

THE FLORIDA STATE UNIVERSITY
COLLEGE OF SOCIAL SCIENCES

SOCIAL CONTEXT AND MENTAL HEALTH:
THE ROLE AND SIGNIFICANCE OF NEIGHBORHOOD AND FAMILY

By

Ryan D. MacDonald

A Dissertation submitted to the
Department of Sociology
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

Degree Awarded:
Summer Semester, 2006

The members of the Committee approve the dissertation of Ryan MacDonald defended on April 28th, 2006.

R. Jay Turner
Professor Directing Dissertation

Clarence Gravlee
Outside Committee Member

John Reynolds
Committee Member

Anne Barrett
Committee Member

John Taylor
Committee Member

Approved:

Patricia Y. Martin, Chair, Department of Sociology

David W. Rasmussen, Dean, College of Social Sciences

The Office of Graduate Studies has verified and approved the above named committee members.

TABLE OF CONTENTS

List of Tables	v
List of Figures	vi
Abstract	vii
INTRODUCTION	1
Specific Aims	3
1. THEORETICAL PERSPECTIVES	4
Ecological Model	6
Neighborhood Exposure and Differential Association	6
Stress Theory	7
2. REVIEW OF THE LITERATURE	9
Historical Neighborhood Research	9
Neighborhoods and General Outcomes	14
Neighborhoods and Physical Health Outcomes	15
Neighborhoods and Mental Health Outcomes	17
Family Structure and Mental Health Outcomes	22
Family Socioeconomic Context and Mental Health Outcomes	25
Depression as an Outcome	28
Summary and Aims	29
3. METHODS	30
Sample	30
Setting	31
Multi-level Modeling Issues and Concerns	32
Assessing Neighborhood Context	34
Measures	35
Data Analysis Plan	43
4. RESULTS	45
Variable, Model, and Case Selection	45
Descriptive Characteristics	50
OLS Regressions on Psychological Distress	50

Summary	61
5. DISCUSSION	62
Overall Findings	62
Implications for Theory and Practice	71
Generalizability and Limitations	73
Future Research	74
CONCLUSION	76
APPENDICES	77
REFERENCES	89
BIOGRAPHICAL SKETCH	97

LIST OF TABLES

1. Factor Analysis of Neighborhood Characteristics	38
2. Boxplots of Neighborhood Disadvantage, Immigrant Concentration, and Residential Mobility	46
3. Correlations Between Independent and Dependent Study Variables	48
4. Mean CESD Scores for Neighborhood and Family Context Dimensions	51
5. CESD Regressed on Neighborhood Disadvantage, Residential Mobility, and Immigrant Concentration	53
6. CESD Regressed on Neighborhood Disadvantage, Family Type, and Family SES	55
7. Mean Stress and Family Process Scores for Neighborhood and Family Context Dimensions	57
8. CESD Regressed on Neighborhood Disadvantage, Family Type, Family SES, Family Processes, and Social Stress	59

LIST OF FIGURES

A. Conceptual Model	5
B. Median Household Income among 1990 Census Block Groups in Cross-section of Miami-Dade County	36
C. Percent of Families below the Poverty Line among 1990 Census Block Groups in Cross-section of Miami-Dade County	37
D. Predicted Psychological Distress Scores by Parental Income, Education, and Occupational Prestige	49
E. Stress Process Model of Study Variables	72

ABSTRACT

As Pearlin (1989) has argued, risk and protective factors for mental health problems arise out of the structural contexts of people's lives and are fundamental to the study of mental health. Despite wide acceptance of this proposition by the field, relatively little attention has been devoted to the effort to specify those variations in social context that matter. That is, what are the aspects of context that put people at risk for risks and/or are protective from risks? Although efforts have been made to understand the mental health significance of separate dimensions of context, few studies consider them together. Specifically, research on the mental health significance of neighborhood circumstances has rarely considered other aspects of social context. Thus, an effort to understand the role and significance of neighborhoods for mental health that includes a consideration of more proximal family arrangements is likely to advance the field. Within this framework, the present study examines two spheres of adolescent social context, neighborhoods and families, and considers how such contexts influence young adult mental health. Further, this research explores mechanisms that may explain the linkage between social context and mental health problems.

Data from a large ($n = 1803$) study of young adults allows for a relatively more comprehensive estimation of social context than has previously been examined. The sample was drawn such that 25% were non-Hispanic white, 25% were African American, and 50% were of Hispanic origin.

Findings suggest that multiple dimensions of neighborhood context make independent contributions to the prediction of young adult psychological distress. Considering the relevance of both neighborhood and family context for young adult mental health, respondents from disadvantaged neighborhoods, single parent families, and families with few socioeconomic resources have higher levels of psychological distress. However, it is the more proximal family conditions that matter for the relationship between social context and psychological distress. Findings indicate family socioeconomic status to be the most robust predictor of psychological distress, all study variables considered. Additionally, results suggest that family processes and

exposure to social stress are two of the mechanisms that explain the linkage between social context and psychological distress. However, they do not fully explain the link between family socioeconomic status and young adult mental health.

CHAPTER 1

INTRODUCTION

That psychological distress and disorder represent significant social problems can hardly be doubted. Findings from a recent national-level community study indicate that a substantial minority of adults met lifetime criteria for one or more mental illnesses (Kessler et al. 1994, Kessler and Zhao 1999). In addition, one community-based study of young adults found that nearly 60 percent had experienced a psychiatric or substance disorder in their young lives (Turner and Gil 2002). There appears to be a tendency by some people to believe that the origins of mental health problems lie entirely within the individuals involved. In contrast, the fact that rates of such problems have been shown to vary by social status suggests that environmental factors may also be involved.

Environmental risk and protective factors shape adolescent experiences and have enduring consequences across the life course. As Pearlin (1989) has argued, these risk and protective factors for mental health problems arise out of the structural contexts of people's lives and are fundamental to the study of mental health. Despite wide empirical support for this proposition, relatively little attention has been devoted to specifying the extent to which and the way in which those variations in social context matter. That is, what are the aspects of context that put people at risk for risks and/or are protective from risks?

Social context or social ecology is a broad term that encompasses an array of spheres of adolescent contextual development including: neighborhoods, schools, peers, and family (Earls and Carlson 2001). Typically these arrangements take the form of nested or hierarchical structures at varying proximity to adolescents. Their significance for the mental health and well-being of adolescents has been well documented (Sampson, Morenoff, Gannon-Rowley 2002, McLeod and Shanahan 1993, Earls and Carlson 2001). However, with such a complex network of social arrangements, literatures on the mental health significance of different dimensions of social context have evolved separately from one another. Specifically, research on the mental health significance of neighborhood circumstances has rarely considered other aspects of social context. Thus, an effort to understand the role and significance of neighborhoods for mental health that includes a consideration of more proximal family arrangements is likely to advance the field. Within this framework, the present study will examine two spheres of adolescent

social context, neighborhoods and families, and consider how such contexts influence young adult mental health. Further, this research will explore mechanisms that may explain the linkage between social context and mental health problems. For clarity, the term “social context” is used throughout this paper to indicate exogenous neighborhood and family circumstances and arrangements¹. Similarly, neighborhood context refers to arrangements of neighborhood characteristics, typically measured by one or more Census indicators. Family context addresses structural family arrangements such as family type as well as the resources associated with one’s family (i.e. socioeconomic status). Family context is different from family processes, which are adolescents’ subjective relationship experiences. These processes are more akin to psychosocial resources that may explain the social context/psychological distress linkages.

