processes (Diez-Rouz 2001). As Fitzpatrick and LaGory (2000:109) propose, uneven spatial distribution of risk and hazards to well-being is a result of the role of place which is “socially and culturally structured” Those who have the greatest financial resources live in areas where their exposure to hazards and risks is minimized while those with limited financial resources have fewer choices and thus live in areas which are least desirable because of higher crime rates and concentrated poverty (Fitzpatrick and LaGory 2010).
The Neighborhood Context

As noted above, disadvantaged residents have limited choices as well as limited resources to cope with disadvantage (Fitzpatrick and LaGory 2010). Higher spatial concentrations of single mother households, residents with lower levels of education, higher rates of public assistance, lower rates of home ownership and higher rates of poverty are found within these neighborhoods. (Hill et al 2005; Ross and Mirowsky 2001). These characteristics reflect the coercive nature of the structure of which they are a product. Residents of disadvantaged neighborhoods may feel a sense of abandonment by the broader society because of lack of resources such as parks or other recreational areas, good schools, and important services which may lead residents to “abandon conventional, orderly behavior” (Ross and Mirowsky 2001). The neighborhoods are characterized by evidences of social and physical disorder which mediate the effects of neighborhood disadvantage (Hill et al 2005). Ross (2000) found that the effects of neighborhood disadvantage on adult depression are actually connected by neighborhood disorder. Disorder, characterized by a lack of social control, leads to an inability of the community to stop negative behaviors so that there is further perpetuation of both social and physical disorder (Sampson 2003).

Because residents experience daily disorder, and a constancy of threat, social resources such as the support of others is unavailable because people do not believe they can trust the individuals who live around them (Sampson, Raudenbush and Earls 1997). There is a perception that they are potential victims because they live in the midst of evidence that others have little respect for the living environment of the neighborhood. Order, characterized by the presence of civility of individuals to one another, signs that
the neighborhood residents obey the law and physical signs of order combine to create a perception that their neighbor can be trusted. The lack of these attributes signifies the opposite (Ross et al 2001).

Residents of disadvantaged neighborhoods have poor mental health mediated by the types of disorder inherent in these neighborhoods and the chronic stressors associated with daily living amid social and physical disorder (Ross 2000). Aneshensel and Sucoff (1996) found an inverse relationship between the average SES of the neighborhood and the adolescent’s perception of ambient hazards. Orderly neighborhoods are safe, without obvious signs of vandalism or unkempt property and with signs of respect for the law. This leads to feelings of security for residents and a mutual respect for other residents in the community. These social and physical “cues” are evidence of social control within a community (Sampson et al 1997; Ross and Mirowsky 2001). Echeverria et al (2008) use the term “neighborhood problems” as a means of describing both social and physical disorganization within a community. It is within this broader context of neighborhood problems that they find a facilitation of poor mental health outcomes due to chronic stressors.

Individuals who live daily in a threatening environment, are often confronted with situations where they feel threatened. They may perceive that they are left on their own with no structure in place to protect them (Hill Ross and Angel 2005). In addition, people surrounded by poor living conditions are often segregated into urban areas where they may experience a sense of powerlessness which has emotional implications. Residents of disadvantaged neighborhoods may feel a sense of abandonment by the broader society because of lack of resources such as parks or other recreational areas,
good schools, and important services which may lead residents to adopt behaviors in opposition to normative mainstream behaviors (Ross and Mirowsky 2001). Ross (2000) found that adult depression is a result of the chronic stress associated with poverty and economic disadvantage as well as perception of disorder. Ross (2000:178) explains that the ongoing stressors, intrinsic to a neighborhood that is physically and socially deteriorated, such as criminal activity, danger, and other obvious signs of low social control are “associated with depression such as feeling rundown, tired hopeless and sad.”

These predominately female -led households also create feelings of tension and unease as a reaction to perceptions of young people out of control with no apparent means of controlling them. Pearlin (1989) also asserts that the chronic aspect of factors such as discrimination which, because of previous experience as well as anticipation of future experiences may cause mental distress. Discrimination because of place as well as race/ethnicity creates feelings of low levels of integration into society which cause, what Pearlin (1989) described as psychic distress.

Adolescents in the Neighborhood

Parents are the initial intermediaries between the child and his or her environment and largely control what the child does daily. Early childhood experience with the neighborhood is initially filtered through the parents so that neighborhood influences on the development of the younger child occur primarily through parental processes (Kohen et al. 2008) If the parents feel unsafe or are reactive to stressors, this may very well influence the way their children perceive their living environment. However, as children
enter adolescence, the structure of the neighborhood is associated with the experiential life of the adolescent, so that how an adolescent experiences that neighborhood, whether they feel safe, or experience it as cohesive, has an effect on the mental health of adolescent residents. Adolescents who live in stable, ordered neighborhoods are less likely to perceive ambient hazards but more likely to perceive higher levels of cohesion. As adolescents perceive greater threats in their neighborhood, they are more likely to experience negative mental health outcomes (Aneshensel and Sucoff 1996).

Residents, including adolescents, living within a segregated structure may feel detached from societal norms where conventional values such as diligence in employment or pursuing educational goals are rejected as not being beneficial because of the seeming hopelessness of their circumstance and replaced with toward short term gratification. They may tend toward a preoccupation of the present since they can see little value in the pursuit of accepted norms with which they could escape their present situation (Browning et al 2003; Ingoldsby et al 2006).

Social disorganization as a product of social and physical disorder may also affect parenting behaviors by lack of regulatory resources and possibly as a result of the parent’s exposure to neighborhood stressors which can have a negative effect on their mental and emotional health. This type of environment allows for the breakdown of social control and social order in which adults and adolescents may engage in greater levels of aggression so that this type of deviant behavior may be perceived as normative by other adolescents exacerbating the neighborhood problems further (Ingoldsby et al 2006).
Neighborhood disadvantage exists in settings with limited access to monetary as well as social resources that are crucial to the maintenance of social order. This has an effect on youth who see limited opportunity for success and so are less prone to finish their secondary education, which in turn promotes involvement of activities which may be illegal and self destructive which perpetuates the cycle of disorder (Dubow 1997). Alienation from the broader society may be experienced in disadvantaged areas with inferior educational institutions and recreational opportunities. Xue et al (2005) found numerous poor mental health outcomes that were associated with neighborhood disadvantage over and above individual level and family characteristics, and noted similar findings in the literature on neighborhood disadvantage and adult depression.

For residents, there is little access to resources to buffer the effects of stressors produced by living in these disadvantaged neighborhoods. Low levels of social organization and collective efficacy in these neighborhoods are found as well as few resources and limited opportunities. Both neighborhood collective efficacy and organizational participation are associated with better mental health for adolescents, after accounting for neighborhood concentrated disadvantage (Xue 2005).

When there is little trust or feelings of common goals between residents, a neighborhood has low social control because there is no collective effort toward shared goals (Morenoff et al 2001). Social disorganization may also affect parenting behaviors by lack of regulatory resources and possibly as a result of the parent’s exposure to neighborhood stressors which can have a negative effect on their mental and emotional health. Single mothers, in particular, may feel they have no control over their children and help from others may be limited because neighbors may have a similar familial
situation so that there are fewer social ties and less support (Sampson and Groves 1989; Sampson et al 1997). As social interaction and contacts increase, parents may be more willing to let children participate in social activities particularly if social networks among parents are formed indicative of a willingness to watch out for each other’s children (Franzini et al 2009).

As noted earlier, previous studies that have examined the effect of stressful neighborhoods on children have found an association between feeling safe and depressive symptoms. In these studies, neighborhood disadvantage/disorder is linked to violence and crime, illicit drug use and mental health outcomes such as depression, anxiety, oppositional defiant disorder and conduct disorder (Ross and Mirowsky 2001; Boardman et al 2000; Aneshensel and Sucoff 1996). Acute stress as well as chronic stress is produced by characteristics of social disorder which may result in violent crime or conflictive situations. Latkin and Curry (2003), in explaining the association between low socioeconomic status, residence and stress, agree with Aneshensel (1992) in her suggestion that it is important to identify stressors that are linked to social disorganization because chronic stressors have a more profound effect on depression than those which have a shorter duration.

When individuals feel isolated and hopeless they become depressed. Pearlin (1989) asserts that depression is an indication of living with chronic stress such as the stress of feeling unsafe (Ross and Mirowsky 2009).. Most people experience some form of depression at some point in their lifetime as a reaction to some sort of stress they are experiencing. However in neighborhoods characterized by disorder where social control is low, these conditions produce chronic stressors which facilitate ongoing psychological
distress. Children in particular, are more likely to associate signs of disorder with risks to themselves which promotes an increase in psychological distress. This has the potential to establish poor mental health trajectories throughout the life course (Xue et al 2005). Stressors in this context are constants rather than occasional occurrences which has serious implications for psychological health. The effects of long term exposure have been shown to impair the body’s defenses both physically and psychologically (Hill et al. 2005).

Social Organization in the Neighborhood

Neighborhoods in which social organization is strong are empowered to maintain social control by individual investment in the quality of the neighborhood. Interaction in formal and informal organizations provides the necessary social cohesion necessary for the minimization of physical and social disorder (Wilson 1996). The role of collective efficacy in social organization is emphasized and defined as the combination of social cohesion and shared expectations for actions that benefit the community as a necessary intervening social process relevant to health outcomes (Browning and Cagney 2002). When residents have social networks, responsibilities and obligations, and perceptions of social control, the youth are better supervised. The individual household is transcended because adults in the community are in a better position to hold not only their children, but also the children of neighbors accountable for their actions (Wilson 1996). Social organization is discussed further in the theory section of this document.
Structural Components of Stress in Disadvantaged Neighborhoods

Daily exposure to life under these conditions puts those exposed in positions of living with chronic stress. Responses to stress have been studied almost exclusively in the context of individual characteristics, but recent research has found that neighborhood context can structure the variety and intensity of stressors that residents encounter (Boardman 2004). In Leonard Pearlin’s stress process model, the beginning level is social inequality indicated by low socioeconomic status (Pearlin et al 2005). Disadvantaged neighborhoods by definition are comprised of individuals and family units with low SES. They are especially vulnerable to the effects of secondary stressors because of limited resources and limited access to outside resources (Pearlin et al. 2005). Pearlin (1989) considers sources of stratification such as race/ethnicity, social and economic class, age and gender as primary factors of stress production when they are unequally distributed. Previous studies have indicated strong associations between low socioeconomic status and life stressors.

Stress in the Neighborhood

Structural components of life within a disadvantaged neighborhood are sources of chronic stress. Pearlin (1989) recognized the impact of structural disadvantages and its impact on mental health. He emphasizes that stress must be studied as the outcome of connected experiences rather than just random experiences; they are the product of structural systems. He adds,

"...the sociological study of stressors can reveal the connections between social organizations and the organization of lives…the antecedents of stress need to be
understood in terms of process, whereby broad structured and institutional forces, constellation of primary and secondary stressors, and widely shared values converge over time to affect people’s well-being” (Pearlin1989:249).

Stress associated with residence in a neighborhood where a majority of the households are single and female coupled with perceptions of social disorder contribute to hopelessness which manifests in depression (Ross 2000). Life events that are primary sources of stress such as the loss of a loved one to a criminal act, job loss, or being a victim of crime occur at much higher rates in poor urban neighborhoods. Residents of impoverished communities, including the young, are more likely to experience stressful life events such as death of a loved one, loss of employment or being a victim of crime. Residents in these areas of “multi-problems” are also much more likely to perceive localized risks/dangers such as violence and crime, toxic substances, substandard and deteriorating housing and graffiti.

Social strain may also be increased due to negative encounters or social interaction with others in the neighborhood as well as discriminatory experiences (Boardman 2004; Dubow et al 1997). Discrimination by place of residence may create daily stress as people may have trouble finding employment or may be subject to harassment by police (Boardman et al. 2001). In addition, people in disadvantaged neighborhoods who face daily displays of public disorder and who may even live in a state of fear live with chronic stressors. Feelings of depression are an outcome of this environment for adults (Ross 2000). For children and adolescents, the effects of stress are also cumulative and affect behavioral and emotional adjustment (Dubow et al 1997).
The place of neighborhood can be considered as a social determinant of health both physical and mental (Diez-Roux 2001). The impact of community level stressors which are ongoing impede a child’s coping mechanisms and may expose the child to violent acts, maltreatment, drug use, as well as living in sub-standard housing. Recent studies of inner city children and adolescents have found that exposure to stress in the form of major life events or the chronic stress of neighborhood disadvantage is correlated with aggression and behavior problems (Dubow et al 1997).