Data from a large community-based study of young adults offers an opportunity to simultaneously evaluate the mental health significance of multiple aspects of social context. Two nested dimensions of social context will be considered: 1) neighborhood context as measured by multiple indices of aggregate neighborhood characteristics, and 2) family context operationalized in terms of family type and family socioeconomic status. An important and unanswered question relates to the independent and joint mental health significance of these two dimensions of social context. Although a substantial body of research has addressed the association between family context and mental health, less is known about the relative and independent significance of neighborhood context for mental health problems. For this reason, this study attends more closely to neighborhood context within the background and analyses sections.

This study extends past research on social context and mental health in several important ways. In addition to conceptualizing and assessing social context more broadly than has been typical, it tests the independent and joint effects of social context for mental health problems. This study also employs a retrospective longitudinal design from a representative community sample to estimate the effects of early adolescent social context on young adult mental health with predictors occurring approximately 9-10 years prior to assessed mental health outcomes. In addition, this research explores mechanisms that may explain the relationship between social context and mental health. Specifically, I examine two primary factors hypothesized to mediate

¹ Though school context and peer relationships are also important dimensions of social context, a consideration of such dimensions was beyond the scope of this paper.

the linkages between social context and mental health—family processes and exposure to social stress.

Specific Aims

A1: To provide a descriptive analysis of multiple aspects of the two dimensions of social context and their associations with psychological distress.

A2: To explore the individual and joint contributions of an array of indicators of neighborhood and family context for mental health.

A3: To consider the explanatory role of family processes and social stress on the joint and independent associations between the two dimensions of social context and mental health.

CHAPTER 2

THEORETICAL PERSPECTIVES

My analyses are informed by several theories, each of which contributes to an understanding of the relationship between social context and mental health. The theme derived from each perspective describes how structures and social arrangements exogenous to adolescents impact their mental health. Primary explanations for the mental health significance of social context do not include individual-level variables. Although endogenous attributes are part of a larger network of adolescent experience, this paper will focus on those characteristics and arrangements that lie outside the skin.

Social context is theorized to have many components that may influence adolescent experience. These components are levels nested within one another descending from society to family to individual (shown in Figure A). In addition, these components may have both independent and mediating effects on the relationship between social status and adolescent mental health. Although Figure A is not exhaustive, it provides a useful model with which to frame the association between mental health and social context.

Several theories address the influence of social context on child and adolescent well-being. In this section, I review three theoretical perspectives and supporting evidence that emphasize the importance of environment for child and adolescent development and well-being. The perspectives are: 1) Bronfenbrenner's ecological model of human development, 2) Neighborhood exposure and differential association theory (Jencks and Mayer), and 3) Stress theory and the stress process framework. These theories provide the present study with a framework with which to specify and test competing and contrasting explanations for the association between social context and adolescent well-being.

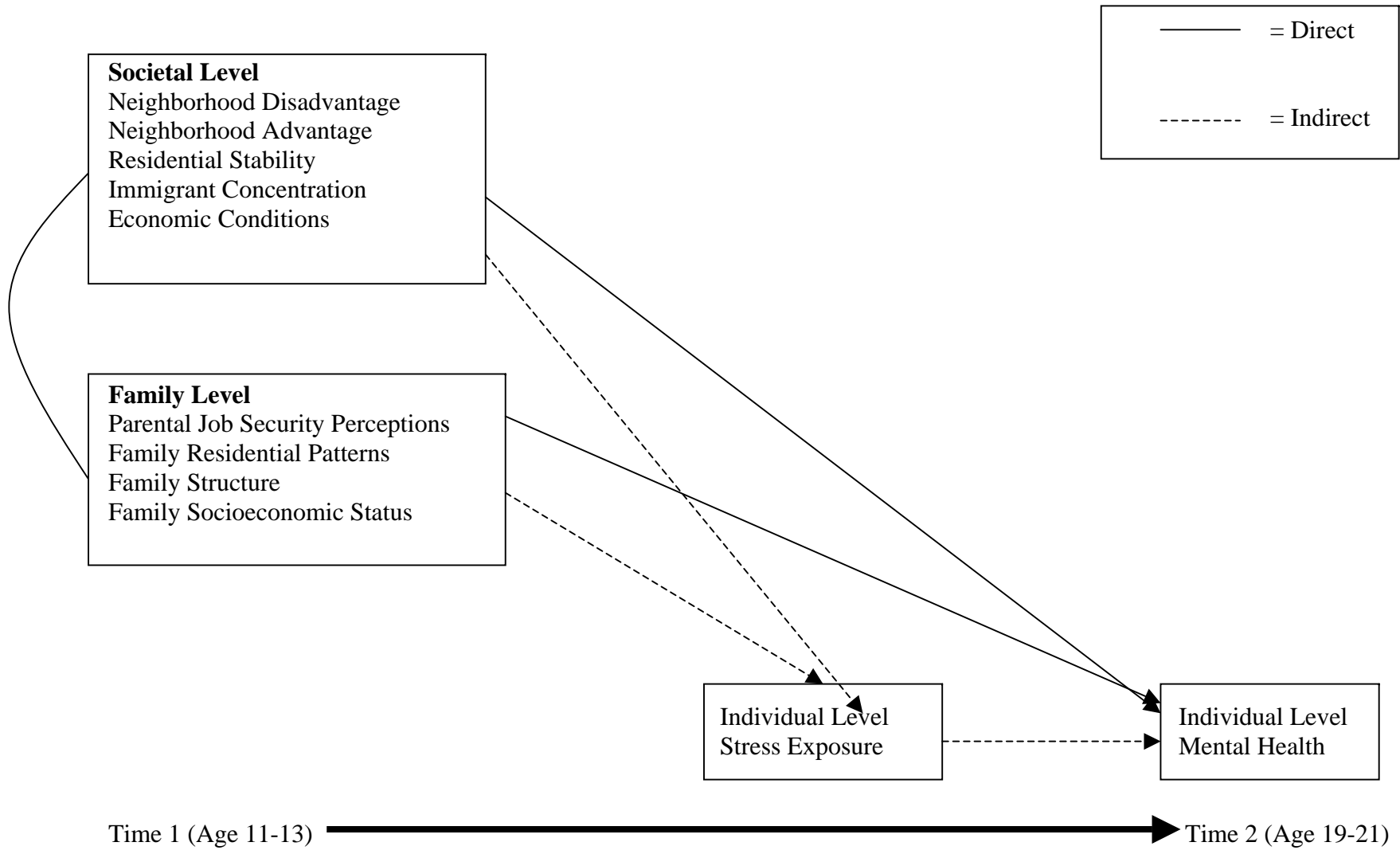


Figure A. Conceptual Model

Ecological Model

Developmental psychologists who study the interaction between the environment and human development often rely on Bronfenbrenner's ecological model of human development (Bronfenbrenner 1977, 1979, 1986). His ecological model of human development is defined as the study of humans and the changing environment in which they live (Bronfenbrenner 1977). This process is affected by relations between the immediate environmental setting and the larger social contexts in which the settings are embedded. It can be thought of as a nested arrangement of structures with each contained within the next. For example, individuals are arranged within families and in turn, a series of families comprise a neighborhood. Neighborhoods can exert a direct influence on individuals or may operate indirectly through families. Testing Bronfenbrenner's model, Rutter and Quinton (1977) suggest that neighborhoods exert indirect effects through family for the well-being of children. Applying Bronfenbrenner's model to this study provides a framework for how social contexts are embedded within one another. It is perhaps the case, that for child well-being, exogenous contexts like neighborhoods may operate directly or indirectly through nested ones such as family structure or family socioeconomic position. Moreover, other factors such as social stress may mediate the multilevel association between social context and mental health.