The ability of individuals to cope with stress may be reduced because of compromised individual psychological resources (Boardman et al. 2001). Single mothers who comprise the majority of households in disadvantaged neighborhoods may feel they have no control over their children and help from others may be limited because neighbors may have a similar familial situation so that there are fewer social ties and less support (Sampson and Groves 1989). Wilson (1996) argues that long term, concentrated unemployment in urban or poor communities undermines the psychological resource of mastery. As a result of unemployment, they lose a crucial “spatial and temporal anchor for day to day life” (Boardman et al. 2001:153; Wilson 1996). This results in a perceived loss of control over daily activities which are necessary for psychological well-being (Boardman et al. 2001). Additionally, unawareness of the impact of their neighborhood context may have multiple adverse reactions as residents may blame their own personal failings for their mental health and those outside the neighborhood context may blame the “victim” for personal failings or attribute their mental health problems to race or ethnicity.
Social resources that could buffer the effects of stressors of neighborhood disadvantage and disorder for youth may be inadequate or non-existent for areas which are socially and physically segregated. Boardman (2004) discusses the moderating effect of social resources in alleviation of stress. Consistent and frequent social interaction with others has the potential to give individuals sense of cohesiveness to their life as well as access to resources for future stress (Boardman 2004).

Social Strain and Neighborhood Context

Social strain, an ongoing aspect of stress, also plays a role in the culture of disadvantaged neighborhoods taking the form of harassment and discrimination. Because a higher incidence of crime is associated with these neighborhoods, police may, through racial profiling or just harassment, be a source of social strain. Job opportunities may also be lost when applicants from disadvantaged neighborhood apply for a job.

Negative or discriminatory associations may be made by the appearance of the physical address on the job application form. People from these neighborhoods may be perceived as “less reliable and productive.” (Boardman et al 2001). Sampson and Raudenbush (2004: 320), propose that “implicit biases” that are cognitively held “below the radar” are linked to how negative stereotypes of certain minorities are perpetuated by factors such as place of residence. These biases are filtered through the lens of historical inequality, which, even when an individual personally rejects bigotry toward African-Americans, there remains the perception of disorder in a spatially and racially segregated area. This form of bias produces chronic stressors which impact individuals in these communities, but there are also stressors which impact communities as a whole which Boardman et al. (2001) refer to as collective stressors.
These may take the form of “prejudice, lack of community attention or resources” and a collective sense of discrimination which impacts the community over and above the impact on the individual. Boardman et al. (2001:) also describe collective stress in the form of lack of coping resources such as grocery stores, recreational facilities and green areas but too many liquor and convenience stores which are often overpriced. These types of stressors, again, contribute to a lack of social cohesion and reflect the problems of social disorganization. Numerous studies have been done which show that above and beyond individual disadvantage there are structural factors which transcend the individual that affect the collective health. How does living with chronic stress negatively affect the health of residents of disadvantaged neighborhoods?

People living in these areas also experience what Leonard Pearlin (1989) calls ambient stressors; stressors that transcend or are found in the spectrum of their various life roles such as fear associated with personal or familial safety or an inability to access needed services or resources which are confounded by the proximity of residence. As Pearlin et al (2005) note, residents of these neighborhoods are more likely to experience a greater number of ongoing stressors or ambient stressors in which residents are confronted with the daily impediments of finding transportation or feeling unsafe. When residents are confronted daily with social disorder in forms such as criminal activity, incivility, and perceived threat of violence, the eventual result may be heightened feelings of depression and anxiety (Hill et al 2005). These neighborhoods may intensify the impact of individual stressors and impede the creation of social bonds which increases the potential for depression (Cutrona et al 2006). The next section will present a
theoretical framework which discusses social disorganization, collective efficacy and spatial structure.
CHAPTER THREE
THEORETICAL FRAMEWORK

Social Disorganization Theory

Morenoff et al. (1999:519) succinctly defines social disorganization as “the inability of a community structure to realize the common values of its residents and to maintain effective social controls.” This may, according to Wilson (1996) be a direct result of close social ties among the residents. There may be a preponderance of interconnectedness among the residents but little connection with the broader society. There may be a social connection between neighbors but the tools needed for social organization extend beyond just close friendships (Morenoff et al 1999). This lack of external ties or access to external resources leads residents to believe that they have little control over the environment. Control over social disorder becomes problematic because residents may believe that they have no power to effect change. In addition to the noxious environment that characterizes physical disorder, lack of social control may create the perceived threat of harm real or imagined (Ross and Mirowsky 2001).

Neighborhoods with high concentrations of poverty which are spatially isolated from resources exhibit the characteristics of social disorganization in which social control is lost or greatly diminished (Wilson 1996). Social disorganization theory, which was developed to explain the way that crime rates varied across neighborhoods, is effective in explaining a range of structural dimensions of neighborhoods that impact health. As a
spatially based explanation of social problems, it has in recent years had resurgence in the literature examining structural neighborhood variables (Browning and Cagney 2002). Wilson (1996:20) defines social organization as “the extent to which the residents of a neighborhood are able to maintain effective social control and realize their common goals.” He further describes three dimensions: 1) the size and viability of social networks, 2.) the extent of collective supervision that the residents exercise and the personal responsibility they assume in addressing neighborhood problems, 3.) and the rate of resident participation in voluntary and formal organizations. Wilson (1996) directs attention to the interaction of structural features of neighborhoods and their impact on well-being. He proposes a two stage theory of neighborhood decline which leads to loss of social control which in turn creates an environment in which residents are exposed to problem behaviors which have deleterious effects on health. These problems flourish in an environment in which there is concentrated economic disadvantage and limited mobility of residents.

Both Wilson (1996) and Robert Sampson (2001) reject the conceptualization of social organization as a network of relationships or strong ties within a neighborhood. Wilson (1996), in fact, argues that these strong social ties may be detrimental to the well-being of the community and may impede the process of social control as well as limiting access to resources from ties outside of the community or neighborhood. While social interaction and integration may be high among residents, they may believe that they have little control over problems within their surroundings. Strong ties which are often geographically limited, may impede their ability to act collectively because they may offend close friends or relatives. When strong ties are spatially concentrated and thus
geographically constrained, the potential for positive collective action toward community problems is inhibited because weak ties (those ties that are more informal with less contact) are limited (Sampson 2008). Social organization is comprised of the communal institutions that function as the "control mechanisms" of the community as well as the extent to which a community is able to realize and articulate the commonality of the values of the residents especially with regard to finding solutions to problems (Kohen et al 2008).

Neighborhoods in which social organization is strong are empowered to maintain social control by individual investment in the quality of the neighborhood. It is only within neighborhoods where residents have a mutual trust with strong social cohesion that willingness to engage in collective action for the maintenance of order is achieved for the common good. Interactions in formal and informal organizations provide the necessary social cohesion to minimize physical and social disorder (Wilson 1996). When residents have social networks, responsibilities and obligations, and perceptions of social control, the youth are better supervised. The individual household is transcended because adults in the community are in a better position to hold not only their children, but also the children of neighbors accountable for their actions (Wilson 1996). Sampson and Groves (1989:777) refers to this as a “collective supervision that the community directs toward local problems.”

Collective Efficacy

Sampson, Raudenbush and Earls (1997) reference this collective effort as a collective efficacy which is task specific rather than a universal application of the concept of efficacy. It is specific to the task of overseeing children and the maintenance of social
order. However, “collective efficacy does not exist in a vacuum” (Sampson et al 1997:919). It is embodied within the structure and constraints of the neighborhood environment by which it is enabled or impeded. Collective efficacy is a necessary mechanism for the achievement of social control through collective efforts toward goals that benefit the whole community. Collective efficacy de-emphasizes close ties but rather is dependent on shared beliefs and expectations as well as a willingness to work together to maintain social control. However, strong ties in the community may undergird the circumstances in which collective efficacy may thrive (Sampson 2003). Trust and cohesion among neighborhood residents are crucial links to their willingness to engage in collective action (Sampson 1999). Neighborhoods with higher levels of collective efficacy have lower levels of disorder (Sampson 2003).

Spatial Structure

Fitzpatrick and LaGory (2010) assert that an understanding of the importance of spatial structure and its effects on the local ecology such as local network structures can be an effective tool for understanding the problems of the disadvantaged. Disadvantaged residents live in segregated, low income neighborhoods with low density leading to limited choices in which local ties may be only social rather than communal. Sampson (2004:107) also points to the known association of racial/ethnic geographic isolation and its connection with “concentrated” disadvantage. Racial and economic stratification result in spatial concentrations of disadvantage resulting in social and physical disorder.

Associated with concentrated disadvantage is a clustering of social problems noted earlier in this paper. Sampson (2004) maintains that “ecological differentiation” by
class, race/ethnicity and its impact on health is growing. In agreement with Wilson (1996), Sampson recognizes the dramatic increase in spatially concentrated poverty accompanied by a growth in income at the other end of the income continuum. Political and social influences are limited because ties outside of the neighborhood are limited. Spatial boundaries” are created by, and around areas of high segregation and limited access to resources. These spatial boundaries, however, might also encircle homogenous communities where the residents have higher socioeconomic status with the resulting implication of access to resources but with a positive impact due to socio-demographic differences (Fitzpatrick and LaGory 2000).

To maintain public order, access to crucial social and economic resources is necessary. When spatial boundaries preclude external ties, neighborhoods become spaces of limited employment, high drop-out rates, increased drug use, and limited access to transportation (Ross 2000). Fitzpatrick and LaGory (2000:59) assert that modern cities are places of segregation where smaller communities are socially and spatially removed which “makes unconventional behavior possible by removing the smaller community from the social controls and expectations of the larger, more traditional society and its majority population.” Residents living under this structure may feel detached from societal norms where conventional values such as diligence in employment or pursuing educational goals are rejected as not being beneficial because of the seeming hopelessness of their circumstance and replaced with toward short term gratification. They may tend toward a preoccupation of the present since they can see little value in the pursuit of accepted norms with which they could escape their present situation (Browning and Cagney 2003). Health-related subcultures arise from detachment from mainstream
society so that acceptance of risky behavior and a sense of anomie arises (Browning and Cagney 2002). The context of the neighborhood is removed from the larger social constraints of deviant behaviors so that these behaviors have less social sanction and may be tolerated as a “normal” part of life (Boardman 2001).

Hypotheses

To test the relationship between neighborhood disadvantage and depression in young adolescents, the following hypotheses are proposed:

**Main Effects**

H1: Neighborhood Disadvantage is positively related to depressive symptomology in pre-adolescents. As neighborhood disadvantage increases, depressive symptomology increases.

H2: The positive relationship between neighborhood disadvantage and depressive symptomology in pre-adolescents is mediated by perceived neighborhood disorder.

**Indirect Effects**

H3: Collective Efficacy is negatively related to depressive symptomology in pre-adolescents. As collective efficacy decreases, depressive symptomology increases.

H4: Social cohesion is negatively related to depressive symptomology in pre-adolescents. As social cohesion increases, depressive symptomology decreases.
Figure 1: Conceptual Model of Neighborhood Disadvantage and Depressive Symptomology
CHAPTER THREE
METHODS

Sample and Research Design

This study is a cross-sectional design utilizing only one wave of data. The data that will be used for this study are from Healthy Passages, a multilevel, multi-method longitudinal study which examines health trajectories of adolescents over a ten year period (Windle et al. 2004). The sample consists of 5,147 children who were in the fifth grade at baseline who will be assessed biennially over a ten year period. Data was collected through interviews either in respondent’s home or in a research setting. The data for this study will be from a sub-sample (n=4547) Because the main effects for this study are based on collective and individual income, inclusion into the subsample was derived from respondents whose primary care giver answered the question on yearly household income.

The sampling frame for Healthy Passages consists of all fifth-grade students who were students in regular classrooms in public schools which had enrollments of twenty-five students or more in the fifth grade. Schools in the study were in specified areas within the metropolitan areas of Birmingham Alabama, Houston, Texas, and Los Angeles, California metropolitan areas. There were twenty-five adjoining school districts in Los Angeles County in California, twenty adjoining school districts in Birmingham,
Alabama and the surrounding areas, and the largest public school district in Houston, Texas (Windle et al 2004).

A two stage probability sampling method was used at each of the three sites. In the first stage, random selection was used to choose schools based on weighted measures to ensure sufficient sample sizes of African – Americans, Hispanics and non-Hispanic Whites. In the second stage, all students were invited to participate in the study. For purposes of equivalence across racial categories, the Youth Risk Behavior Surveillance racial categories were used. To address small numbers in racial sub-categories, respondents who reported more than one primary racial/ethnic group identity were classified as “Other” for the purpose of maintaining statistical inference. Approval for the study was granted by institutional review boards at each geographic site as well as the Center for Disease Control and Prevention (Windle et al 2004). The sample (n= 5147) is 50.3% female and 49.7 male. Racial composition consists of 33.2% Hispanic, 35.2% African American, 25.3% white and 6.3% reported in more than one racial category or reported Asian or Pacific Islander or American Indian/Alaskan Native.

Data

Data were gathered utilizing five different sources: 1.) Surveys of primary care givers of fifth grade respondents, 2.) Survey of fifth grade respondents, 3.) Survey of school teachers of fifth grade respondents, 4.) Interviewer observations of schools, 5.) Interviewer observations of neighborhood environments (Windle et al 2004). Individual respondents are linked to census tract and block data by city, county and zip code derived from the Summary Tape File Three of the 2000 census. Three stages of the project were
instituted. The first stage consisted of focus groups, structured interviews and testing for the purpose of development of appropriate measures. This included a pilot study with a sample of 646 children to test the efficaciousness of proposed measures and procedures. The second stage began the actual biennial data collection which will continue until the cohort of fifth graders reaches twenty years of age. The last stage will begin in 2016 and will include some form of episodic follow-up to be determined.