Neighborhood Exposure and Differential Association

In the view of Jencks and Mayer (1990), there are many ways neighborhoods may affect behavior. They distinguish between three perspectives on the influence of neighborhoods: 1) disadvantaged neighbors are a disadvantage, 2) advantaged neighbors are a disadvantage, and 3) disadvantaged neighbors are irrelevant. The first perspective states that children's associations with neighbors who engage in deviant behavior are likely to result in them engaging in such behaviors themselves. Conversely, the presence of positive role models within a neighborhood, may lead children to follow suit. In addition, more affluent neighborhoods are more likely to attract outside positive adult role models to serve in neighborhood institutions like law enforcement and education. Disadvantaged children may benefit importantly from positive peers and adult role models found in more affluent neighborhoods. In contrast, deviant peers and poor role models found in disadvantaged neighborhoods tend to impair the life chances of children. The second perspective, based on relative deprivation theory and competition for resources,

suggests that disadvantaged children who live in or near high SES neighborhoods may react negatively to their surroundings. Relative deprivation models assume that children compare themselves to those around them, and when disadvantaged children compare their material resources to their more advantaged neighbors, they may respond by associating with a deviant subculture. The third perspective rejects notions of the surrounding influence of neighbors and supposes that people act in their own best interests regardless of their neighbors' values and beliefs. Because children tend to seek out people like them and, as long as neighborhoods display even modest heterogeneity, neighborhood social composition is unlikely to have much of an effect on children. An additional perspective suggested by Mayer and Jencks (1989) is that, even if neighbors do not directly influence behavior, the institutional and structural makeup of neighborhoods may. There are simply more and better resources in higher SES neighborhoods than in lower SES ones.

Perhaps the unique contribution of Jencks and Mayer to an understanding of neighborhood effects is the importance and duality of affluent neighbors. For households that are relatively disadvantaged, having affluent neighbors may be beneficial in some cases but detrimental in others. They tentatively suggest that, where social cohesion is high and neighborhoods have clearly defined norms, the presence of affluent neighbors for the economically disadvantaged is beneficial. Conversely, in situations where there is competition for social and economic resources, affluent neighbors may be a disadvantage. The duality of the relative importance of affluent neighbors suggests that, at the very least, researchers should focus not only on neighborhood disadvantage, but on neighborhood affluence as well.

Stress Theory

Finally, analyses are framed by many ideas from stress theory (Pearlin et al. 1981). A part of the stress process model identifies how patterned social experiences relate to mental health risk. That is, how do experiences of stress translate to mental health problems including psychological distress? Within the stress process framework, the relationship between social statuses (such as race, gender, marital status, etc.), stressors (life events, life traumas, chronic stress), social and personal resources (support, mastery, etc.), and mental health outcomes (psychological distress, DSM-IV disorders, substance abuse) rarely considers dimensions of social context. It would appear that, especially among adolescents, social context indexes

variations in environment that condition the exposure to stress and the development of coping resources. These structural contexts of adolescents' lives in turn shape trajectories that influence future mental health risk. Indeed, Pearlin (1989) argued that mental health risk and protective factors arise out of the context of people's lives. Therefore, including social context within the stress process framework in this research is likely to advance understanding of the relative significance of social context for mental health outcomes. In addition, this paper can suggest how such contexts create environments that lead to variations in stress exposure and supportive resources.

CHAPTER 3

REVIEW OF THE LITERATURE

Research addressing neighborhood context and mental health problems is less developed than studies involving either family structure or family socioeconomic. For this reason, my initial focus is on the literature relating to neighborhood contextual factors, including both historical and recent conceptualizations, the prevailing paradigms, and evidence of their association with a variety of outcomes including mental health problems. I then briefly review the more substantial evidence on the relationships between family context and mental health problems. In the course of identifying the major contributions to the field, I also note current gaps and identify the efforts within this study to address these gaps.

Historical Neighborhood Research

In this section I show the beginnings of neighborhood research in the early 20th century and trace significant advances in the field up to the present. The discussion will focus on several key areas as follows: 1) early research citing the importance of studying neighborhoods as a social construct, 2) ancillary research concerning poverty, ethnicity, and socioeconomic status, and 3) current research addressing why neighborhoods continue to be an important area of sociological inquiry.

Both theory and research has suggested the importance of the environment for health and well-being. Although some scholars trace such associations back to the 5th century B.C. (see MacIntyre and Ellaway 2003), American research on the subject of neighborhoods began in earnest in the 1920s. The Chicago School of sociology offered social disorganization theory as one explanation for elevated rates of social problems found within certain neighborhoods. Social disorganization theory suggests disorganized communities lack the collective efficacy and cohesion to encourage an agreed upon set of beneficial behaviors, norms, and values. Thus, such communities are likely to encounter more social problems than communities with intact systems of social control. Individuals within disorganized communities are relatively free from the constraints of social control and allow for the pursuit of less legitimate opportunities (i.e. crime). Social disorganization theory proposes that resulting social problems are a consequence of “normal” individuals reacting to abnormal social circumstances. Park and Burgess (1925)

argued that cities, specifically urban cities such as Chicago, were divided into zones in the shape of concentric circles. The inner circle represented the Central Business District followed subsequently by the Transitional Zone, Working Class Zone, Residential Zone, and the Commuter Zone. Moving away from the Central Business District, zones became increasingly more advantaged in terms of aggregate socioeconomic indicators and immigrant concentration.

Shaw and McKay (1942) applied social disorganization theory to the Park and Burgess Concentric Zone model of cities in order to study how delinquency varied by neighborhood. They noted how neighborhoods high in poverty tended to have high rates of residential mobility and racial heterogeneity making social disorganization and resulting social problems more likely. Results from their studies indicated that delinquency was elevated in particular neighborhoods, net of the personal characteristics of the individuals who lived in them.

Faris and Dunham (1939 [1960]) also conducted research using the same theoretical model. They studied variations in the rates of mental disorder across neighborhoods through an examination of the spatial distribution of individuals who were admitted to both public and private psychiatric hospitals. Their study was the first to show that urban areas characterized by high rates of social disorganization also experienced elevated levels of mental disorder (Faris and Dunham 1939 [1960]: xviii). When divided into tracts or concentric zones, the highest rate of mental disorder was found in the central areas of the city. Moving from the central city toward the periphery, rates of disorder declined steadily. However, Faris and Dunham found that not all types of disorders were distributed in this fashion. For example, although rates of schizophrenia and alcoholism were highest in the most disorganized areas (the central business district and surrounding areas), rates of manic-depressive disorder showed no clear spatial pattern with high rates in both the socially disorganized and periphery areas.

The work of Faris and Dunham raised two major issues: the ecological fallacy and causation versus selection. First, the ecological fallacy occurs when making inferences or conclusions about the characteristics of individuals based upon aggregate characteristics. Because Faris and Dunham did not have access to individual-level data such as socioeconomic or marital status, their conclusions could only bear upon trends at the aggregate level. To properly argue support for their findings would require controlling on individual-level characteristics such as socioeconomic status, marital status, and gender because these statuses have been shown to share variance with mental health problems (Turner and Lloyd 1999). In other words, an equally

plausible explanation for the association between mental disorder and neighborhood location is that the psychiatric patients had lower individual levels of SES compared to non-patient residents of the same neighborhoods. Though individual and neighborhood SES are correlated, knowing one's individual SES does not determine the conditions of one's neighborhood and vice versa (South and Crowder 1997; Silver 2000; Silver et al. 2002).