Measures

*Dependent Variable*

The dependent variable is depressive symptomology. This is measured by six items from the DPS Major Depressive Disorder Subscale-6.5 (DPS-Diagnostic Predictive Scales (Cronbach’s alpha .627). This scale, which contains six gate items, has been effectively used to screen out respondents from more extensive testing for depression (Lucas et al 2001). Factor analysis was used to verify scale validity. Eigenvalues were checked for factor variance. Items include: (Over the past week) Nothing was fun, (I had) less energy than usual, (I had) serious suicide thoughts, (I was) tired from little things, not as good as other people, not thinking clearly. Responses are yes =1 or no =0. Responses are summed to obtain the depressive symptomology counts for each respondent. Higher scores indicate higher depressive symptomology.

*Independent Variables*

Demographic Characteristics: Covariates for the study include race of respondent, gender of respondent, household income, child’s perceived disadvantage, and marital status of the child’s primary caregiver. Individual measures of household income
and marital status were obtained from the primary caregiver interviews (usually a parent). Income categories ranged from under $5000 a year to over $250,000 a year. Income was recoded as a dummy variable where 1= household income under twenty thousand dollars a year and 0= household income over twenty thousand dollars a year. Because the income item in the neighborhood disadvantage index is the percentage of families who fall under the federal poverty guidelines, dichotomizing this variable (Ross 2000; Ross and Mirowsky 2001) allows a comparison of those who have very low income with those who do not. To measure the child’s perception of individual disadvantage, a one item question was used, “Have you been badly treated because your family cannot afford some things that other kids have? (yes=1 no=0). While the income variable controls for objective individual family disadvantage, this variable controls for the impact of individual disadvantage on the child’s depression. Children who are aware that their family is economically disadvantaged may have higher levels of depression.

Marital Status was recoded as a dummy variable with married = 1 and other marital status = 0. Both of these measures were used to control for individual disadvantage. Gender was included because of previous research which shows differences between males and females in rates of depression which become more pronounced in post pubescent adolescents (Aneshensel et al 1996). Males are coded as 1 and Females as 0. A dummy variables for race were constructed with Black =1 and all other racial groups = 0 comprising the reference category. Theoretically, Blacks are more likely to reside in spatially and racially segregated areas and thus more likely to reside in areas of concentrated disadvantage.
The depression of the primary care giver was included in the model to control for the impact of parental depression on children. Maternal depression has been found to impact the psychological functioning of children. Children raised by a depressed mother are more likely to be depressed themselves (Lim Wood and Miller 2008; Ashman, Dawson and Panagiotides 2008).

_Census Block Data_

To obtain objective measures of neighborhood disadvantage, Census Block Data (geo-coded data) from the 2000 U.S. Census was used by matching block-level data to each respondent’s geographic location. The census block is the smallest geographic area for which data are collected in the decennial U.S. census. This is especially important in examining differences by neighborhood as it allows respondents to be grouped into smaller geographic areas to ascertain differences by place of residence.

From this data, percentage of single parent households (female) and percentage of families below the federal poverty guidelines were used to measure neighborhood disadvantage. The use of only these two measures comes from “both theoretical and empirical observations” (Ross 2000:180). While poverty alone can be considered a primary measure of economic disadvantage, Wilson (1996) points to social disadvantage, which is a product of a high percentage of single parent households, as contributing to total disadvantage in a neighborhood. Wilson (1996) proposes that this contributes to an environment in which single female parents may be perceived as unable to maintain control over their thus contributing to further signs of disadvantage and disorder,
*Perceived Disorder: Mediators*

Perceived disorder is hypothesized to mediate or link the effects of neighborhood disadvantage to the mental health of young residents. When children are confronted daily with an environment which they perceive as threatening, they are more likely to experience feelings of anxiety and depression. How youth experience their living environment, whether threatening or safe affects mental health outcomes (Aneshensel 1996: Natsuki et al 2007).

Two measures of perceived disorder for the child respondent are used in this study. Respondent’s perception of safety was measured using one item, “How safe do you feel in your neighborhood?” Children who feel unsafe in their neighborhoods may be responding to a disordered environment they perceive as dangerous and threatening. This variable is ordinal with values 1= always, 2= sometimes and 3= never. For the second measure, exploratory factor analysis was used to construct a perceived disorder scale. Four items loaded on the same factor with all factor loadings from .717 to .742. Eigenvalues were checked for factor variance. The scale contains items which ask the child respondent how many times in the last twelve months have you…1) seen someone threatened, 2) seen someone get beaten up, 3) seen someone threatened/injured with a gun and 4) seen someone threatened/injured with a knife. Responses range from 1= Never to 4 = a lot of times (Cronbach’s alpha .675).

*Collective Efficacy and Social Cohesion*

As a measure of collective efficacy, the Neighborhood Support Scale (Cronbach’s alpha=.805) was included. The respondents to these questions were to the
primary care giver of each child in the sample. This seven item scale is also adapted from the Social Contacts and Resources Scale from Rand’s Health Insurance Experiment (HIE) (Donald & Ware 1982). Exploratory factor analysis was used to assess the validity of the scale with eigenvalues observed to check factor variance. The first four items are predicated on the primary question: If a group of neighborhood children were skipping school and hanging out on a street corner, spray painting graffiti, showing disrespect to an adult, saw someone beaten or threatened, how likely is it that your neighbors would do something about it?...Additional items include, …How likely is it that your neighbors would organize to try to do something to keep the fire station open? While you have lived in this neighborhood, have you or anyone in your household had anything stolen or damaged inside or outside your home, including your cars or vehicles parked on the street? The last item asks, How safe is it to walk alone in your neighborhood after dark? Responses range from 1= very likely to 5 = very unlikely for first six items. Responses range from 1= completely safe to 5 = extremely dangerous for the last item. Higher scores reflect less collective efficacy (greater perception of social disorganization). Exploratory factor analysis was used to check scale validity with eigenvalues observed to check factor variance.