Second, when studying the association between psychiatric disorders and socioeconomic status, there are always at least two competing explanations: social causation and social selection. The social causation perspective suggests that the inverse relationship between socioeconomic status and mental disorders is the result of the conditions of life experienced by lower SES individuals. The social selection perspective argues that the higher rates of mental disorder at lower levels of SES is a result of inter- and intragenerational sorting processes whereby the unhealthy drift to or fail to rise out of lower social positions (Dohrenwend et al. 1992). Although Faris and Dunham speculated that the causal direction most likely favored the social causation hypothesis, they did not have the capacity to rule out the influence of social selection. However, evidence and research since the time of their study supports their speculations for disorders other than schizophrenia (Aneshensel 1992).

The work of Faris and Dunham was pioneering and as Silver et al. (2002) argue, "Stimulated considerable sociological interest in the relationship between social class and mental health," (1457). Their study was pivotal for underscoring the need to examine the role and significance of neighborhoods, social class, and ethnicity, in particular for urban African Americans. As is widely recognized, overlap among these three characteristics is substantial. Indeed, the work of early Chicago School researchers led to a discourse on environment, social class, and social problems. More specifically, there was a surge in research concerning how differences in social class, particularly within large urban cities, were associated with differences in health and criminal behavior (for review see Williams and Collins 1995; Dohrenwend and Dohrenwend 1969; Cohen 1955; Shaw and McKay 1942; Glueck and Glueck 1950). Additionally, various disciplines weighed in with theories concerning extreme and cyclical poverty experienced by urban African Americans in the 1950s, 60s, and 70s. Prominent among these was the "Culture of Poverty" debate concerning intergenerational transmission of poverty particularly among poor urban minorities (Lewis 1968; Moynihan 1965; Blau and Duncan 1967). The culture of poverty debate began in earnest with the release of the Moynihan Report, which

criticized the deterioration of the African American family structure as being primarily responsible for the continued conditions of poverty experienced by many urban African American families. The Moynihan Report characterized many black families as “approaching complete breakdown” with approximately 40 percent of families with no husband present and nearly 25 percent of illegitimate births (Moynihan 1965). As Corcoran (1995) notes both sides of the culture of poverty debate assumed poverty was intergenerational, but disagreed as to its causes. Despite the evidence (Blau and Duncan 1967) that demographic background has only modest associations with occupational outcomes, the culture-of-poverty debate and individual-level measures of SES dominated much of the research concerning environment, social class, and intergenerational status attainment (Wilson 1987).

The impact of the Moynihan report was pervasive among social science researchers who subsequently shied away from researching behavior that might be seen as stigmatizing to certain groups (Wilson 1987). Throughout the next several decades, research on neighborhood characteristics was largely limited to discussions of status attainment (for exceptions see Kasarda 1976, 1989, 1993). Stimulated by critical insights of Wilson regarding the structural correlates that perpetuate the underclass and the changing face of poverty in the 1970s, research on neighborhood environments increased greatly during the 1980s and 1990s. Wilson claims that loss of well-paying manufacturing jobs that employed many less educated blacks from inner cities and the out-migration of the middle class blacks from urban poverty areas combined to reduce the life chances of the remaining impoverished residents and their children. Wilson argues that highly concentrated poverty neighborhoods, high rates of unemployment, and low proportions of middle class residents are some of the problematic structural conditions associated with joblessness.

Like Wilson, Massey and Denton (1993) argue that neighborhood structure matters for a variety of outcomes, most notably the continuation of poor, urban, and typically African American underclass neighborhoods. However, Massey and Denton contend that the defining principle of continued cycles of deprivation experienced by some groups of African Americans is residential segregation. In their view, residential segregation is the principle organizational feature of society that is responsible for the creation of the urban underclass. They argue that segregationist policies and behaviors have fostered an oppositional culture among African Americans that devalues work, schooling, and marriage. While in agreement with Wilson that

the economic transformation of the inner cities contributed to the underclass, they suggest that the effects would not have been so concentrated among poor African Americans if it were not for residential segregation. Residential segregation is therefore critically linked to the erosion of certain neighborhoods, typically defined as high poverty, high minority concentration, into areas of high crime with poor schools and few resources (Massey 1990). To further explicate how continuation of poverty is linked to neighborhoods, Massey states that, “a rise in the black poverty rate produces a dramatic loss in potential demand in poor black neighborhoods, leading to the withdrawal, deterioration, and outright elimination of goods and services distributed throughout the market,” (p. 351).

One of the most in-depth studies of neighborhoods and behavior was conducted by Brooks-Gunn and colleagues (1997a, 1997b). Much of their work was published in a two-volume text entitled *Neighborhood Poverty*. It was the goal of the research team to understand how neighborhood disadvantage influences child and adolescent development and to what extent family-level variables mediate this relationship. Using as many as six data sets, empirical findings from the study covering early, middle, and late adolescence are presented throughout *Volume 1*. Although the outcomes evaluated varied with data availability and age appropriateness, the researchers were able to assess the direct effects of neighborhoods on a variety of behaviors. Two broad findings from their research are as follows: 1) although neighborhood conditions were significant predictors of child development, the effects were smaller than those of family-level conditions, and 2) neighborhood context was non-linear predictor across the life course with effects being most pronounced at early and late adolescence.

The work of Wilson, Massey and Denton, and Brooks-Gunn and colleagues has fostered a recent reinvigoration of neighborhood contextual research. As the landscape of American cities changes, so too does the relative importance of neighborhood contextual conditions on residents' quality of life. While early research has provided a framework in which to study neighborhood context, more recent theories and research underscore how employment and economic and residential segregation operate to influence individuals living conditions. Despite these advances in the ways researchers come to study neighborhoods, substantial gaps remain with respect to the significance of neighborhood context for a variety of outcomes. The body of historical evidence suggests the importance of neighborhood context for an array of outcomes,

therefore, the next section will address how neighborhood context is associated with a variety of outcomes.

Neighborhoods and General Outcomes

The study of neighborhoods is highly relevant within historical and current literature in the fields of criminology, demography, and education and is considered with respect to an array of outcomes such as adolescent development, crime, and delinquency. For example, Elliott et al. (1996) studied neighborhood effects on adolescent development, focusing on prosocial competence, conventional friends, and problem behaviors. They found the effect of neighborhood disadvantage on all outcomes to be significant largely a result of its association with informal control. Krishnakumar and Black (2002) studied the association between perceived neighborhood disadvantage and adolescent competence in a sample of African Americans. They found that ecological risk factors were associated with poor competence as early as ages 5 and 6. Moreover, additional ecological risk factors such as family poverty and maternal alcohol use were additive and the relationship between neighborhood disadvantage and competence was enduring. The authors note that “as children become older, the negative impact of family economic hardship may be overshadowed by neighborhood threats” (Krishnakumar and Black 2002: 261).

Perhaps the most common outcome in neighborhood research has been crime (for a recent review see Sampson and Lauritsen 1994). Sampson, Raudenbush, and Earls (1997) studied the association between neighborhood disadvantage and violent crime assessed in terms of perceived violence, victimization, and homicide. Although some of the association between objective neighborhoods and violence was found to be mediated through collective efficacy, a significant residual amount of variation in the focal relationship remained. Consistent with the conclusions of Sampson and Wilson (1995), Krivo and Peterson (1996) argue that it is community poverty and disadvantage that account for ethnic differences in criminal behavior. Indeed, their findings support Sampson and Wilson’s contention that neighborhood differences in violent crime are largely explained by the association with poverty. They note, “crime rates for racially distinct areas generally approach one another when structural conditions are controlled” (Sampson and Wilson 1995: 642). Hypothesizing that neighborhoods influence ethnic differences in juvenile delinquency, Peeples and Loeber (1994) controlled on an array of

individual and neighborhood-level factors. They found that with such controls, African American and White youths are similar in delinquent behavior. This finding is especially striking considering that, among respondents whose neighborhoods were not labeled as “underclass,” the average African American neighborhood was substantially poorer than the average White neighborhood. Other outcomes that have been linked with neighborhood disadvantage include adolescent sexual activity (Upchurch et al. 1999, Crane 1991, Evans, Oates and Schwab, 1992, Brooks-Gunn et al., 1993) and high school educational outcomes (Crane 1991, Case and Katz 1991, Clark 1992, Brooks-Gunn et al. 1993, Duncan 1994, Aaronson 1997).