To measure social cohesion, I use the Neighborhood Social Scale (Cronbach’s alpha=.852) (primary caregiver). This scale is adapted from Social Contacts and Resources Scale from Rand’s Health Insurance Experiment (HIE) (Donald and Ware 1982). This scale measures the types of support that are exchanged between neighbors in their community. Factor analysis was also used to assess validity. Eigenvalues were checked to assess factor variance. Items include: About how often do you and people in
your neighborhood do favors for each other? For example, watch each other’s children, help with shopping, lend gardening or house tools. When a neighbor is not at home, how often do you and other people in your neighborhood watch over their property? How often do you and other people in your neighborhood ask each other advice about personal things such as child rearing or job opening? How often do you and other people in your neighborhood have parties or other get-togethers with other people in the neighborhood? Responses range from 1= never to 4= often. Higher scores reflect greater levels of social cohesion.

Analysis

Variables were first examined for outliers and skewed distribution. Data used for this analysis are multi-level; individuals are nested in neighborhoods. For multilevel data, multi-level analyses are indicated. An unconditional means model was run to provide variance estimates for both level one and level two variance residuals. The intraclass correlation coefficient (ICC) was calculated which describes the amount of variability between the Level 2 units (census blocks). The ICC (.015016/ [.015016 + 2.515909] = .006) was sufficiently low which indicates little variability between level two units. Preliminary analyses with both hierarchal linear modeling (HLM) and OLS regression confirmed similar results so regression results are reported because of ease of interpretation and explanation.

Stepwise regression was used to build four nested models. Model one is a main effects model which shows the total effect of neighborhood disadvantage on depression. Model two adds sociodemographic variables objective individual disadvantage and child
perceived disadvantage. Model three adds perceived disorder, perceived social cohesion, primary care giver depression and collective efficacy measures. Model four is a full model with an interaction term added. Models were checked for multicollinearity by examining correlations between variables and the Variance Inflation Factor (VIF). Normal distribution of residuals was assessed by examining predictive versus observed values on a scatter plot.

<table>
<thead>
<tr>
<th>TABLE 1. Descriptive Statistics: Demographics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables</td>
</tr>
<tr>
<td>Race of Respondents</td>
</tr>
<tr>
<td>Race of Respondents</td>
</tr>
<tr>
<td>Household income of sample</td>
</tr>
<tr>
<td>Gender of Respondents</td>
</tr>
<tr>
<td>Gender of Respondents</td>
</tr>
<tr>
<td>Household Composition</td>
</tr>
<tr>
<td>Household Composition</td>
</tr>
<tr>
<td>Age of Respondents</td>
</tr>
<tr>
<td>Marital Status</td>
</tr>
</tbody>
</table>

Results

Table 1 presents descriptive statistics of demographic variables. The median household income of the sample is $43,748 with a standard deviation of $25,995. The lowest income category is under $7000 with the highest reported income over $200,000.
However 43% of the sample reported total household income under $30,000. Forty-five point seven percent of the children live with two biological parents, while 10.1 percent of the sample are in single parent (female) households although 28% of children live with one parent and a second non-related person and 5% reside solely with a non-relative, step-parent or adoptive/foster parent.

Table 2 presents descriptive statistics reporting means and standard deviations of study variables as well as bivariate correlations (Pearson’s r) of primary independent variables and depressive symptomology. Following the conceptual model, the main effects of neighborhood disadvantage (summed index of the percentage of households with incomes under amount set by federal poverty guidelines and percentage of single parent households by census block), higher levels of perceived disorder and higher levels of feeling unsafe by the child and higher levels of social cohesion are positively correlated with depressive symptomology. There is a negative correlation between higher levels of collective efficacy and depressive symptomology.

Table 3 presents the findings from the OLS regression of neighborhood disadvantage, perceived disorder, collective efficacy and social cohesion on depressive symptomology. Model 1 tests the hypothesis that there is a positive relationship between depressive symptomology and the main effects of neighborhood disadvantage. A significant positive relationship was found between the index of neighborhood disadvantage and an increase in the number of depressive symptoms (b=.074, p<.0001). Children who live in neighborhoods with concentrated poverty and large numbers of female led households have higher levels of depression. Is this due to a selection process in which disadvantaged individuals select into neighborhoods that are disadvantaged?
<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Bivariate Correlation with MDD subscale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Depressive Disorder Subscale</td>
<td>1.9367</td>
<td>1.59019</td>
<td>r = .059, p &lt; .000</td>
</tr>
<tr>
<td>Neighborhood Social Scale</td>
<td>2.5240</td>
<td>.84915</td>
<td>r = -.059, p &lt; .000</td>
</tr>
<tr>
<td>Neighborhood Support Scale</td>
<td>2.0975</td>
<td>.89782</td>
<td>r = .064, p &lt; .000</td>
</tr>
<tr>
<td>Feels Safe in Neighborhood</td>
<td>1.5682</td>
<td>.60080</td>
<td>r = .161, p &lt; .000</td>
</tr>
<tr>
<td>Neighborhood Disadvantage Index</td>
<td>2.0598</td>
<td>1.62354</td>
<td>r = .076, p &lt; .01</td>
</tr>
<tr>
<td>Child Perceived Disorder Scale</td>
<td>5.9849</td>
<td>2.216979</td>
<td>r = .267, p &lt; .000</td>
</tr>
<tr>
<td>Maternal Depression</td>
<td>3.2369</td>
<td>4.32237</td>
<td>r = .061</td>
</tr>
</tbody>
</table>

Tests of significance are two-tailed.

Demographic covariates are added in Model 2. The addition of objective individual disadvantage, marital status and child perceived disadvantage controls for the effects of individual disadvantage over that of disadvantages of neighborhood residence. In this model, the addition of individual disadvantage and perceived disadvantage reduces the significant effects of neighborhood disadvantage about fifty percent but it remains
significant (b= .034, p< .05). This indicates that objective individual disadvantage and perceived disadvantage partially account for the contextual effects of disadvantaged neighborhoods. However, even with partial attribution to individual disadvantage and perceived disadvantage, children who live in disadvantaged areas have greater depression.

Household income is significant and positively associated with a rise in the number of depressive symptoms (b= .150, p< .01). Children who live in homes where the household income is under twenty thousand dollars annually report greater numbers of depressive symptoms than those who live in households with higher income levels. Perceived disadvantage is also significant (b= 1.043, p< .000). Children who perceive that their family is economically disadvantaged are more depressed. Race is also significant with blacks reporting higher levels of depression compared to all other racial groups (b=.139, p < .01). The marital status of the child’s primary caregiver is not significant. Marital status has no effect on depression levels in child respondents. Males report greater levels of depressive symptomology than females (.121 p<.05).

Model 3 tests Hypotheses 2, which states that the positive relationship between neighborhood disadvantage and depressive symptomology is mediated by perceived neighborhood disorder. In this model, measures of social cohesion, collective efficacy and mediating variables which measure perceived neighborhood disorder are added. There is a significant relationship between how safe children perceive their neighborhood to be and number of depressive symptoms (b=.308 p< .0001).
<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intercept</strong></td>
<td>1.783***</td>
<td>2.034***</td>
<td>1.125***</td>
<td>.756***</td>
</tr>
<tr>
<td></td>
<td>(.038)</td>
<td>(.100)</td>
<td>(.113)</td>
<td>(.189)</td>
</tr>
<tr>
<td><strong>Neighborhood Disadvantage Index</strong></td>
<td>.074***</td>
<td>.034*</td>
<td>-.024</td>
<td>-.010</td>
</tr>
<tr>
<td></td>
<td>(.014)</td>
<td>(.016)</td>
<td>(.016)</td>
<td>(.017)</td>
</tr>
<tr>
<td><strong>Socio-Demographic Covariates</strong></td>
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</tr>
<tr>
<td>Individual Disadvantage (1= under $20,000 yearly income)</td>
<td>.150**</td>
<td>.064</td>
<td>.055</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.056)</td>
<td>(.056)</td>
<td>(.056)</td>
<td></td>
</tr>
<tr>
<td>Child Perceived Disadvantage</td>
<td>1.043***</td>
<td>.777***</td>
<td>.772***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.074)</td>
<td>(.072)</td>
<td>(.072)</td>
<td></td>
</tr>
<tr>
<td>Marital Status (PCG) (1= unmarried)</td>
<td>-.009</td>
<td>-.019</td>
<td>.019</td>
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<tr>
<td></td>
<td>(.013)</td>
<td>(.013)</td>
<td>(.013)</td>
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<td>Race (Black =1)</td>
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<td>-.043</td>
<td>-.055</td>
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<td></td>
<td>(.053)</td>
<td>(.053)</td>
<td>(.053)</td>
<td></td>
</tr>
<tr>
<td>Gender (Male =1)</td>
<td>.111*</td>
<td>.018</td>
<td>.012</td>
<td></td>
</tr>
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<td></td>
<td>(.046)</td>
<td>(.045)</td>
<td>(.045)</td>
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<tr>
<td>Maternal Depression</td>
<td>.012*</td>
<td>.012*</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(.005)</td>
<td>(.005)</td>
<td></td>
<td></td>
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<tr>
<td><strong>Perceived Disorder</strong></td>
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<td></td>
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<tr>
<td>Feels Safe in Neighborhood</td>
<td>.281***</td>
<td>.275***</td>
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<td></td>
<td>(.039)</td>
<td>(.039)</td>
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<tr>
<td>Child Perceived Disorder</td>
<td>.157***</td>
<td>.168***</td>
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<tr>
<td></td>
<td>(.011)</td>
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<td><strong>Collective Efficacy</strong></td>
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<tr>
<td>Neighborhood Support (PCG)</td>
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<td>.008</td>
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<tr>
<td></td>
<td>(.029)</td>
<td>(.029)</td>
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<tr>
<td>Neighborhood Cohesion</td>
<td>- .010</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.030)</td>
<td>(.030)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Interaction</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Neighborhood Disadvantage Index* Perceived Disorder</td>
<td>-.024***</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(.006)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.006</td>
<td>.052</td>
<td>.107</td>
<td>.111</td>
</tr>
</tbody>
</table>

*** p < .001; ** p < .01; * p < .05; (two tailed) Standard error in parentheses.
The effects of the perceived disorder scale are also significant (.178 p< .011) with a one unit increase in the perceived disorder scale associated with a .178 increase in number of depressive symptoms. Children who feel unsafe in their neighborhood or perceive greater levels of disorder report higher levels of depressive symptoms. In this model, the effects of both neighborhood disadvantage and objective individual disadvantage disappear supporting the second hypothesis that the effects of neighborhood disadvantage are mediated by neighborhood disorder. The effects of neighborhood disadvantage on depression are largely explained by perceived disorder. Neighborhood disorder is the by-product of concentrated disadvantage so that children who live in a disordered environment do not feel safe or perceive their surroundings as threatening which has negative mental health consequences such as increased depression.

Perceived disadvantage remains significant (b=.777, p< .000) indicating that a child’s perception of their economic status in relation to others has an effect on depression. This effect is lessened, however, when perceived disorder is added to the model. The significant effects of gender and race disappear in model 3. Neither social cohesion nor collective efficacy is significant in this model as having an association with the number of depressive symptoms so that both hypotheses three and four are unsupported.

The fourth model is a full model with interaction terms. Both variables which measure perceived disorder are again significant. The interaction term for neighborhood disadvantage by perceived disorder is negative and statistically significant (b = -.023, p<) indicating that higher levels of disadvantage and disorder are correlated with lower levels of depression. Higher levels of disadvantage are not as salient for depression for children
in neighborhoods with higher levels of disorder. While there is a relationship between neighborhood disadvantage and depression, the mediating effects of neighborhood disorder makes that association less important at higher levels of disorder. This again, supports hypothesis two; disorder mediates the effects of disadvantage.
CHAPTER FIVE
DISCUSSION

As noted in the introduction, this is an exploratory, cross-sectional study of children who are prepubescent or will transition into puberty within the next several years. The primary purpose of the study is to provide a foundation for future longitudinal studies of these same respondents which will examine the effects of disadvantage and disorder on youth who are beginning the process of experiencing and filtering their residential context apart from the primary influence of family. Results of this study link neighborhood disadvantage to depression through perceptions of disorder in neighborhoods with concentrated disadvantage and low social control. In these neighborhoods, children perceive their environment as unsafe because of feelings of living in a threatening environment. Children who live in areas in which they do not feel safe or feel threatened have higher levels of depression.

This study corroborates previous studies that have found a relationship between neighborhood disadvantage and depression. Disadvantaged individuals live in disadvantaged areas because of limited choice due to economic disadvantage. Areas of concentrated disadvantage with a greater number of female-led single parent households where social control is low become threatening places to children because of overt social disorder. For children, depression is a result of regular exposure to chronic stressors associated with perceived disorder such as criminal activity, drug use and incivility. This study found that for children on the verge of adolescence, there is a relationship between living in a disadvantaged and disordered neighborhood and depression even when
accounting for the effects of individual disadvantage. This may be due to the negative effects of living with chronic stress. As discussed earlier, the negative effects of chronic stress on depression are more profound than those that are ongoing. The impact of community level stressors that are chronic stressors may impede a child’s coping mechanisms so that the potential for depression may be greater.