Research on these outcomes suggests that there is a consistent yet modest contribution of neighborhood effects after controlling on individual factors. Criminologists have provided the field with an array of theories, measures, and findings that underscore the importance of studying neighborhoods. The question now turns to whether neighborhood characteristics operate in a similar fashion for health. Do the same mechanisms that drive the relationships between neighborhood context and crime, adolescent development, and other outcomes mentioned previously apply to an array of both physical and mental health outcomes? Despite several important studies on the association between neighborhoods and both physical and mental health (see Silver et al. 2002, Aneshensel and Sucoff 1996, Ross 2000), research on neighborhood effects and health has received substantially less attention. I now review research addressing the importance of neighborhood context for an array of both physical and mental health outcomes including self-reported physical health, number of chronic conditions, physical limitations, mortality, depression, and substance use.

Neighborhoods and Physical Health Outcomes

Given the rich tradition of examining the significance of environmental context, it is not surprising that community health researchers have also taken interest. Building on the work of Wilson (1987), Mayer and Jenks (1989), and Brooks-Gunn et al. (1997), attention to the importance of neighborhoods for one’s health has received recent attention. Although the outcomes described in this section, such as self-reported health, mortality, and physical functioning are more general health outcomes, there is reason to believe that neighborhood effects may operate in a similar fashion for mental health. In many cases, there is a strong association between physical and mental health as they are both indicators of one’s well-being.

Therefore, it is likely that neighborhood characteristics may influence both physical and mental health in a similar way. However, within most adolescent populations, the prevalence of physical health problems is quite low and the correlation between physical and mental health in the present study is .27. Adolescents and young adults are typically a physically healthy group and have yet to experience many of the chronic conditions associated with aging. Therefore, if neighborhood characteristics are to be implicated for health and well-being among younger populations, it is likely that such problems would manifest in terms of mental health problems or physical traumas. But are the pathways linking neighborhoods to physical and mental health disparate or concordant? A review of current research on neighborhood context and physical health provides an opportunity to compare and contrast findings mental health outcomes. Accordingly, a review of research on the neighborhood linkage with physical health appears useful and important as this linkage may provide insight into the importance for mental health.

Studies examining the relationship between neighborhood characteristics and physical health are relatively consistent. Most studies have found significant associations between neighborhood context and physical health after controlling on individual characteristics, while a few have found this relationship to be adequately explained by differences in individual-level variables. For example, Robert (1998, 1999) examined three operationalizations of socioeconomic context (neighborhood context, family wealth, and individual socioeconomic status) and their relative associations with self-reported physical health. Using self-reported physical health, number of chronic conditions, and physical limitations as indicators of health status, she found significant associations between neighborhood socioeconomic characteristics and individual health, controlling on family and individual socioeconomic status. Although not all indicators of neighborhood context were significantly associated with every health outcome, modest but significant associations were found between at least one dimension of neighborhood context and each measure of health. Overall, Robert's research offers support for the hypothesis that neighborhood contextual conditions are associated with physical health, but the strength of the associations was relatively modest. Marinacci et al. (2004) studied the role and significance of individual and neighborhood socioeconomic context on mortality. When they took into account both individual SES and an index of neighborhood contextual conditions, they found both to be significantly associated with all-cause mortality. Additional studies also support the contention that neighborhood socioeconomic characteristics are associated with mortality above

and beyond individual socioeconomic status (Haan, Kaplan, and Camacho 1987; Anderson et al. 1997; LeClare et al. 1997). Using an array of objective neighborhood contextual measures to form a neighborhood disadvantage index, Ross and Mirowsky (2001) found an association between neighborhood context and an index of physical health, operationalized as self-reported physical health, physical functioning, and absence of chronic conditions, above and beyond individual socioeconomic status.

In contrast, Browning and Cagney (2003) failed to observe such an association. They found an objective measure of neighborhood poverty to be unassociated with self-reported physical health controlling on individual socioeconomic status. However, their measure of affluence suggested health protective effects on individuals net of the effect of structural and individual controls. They suggest that, “measures of the proportion of residents who are poor in a neighborhood may be capturing, in part, the influence of the absence of residents with resources,” (Browning and Cagney 2003: 565) which is similar to Mayer and Jencks’ argument that in some circumstances there is an advantage to having advantaged neighbors.

Prior research has generally found an association between neighborhood context and physical health. However, the magnitude of the relationship is modest after controlling on an array of individual factors. The modest magnitude of the association raises questions about the utility of neighborhood contextual measures in models that predict physical health. While this critique is somewhat justified as most studies show that neighborhood characteristics account for only 5 to 10 percent of the variance (Leventhal and Brooks-Gunn 2000), the consistent finding of any observed association between macro-level neighborhood conditions and individual physical health warrants continued research. However, the question is now raised addressing the utility of neighborhood context in explaining mental health problems. Do neighborhood characteristics operate in a similar fashion for mental health outcomes and are the associations stronger or weaker? I now review current studies addressing the relationship between neighborhood context and mental health including an array of diagnosable disorders, depressive symptomatology, and substance use.

Neighborhoods and Mental Health Outcomes

Although the observed association between neighborhood context and physical health outcomes is relatively consistent, recent findings on neighborhoods and mental health outcomes

has been mixed. Research in the field is varied with respect to the outcome examined, the study population, and the operationalization of objective neighborhood characteristics employed. For example, mental health broadly defined can include classifiable internalizing and externalizing disorders, substance use, and psychological distress. Additionally, studies have included populations that varied on ethnic backgrounds and age. Moreover, much of the research that does focus on neighborhoods and mental health is linked to research on socioeconomic status and mental health. By conceptualizing SES in a variety of ways, researchers have attempted to link socioeconomic conditions at the individual-level to more macro-level neighborhood characteristics. The variety within this area of study can be seen as a weakness because research efforts lack clear consensus and uniformity on any one measure, population, or outcome. However, the association between neighborhoods and multiple outcomes within varied populations speaks to the potential explanatory power of neighborhoods. Although this broad approach to exploring the utility of neighborhoods for explaining variations in mental health problems constitutes potential advancement in many areas, it makes clear conclusions about the state of the field difficult.

In a recent study using data from the ECA, Silver, Mulvey, and Swanson (2002) sought to explore the relationship between neighborhoods and mental health problems. Using a neighborhood disadvantage index, they found that neighborhood disadvantage was associated with major depression and substance abuse disorder, but not schizophrenia, net of individual socioeconomic characteristics. However, residential mobility, an indicator of neighborhood stability, was associated with all three mental disorders. Likewise, Boardman et al. (2001) examined the relationship between neighborhood disadvantage and drug use in a sample of Detroit area adults. They found a significant association between neighborhood disadvantage, defined as an index of Census operationalizations of neighborhood characteristics, and drug use net of individual socioeconomic and demographic characteristics. Additionally, the relationship was stronger among individuals with low levels of SES. Using a representative sample of Illinois adults, Ross (2000) explored the relationship between neighborhood disadvantage and depression. She found support for the focal relationship net of an array of sociodemographic variables including individual measures of socioeconomic status. Though more than half of the focal relationship is explained through sociodemographic controls, there remained a significant association between neighborhood disadvantage and depression. Ross, Reynolds, and Geis

(2000) explored the conditional effects of neighborhood stability on the relationship between neighborhood socioeconomic context and both depression and anxiety. Their results support a relationship between neighborhood stability and mental health contingent upon the socioeconomic level of the neighborhood. Findings from these studies support the claim that neighborhood context is associated with mental health outcomes net of the individual characteristics of the respondents. However, when controlling on individual socioeconomic status, the observed magnitude of the association is modest at best.

Although these relationships appear consistent across outcomes within adult populations, the question of whether neighborhood contextual conditions affect children and adolescents has been sparsely addressed. For these populations, neighborhood residence is determined by the actions, achievements, and preferences of others, typically the child or adolescent's family. As Aneshensel and Sucoff (1996) note, "Families select themselves into communities on the basis of characteristics of the communities. Some of this selection may entail factors directly pertinent to adolescent mental health..."(p. 306). Thus, children and adolescents can be selected into a neighborhood context on the basis of family preferences and not their own mental health, which is typically the social selection argument made for adults. McLeod and Edwards (1995) explored the relationship between neighborhoods, poverty and children's mental health. Their results support the conclusion that both family and neighborhood context make significant independent contributions to children's mental health. They also found the effects of certain aspects of neighborhoods such as living in an urban area to be related to children's mental health, all other factors controlled. However, because children's mental health was assessed from parent's reports, which are potentially biased, the findings should be interpreted with caution. In another recent study, Wheaton and Clarke (2003) used a life course perspective that estimated neighborhood contextual effects and their association with early adult mental health problems. They found that, controlling for the effects of individual level and family level factors, neighborhood context in childhood was a predictor of early-adult mental health. In their view, stress exposure and the temporal sequencing of context should be accounted for when estimating neighborhood effects on mental health. The current study follows these suggestions. The estimates of social context including neighborhood context and family context, as well as potential mediators such as stress exposure, are temporally prior to the outcome of interest.

Although there is substantial agreement that there is an association between neighborhood conditions and mental health, this association has been found to be mediated, either partially or entirely, through related social phenomena (e.g. collective socialization and perceived neighborhood disorder). For example, Ross (2000) examines the risk of adult depression in a community sample of adults. She finds that, above and beyond the individual characteristics of race, ethnicity, gender, age, education, employment, income, household structure, and urban residence, neighborhood context remained a significant predictor of adult depression. In addition, many of the contextual effects of neighborhoods on depression were found to be mediated by perceptions of neighborhood disorder. Using the Ross and Mirowsky scale of perceived neighborhood disorder, Ross argues it is perceived neighborhood disorder arising from poor neighborhood conditions that matters for depression. Conceptually concordant findings were reported from the Ross, Reynolds, and Geis (2000) study, reviewed above. These findings suggest that the relationship between neighborhood economic circumstance and mental health is conditioned by residential stability. They hypothesized that two potential mediators of the neighborhoods-mental health relationship, perceived social ties and perceived social order, might explain the focal relationship. After controlling on mediators and individual-level characteristics, evidence from their study supports the contention that stable disadvantaged neighborhoods with little residential turnover were detrimental for the mental health of the residents whereas residential stability in affluent neighborhoods benefited the mental health of the residents. Moreover, similar to findings from Ross (2000), evidence suggests that associations with perceived neighborhood disorder explain the relationship between objective neighborhood characteristics and mental health. However, at least one study did not find any mediating effects of related social phenomena (Kasl and Harburg 1975). Although residents in a community sample exhibited clear differences in perceptions about their neighborhoods, there were no significant differences in mental health by neighborhood. Moreover, neighborhood perception did not show a consistent association with mental health.

Although most studies take advantage of objective Census-level data as operationalizations of neighborhoods, some studies rely on subjective accounts. As McLeod and Nonnemaker (2000) argue, “They [aggregate indicators of neighborhood characteristics] may remain removed from the proximal conditions that are immediately relevant to psychological well-being,” (139). Although the current study does not assess subjective neighborhood

experience, it is appropriate to review current research within the field. For example, in a study of middle school students, Crum, Lillie-Blanton, and Anthony (1996) explore the relationship between subjective neighborhood context and illicit drug exposure. Results indicated a significant association between perceived neighborhood disadvantage and exposure to cocaine whereby youth in the most disadvantaged neighborhoods were 5.6 times more likely to have been exposed to cocaine than residents from less disadvantaged neighborhoods. As the researchers did not account for family level socioeconomic status in their model their results should be interpreted with caution. D’Imperio, Dubow, and Ippolito’s (2000) research suggests that perceptions of neighborhood disadvantage are associated with internalizing disorders such as depression and anxiety. In a small sample of middle-school students in which 50 percent were from families below the poverty line, they found that those individuals who were classified as “high stress” had significantly higher depression and anxiety symptomatology scores than individuals who were not classified as “high stress.” “High stress” was operationalized as elevated scores on a major life events/neighborhood perception scale. Finally, McLeod and Nonnemaker (2000) argue that perceived neighborhood disadvantage is a potential mediator for the relationship between childhood poverty and mental health problems. After the researchers included an array of potential mediating variables, results indicated that perceived neighborhood disadvantage was a powerful explanatory variable for whites, but not African Americans or Hispanics.

Although evidence suggests subjective assessments of neighborhood characteristics are associated with mental health outcomes, these conclusions should be interpreted with caution. It is highly likely that results from these studies suffer from present state bias—a condition where individuals’ perceptions about their surrounding environment may be influenced by their current mental health status. In other words, individuals with higher levels of psychological distress are likely to view their neighborhoods as more dangerous and detrimental to their own health. Studies that use objective measures of neighborhood status generally do not suffer from this form of bias, because it is unlikely that an individual’s mental health status could influence the aggregate characteristics of a neighborhood.

It is clear from prior research that neighborhoods represent a dimension of social context that is associated with mental health problems. However, neighborhood context is only one dimension of social context experienced by children and adolescents. To a large extent,

available evidence treats the contextual dimensions of family structure and family socioeconomic status in isolation from neighborhood context. For example, only a few studies (Aneshensel and Sucoff 1996; Brooks-Gunn et al. 1997; Wight et al. 2005) consider the mental health relevance of both family structure and family economic context. Families are perhaps the primary agents of socialization in a child's life and as such variations in family structure and family socioeconomic resources presumably condition the development, growth, and well-being of children. Studies that do not account for variations in family type and family socioeconomic conditions may be missing important elements of adolescent social context that are relevant for their mental health. In addition, it is unclear from prior literature whether the neighborhood-mental health relationship is conditioned by variations in family type or family socioeconomic conditions. Variations in the neighborhood/mental health relationship may also be explained by differences in other potential mediators. Among these, family social support and exposure to social stress may be particularly significant. The current study assesses multiple dimensions of social context for adolescents including the following: neighborhood characteristics, family type, and family socioeconomic status. In addition, this study addresses a set of potential mediators hypothesized to explain the focal relationship between neighborhoods and mental health including family process variables and a relatively comprehensive set of lifetime major and potentially traumatic events. The next major section reviews research concerning the relationship between family context and mental health in two subsections: family structure and family socioeconomic status.

Family Structure and Mental Health Outcomes

The role and significance of family structure for mental health has long been a topic of sociological interest. Over the past 50 years, alternative family types such as single parent families, stepfamilies, same-sex parent families, and extended families have become more commonplace in mainstream American society (Fields and Casper 2001; Glick 1990). This fact raises the possibility that associations between family structure and adolescent well-being will have changed as well. Historically, divorce and single parent families have been recognized as events and contexts that put children at elevated risk for mental health problems.