However, while part of the contextual effect of neighborhood disadvantage can be attributed to individual disadvantage, it is the perception of disorder that links the effects of disadvantage to depression in pre-adolescent residents of disadvantaged neighborhoods. The ecology of disadvantaged neighborhoods provides the conditions in which physical and social disorder flourish. Disorder creates an environment which children perceive as unstable or dangerous. Children are more likely to associate perceived disorder with personal risk, so that they feel unsafe or threatened which increases their risk for mental health problems such as depression. It is distressing to children to constantly feel as though they are unsafe or in some sort of danger.

Higher levels of disadvantage are not associated with greater depression with the children in this study. It is rather that children who live in areas of concentrated disadvantage are confronted with disorder through physical and social cues that there is little social control. It is through the mechanism of disorder that children experience their environment as unsafe or threatening. In this study, higher levels of disadvantage had less effect on depression with higher levels of disorder indicative of the mediating effects of disorder which is the linking mechanism for neighborhood disadvantage to depression in preadolescents. There may be a “ceiling effect” in which higher levels of disadvantage do
The level of disadvantage is less important than the resulting manifestation of disorder in a child’s neighborhood.

In this study, there was no relationship found between the primary care giver’s perception of collective efficacy and social cohesion within their neighborhood and their child’s depression. Disadvantaged and disordered neighborhoods have greater social disorganization which, could imply that there is some sort of adaptation process by children to neighborhoods with low collective efficacy and social cohesion because it is all they have ever known. While these characteristics reflect the disorder of the neighborhood, this study finds that it is the preadolescent’s perception of disorder and the perceived risk to themselves that is associated with higher levels of depression.

Since depression is also only one aspect of mental health, for children, perceptions of disorder may be experienced in other ways such as anxiety or behavior problems. Because other internalizing and externalizing behaviors were excluded as outcomes, it is possible that at this age, other mental health outcomes may be more likely. Future studies should examine the neighborhood context and its effect on a greater variety of mental health outcomes. Early experience with depression may establish future trajectories for preadolescent residents which may extend far beyond adolescence (Murry et al 2011).

Limitations

There are several methodological limitations of the study. First, it is cross-sectional so it is only possible to consider associations between variables rather than
causal inference. The age of the respondents (mean age of 10.3 years) should be considered as a possible confounding variable. Since preadolescent children experience their environment primarily through their parents, depression may be related more to personal or individual characteristics.

Additionally, parenting behavior may be impacted by living in a disordered and disadvantaged neighborhood which may have detrimental effects on their children. Adults who live in disordered and disadvantaged neighborhoods have been found to have negative mental health outcomes including depression. Children who live in disordered and disadvantaged neighborhoods may have parents who are depressed or have some other mental disorder which could have an effect on the child’s mental health. It will be especially important to disentangle these effects from neighborhood contextual effects. Also, because of the unique transition of respondents from preadolescence to adolescence with the accompanying physical, psychological and emotional changes that accompany pubescence, future studies should be longitudinal and examine the relationship of the neighborhood context to depression over time. Longitudinal studies are also necessary to address competing hypotheses such as selection processes.

Individual conceptions of neighborhood may be socially constructed by attachment to place or by natural boundaries in contrast to artificially constructed boundaries used by the Census Bureau which could potentially impact how people respond to their perception of their environment. Additionally, this study did not control for how many years the child had lived in his or her particular neighborhood which could impact the child’s perception of the environment as well as the perceptions of the primary care giver.
Conclusion

Young residents of neighborhoods with concentrated poverty and high numbers of female single parent household experience distress due to chronic stressors inherent in these neighborhoods. When children are faced with an environment of instability and uncertainty as a result of social disorganization they may have feel they have no control over their lives. Exposure to stress is cumulative and results in poor mental health outcomes such as depression. The evidence of disorder in poor neighborhoods signifies to the child that they are potential victims because they live in an environment where they are confronted with crime, drug use, incivility and physical deterioration. Depression is a response to this constant distress.
REFERENCES


Boardman, Jason D., Brian Carl Finch, Christopher G. Ellison, David R. Williams, and James A. Jackson. 2001. “Neighborhood Disadvantage, Stress, Drug Use among Adults.” *Journal of Health and Social Behavior* 42(2) 151-165.


APPENDIX

IRB APPROVAL
Project Revision/Amendment Form

(Please type: To MS Word, highlight the shaded, underlined box and replace with your text; double-click checkboxes to check/uncheck.)

Federal regulations require IRB approval before implementing proposed changes.

1. Contact Information
   Principal Investigator's Name: Frank A. Franklin  Blazer ID: frank A  E-mail: frank@uab.edu
   Contact Person's Name: Christal Montgomery  Blazer ID: cjonnell7  E-mail: cjonnell7@uab.edu
   Telephone: 36-9468  Fax: 36-0530
   Campus Address: 912 Bldg, Zip 3200

2. Protocol Identification
   Protocol Title: Healthy Passages: A Longitudinal Study of Adolescent Health
   IRB Protocol Number: P060815002
   Current Status of Project (check only one):
   □ Currently in progress (Number of participants entered: ______)
   □ Study has not yet begun (No participants entered)
   □ Closed to participant enrollment (remains active)—
     Number of participants on therapy/intervention: ______
   □ Closed to participant enrollment (long-term follow-up only: ______
   □ Closed to participant enrollment (data analysis only)—
   Total number of participants enrolled: 1,731 (307 pilot + 1,494 full study)

   This submission changes the status of this study in the following manner (check all that apply):
   □ Protocol Revision
   □ Protocol Amendment
   □ Study Closed to participant entry
   □ Study Closure
   □ Other, (specify) ______
   □ Revised Consent Form
   □ Addendum (new) consent form
   □ Enrollment temporarily suspended by sponsor
   □ Change in protocol personnel

3. Reason for change
   Briefly describe, and explain the reason for, the change. If normal, healthy controls are included, describe in detail how this change will affect those participants.
   Include a copy of the protocol and any other documents affected by this change (e.g., consent form, questionnaire) with all the changes highlighted.
   We are requesting the addition of Vicki Winstead to the Healthy Passages protocol. She will be involved in the conduct of data analysis for which the study was designed under supervision of Investigators.

4. Does this change revise or add a genetic or storage of samples component?
   □ Yes  □ No

5. Does the change affect subject participation (e.g., procedures, risks, costs, etc.)?
   □ Yes  □ No

6. Does the change affect the consent document(s)?
   If yes, briefly discuss the changes.
   Include the revised consent document with the changes highlighted.
   Will any participants need to be reconsented as a result of the changes?
   □ Yes  □ No
   If yes, when will participants be reconsented?

Signature of Principal Investigator: ___________________________ Date: 7-28-09

IRB proj-rev-amend - Add Vicki Winstead