Research on family structure and mental health has suggested an association between family type of origin and adolescent depression. Evidence from a body of research suggests

adolescents from two-parent families suffer from fewer mental health problems than adolescents from non-traditional families. For example, Gore, Aseltine, and Colton (1992) found that adolescents from single parent families report higher depressive symptomatology than adolescents from two-parent families. The contrast between stepfamilies and two parent families, however, was not statistically significant. Aseltine (1996) also examined the effect of parental divorce on adolescent mental health. Comparing children from ever-divorced families (a secondary comparison between single and remarried families was also examined) to those from intact families yielded no significant differences in adolescent mental health. However, when disaggregating the stepfamilies from the single parent families, results suggested that children from single parent families suffer worse mental health than children from intact families, with children from stepfamilies located somewhere in between. In a large community-based study conducted in the Netherlands, Garfenski and Diekstra (1997) found significant differences in emotional problems by family type. Specifically, children from single-parent families and stepfamilies reported more symptoms of anxiety and loneliness, and more depressed mood than children from two-parent families. In another Dutch study, Spruit and de Goede (1997) found results similar to Aseltine (1996) that children in single-parent families had the lowest psychological well-being while those from two-parent families experienced the highest well-being with stepfamilies somewhere in between. Moreover, these relationships remained observable when the powerful potential mediator of family income was controlled. Finally, Barrett and Turner (2005) used the current study's data to show that family structure was associated with psychological distress. In addition to exploring typical explanations for the association such as family economic resources and family support, they argue that social stress is also a powerful mediating variable in the relationship between family structure and psychological distress.

Related research has found an association between parental divorce and adolescent mental health. Because by definition divorce results in youth spending at least some time in a single parent household or stepfamily it is appropriate to examine this body of research. A large body of research has shown that divorce represents a stressful experience for children and adolescents that may have both short (Rutter 1979; Hetherington 1979) and long term (Hetherington, Cox, and Cox 1978) consequences for adolescent well-being. Despite some well-recognized methodological limitations, the majority of these studies have suggested that children

of divorce are more likely to experience mental illness than children from two-parent families (Amato and Keith 1991). The effects of divorce may be painful and acute. Moreover, the experience and ramifications of divorce often result in a protracted series of stressful life experiences for children and adolescents. Mechanic and Hansell (1989) provide examples of such events as residential and school changes, family economic problems, custody disputes, and potential separation from friends.

Residence in one of the family types at risk for adverse adolescent outcomes can be a marker for other potential adverse situations such as financial difficulties and family conflict that, in turn, may account for the relationship between family structure and adolescent mental health. Two potential explanations for family structure differences in adolescent mental health, family processes and socioeconomic resources, have received primary attention. Some researchers have found that family structure differences are mediated entirely through family processes (Adlaf and Ivis 1996) while others find that significant differences remain (Gil et al., 1998, Turner et al. 1991). Family processes can include such dimensions as family conflict before and after divorce, parental social support, the role of nonresident fathers, and parenting style. For example, Amato, Loomis, and Booth (1995) argue that parental marital separation can be beneficial to children in married families with high levels of conflict. However, divorce is more detrimental to children if they perceive little overt conflict prior to divorce. Their findings are consistent with other research showing the role of conflict in the family structure–mental health relationship (Furstenburg and Cherlin 1991; Barber and Eccles 1992).

Another prominent explanation for the association between family structure and adolescent mental health is disparity in economic resources by family type. It is well established that single parent families have fewer financial resources than either stepfamilies or two-parent families (Fields 2003). However, SES variations in family structure provide only a partial explanation for differences in adolescent mental health (McLanahan 1997; Gil et al. 1998; Albrecht et al. 1996). Thus, it appears that the mental health significance of family structure goes beyond the effects of associated differences in economic resources. Moreover, studies on the effects of family structure on mental health have not been limited to children and adolescents. In a recent study, Gilman et al. (2003) examined how early childhood family disruption is associated with adult depression, suggesting that the structure of one's family of origin may have consequences across the life course.

Although many of these studies show a clear relationship between family type and mental health, there is relatively little research that incorporates neighborhood measures as a potential explanation for family type differences in mental health. Unemployment rates, poverty rates, and other macro-level social and economic characteristics could all have an impact of the well-being of community residents and may account for observed family type differences in risk of mental health problems. The current study will attempt to bridge this gap and assess how family structure operates in conjunction with neighborhood characteristics to provide a more comprehensive estimation of the mental health significance of adolescent social context.

Family Socioeconomic Context and Mental Health Outcomes

Family socioeconomic status represents an important and meaningful context for child development and well-being. Duncan et al. (1998) report an important correlation between parental socioeconomic status and child outcomes. Indeed, there is little doubt that children from lower socioeconomic backgrounds experience childhood differently from more advantaged children. Given this consistent finding, the question turns to why it is that parental socioeconomic status, typically indexed by one or more of occupational level, education, and income, matters for the well-being of children? I present ideas and findings that show how each dimension of parental socioeconomic status represents an important dimension of social context for children. Then, I present findings that support the association between parental socioeconomic status, variously defined, and children's physical and mental health outcomes.

Kohn (1972) argues that, "The family...is important principally because of its strategic role in transmitting to its offspring conceptions of social reality that parents have learned from their own experience" (p. 300). That is, primarily through occupation and education, parents acquire values and orientations that they pass along to their children. Children's experiences, therefore, are conditioned by their parents' level of education and occupation type. Varying occupations are characterized by different work circumstances that are thought to shape the values, attitudes and orientations (Kohn 1969). For those working in higher level occupations, pay and security are taken for granted and characteristics like freedom and creativity are emphasized. For lower level occupations job security, fringe benefits, and pay are emphasized. Higher-level occupations tend to be characterized by autonomy, self-expression, and individual creativity and accomplishment. Lower level occupations, in contrast, are characterized by

routinization, closeness of supervision, and noisome working conditions (i.e., noise, hazardous conditions, extreme heat, humidity, and atmospheric conditions) (Kohn 1969, 1972; Link, Dohrenwend, and Skodol 1986). Kohn (1969) argues that occupational self-direction has the greatest impact on parental orientations and the values they inculcate to their offspring. When making the distinction between those occupations that are or are not self-directed, he notes, “Insofar as men are free of close supervision, do complex work with data or with people, and work at complexly organized tasks, their work is necessarily self-directed. Insofar as men are subject to close supervision, work with things, and work at simply organized tasks, their work does not permit self-direction” (1969, p. 140).

How then is the complexity and self-direction of parental employment important for the children? Kohn argues that parental occupational experiences condition the values they confer on their children and reinforce through praise and criticism. Middle class parents, whose jobs are relatively self-directed, tend to reinforce values consistent with self-direction. Conversely, working class parents, because of the lack of self-direction in their employment, tend to bestow orientations that emphasize conformity to authority (Kohn 1969). Occupational level is, therefore, important not only for the mental health of parents, but because it provides a context for children reflected in the parental values and orientations resulting from characteristics of parents’ work (Kohn 1969, 1972; Link, Lennon, and Dohrenwend 1993; Tausig 1999).

Many of the same arguments that were made for the importance of parental occupation in childhood health can be made for parental education. Ross and Wu (1996) argue that education is the key to one’s position in the stratification system and conditions both future occupation and income levels. Kohn (1969) also notes that education is a more powerful explanatory variable than occupational position in explaining dimensions of values. Parental education is meaningful for children because it indexes not only variations in knowledge resources but also because of its positive association with occupation, income, parenting style, and parental support (see Wickrama et al. 1998). Researchers have argued that there are variations in the availability of cognitively stimulating materials and experiences by socioeconomic status whereby children from lower SES families consistently lack access to such materials and experiences (Bloom 1964; Bradley et al. 2001). It stands to reason that well-educated parents are more likely to encourage and foster a learning environment that is cognitively stimulating. Although education is strongly associated with other measures of socioeconomic status, it is important in its own

right. Supporting this claim, Kohn (1969) concludes “education and occupational position are each related, independently of the other, to almost all aspects of values and orientation,” (132). Additionally, low parental education is most strongly linked to authoritarian conservatism suggesting more rigid and ineffectual parenting styles, values, and orientations.

Perhaps the most obvious dimension of parental socioeconomic status in terms of its consequences for children’s social context is income. Abundant research has shown that children from families with higher incomes experience childhood differently than those from lower incomes. Though much of the literature on parental income and its consequences for children has focused on poverty, it is important to recognize that differences in income above the poverty line may also matter with respect to the social context of children. However, there is generally a weaker observed association between parental income and child outcomes than for the other two dimensions of socioeconomic context (Entwisle and Astone 1994; Hauser 1994).

I contend that, taken together, these dimensions of parental socioeconomic status specify meaningful variations in the social contexts within which children develop. But what is the association between this socioeconomic context and health outcomes? There have been a number of research findings citing the importance of SES in child development, cognitive functioning, problem behavior, delinquency, and achievement (Brooks-Gunn et al. 1997). Additionally, there is abundant research on socioeconomic status differences in child and adolescent physical and mental health. The accumulated evidence suggests that parental socioeconomic status is associated with child physical health problems including: low birth weight, respiratory illness, and poor growth. Additionally, parental socioeconomic status conditions health status across the life course and has been linked to higher rates of diabetes, hypertension, cardiovascular disease, increased mortality, and mental health problems in adults (Gillman 2002; Gilman et al. 2002). Although many of these problems do not have first onset until adulthood, there is some evidence that physical and mental health problems begin in childhood and adolescence suggesting that social context also has lasting health effects across the life course (Gilman et al. 2002 9-13). What is clear from accumulated evidence is parental socioeconomic status represents a “fundamental cause” of disease for children as it affects multiple disease outcomes including physical and mental health problems across the life course (Link and Phelan 1995).

The three dimensions of socioeconomic status (education, occupation, and income) can be used to comprise an index adequate for estimating variations in family socioeconomic context and for assessing the potential relevance of such context for the mental health of children as part of this study. To this point, I have reviewed relative literature on the association between social context and both physical and mental health outcomes, however, I have chosen only to focus on mental health as an outcome for this study. While the association between social context and physical health outcomes is important in its own right, it is beyond the scope of the present study. Next, I review supporting evidence for children's mental health problems as a meaningful and relevant outcome to be studied. Specifically, I show how depression is an important problem for adolescents and young adults.

Depression as an Outcome

Results from the Epidemiological Catchment Area Study (ECA) as reported by Kessler et al. (1994) and other findings from representative community samples clearly indicate that the prevalence of diagnosable mental health problems is high. A substantial minority of individuals met DSM lifetime criteria for one or more mental illnesses with approximately one third meeting criteria within the past year (Kessler and Zhao 1999). More recently, using the present data Turner and Gil (2002) found that "more than 60 percent of the sample met criteria for 1 or more study disorders some time during their lives, and 38 percent did so during the 12 months preceding the interview" (Turner and Gil 2002: 45). As at least one major study notes (National Comorbidity Study), major depression is the most common mental illness in the U.S. affecting nearly 10 percent of the population annually. Of the approximately 44 million Americans that suffer from a diagnosable mental disorder in a given year, nearly half suffer from some form of depression (NIMH 1999).

Many researchers have shown that even a few symptoms of depression can interfere with core role performance and thus hamper the activities of daily living (Mirowsky and Ross 1989). To the degree that one's activities are altered or one's role performance is impeded, even low levels of depressive symptomatology are associated with role-impairment. Additionally, as Pearlin (1989) has stated, psychological distress not only allows us to understand the suffering of individuals, but also is perhaps a reflecting pool for the organization of society. In other words, differential reports of depressive symptomatology reflect the unequal distribution of valued

resources and suffering within a society. At the very least Pearlin's assertion underscores the importance of studying symptoms of depression. Building on this assertion that even symptoms of depression are of social importance while reflecting the inequality of resources, depressive symptomatology represents a significant and practically important research outcome. As the data allow for an estimation of depressive symptomatology as measured by the CESD, variations this outcome by each component of social context will be considered.

Summary and Aims

There are several conclusions to be drawn from previous research on neighborhoods, family type, family SES, and mental health. First, it is most often the case that individuals from disadvantaged social locations experience more mental health problems. That is, those residing in neighborhoods characterized by high unemployment and poverty with poor social organization, children from nontraditional families, and those from families of low socioeconomic status have more mental health problems than more advantaged children and adolescents. Although some studies include more than one of these dimensions in risk for mental health problems, most often these dimensions have been studied in isolation. In an attempt to more comprehensively estimate the mental health significance of child and adolescent social context, I examine the independent and joint predictive power of multiple aspects of two dimensions of social context: 1) neighborhood context in terms of multiple indices of characteristics, and 2) family context as estimated by family structure and family socioeconomic status. More specifically, this study pursues the following aims:

A1: To provide a descriptive analysis of multiple aspects of the two dimensions of social context and their associations with psychological distress.

A2: To explore the individual and joint contributions of an array of indicators of neighborhood and family context for mental health.

A3: To consider the explanatory role of family processes and social stress on the joint and independent associations between the two dimensions of social context and mental health.

CHAPTER 4

METHODS

Sample

Data for this research paper come from a study that builds on a previous three-wave investigation from the Miami-Dade, Florida public school system (Vega and Gill, 1998). All of the county's public middle schools and all of the public high schools, as well as alternative schools, participated in this community-based study. Private schools were not included in the sampling frame. Participating students were selected from the 6th and 7th grade class rosters and questionnaires were administered annually between 1990 and 1993—concluding when participating students were in grades 8 and 9. Consent forms were sent to parents of the total population of 9,763 males students scheduled to enter sixth and seventh grades, and of 669 female students from six schools. Of these 10,432 prospective participants, completed questionnaires were obtained from 7,386 respondents at wave 1, 6,646 respondents at wave 2, and 5,924 respondents at wave 3. Time 1 participants were highly representative of the target ethnic distribution (25% Non-Hispanic White, 25% African American, 25% Non-Cuban Hispanic, and 25% Cuban), which approximates the population from which they were drawn. This was also true for the Time 3 participants, despite nearly 20 percent attrition across the three data points (Vega and Gill, 1998).

Within ethnicity, all female participants in the first three waves and a random sample of 1,264 male participants were selected for follow-up interviews in 1997 when 93 percent of the sample was between 19 and 21 years of age. To supplement the sample of females to achieve the target gender distribution, the Miami-Dade county sixth and seventh grade class roster from the year of wave 1 data collection was employed as the sampling pool. 909 new girls were randomly selected from this pool, and stratified to achieve the target ethnic distributions. Overall, 70.1% of those searched for and recruited to the study were successfully interviewed. Although a significant number of the target sample had left the area for college or other reasons, we succeeded in interviewing 76.4 percent of those previously studied. In 2000, the ethnic distribution of young adults consisted of 57% Hispanic (approximately ½ were of Cuban origin), 24% Non-Hispanic White and other Non-Hispanics, and 19% African American.

Comparisons of those interviewed with the random sample drawn from the original study population revealed no statistically significant differences on a wide array of early adolescent behaviors and family characteristics that are likely to be relevant to mental health and substance use risks. These comparisons and the 76.4 percent follow-up success rate bolster the conclusion that the sample is representative of the population from which it was drawn.

In contrast, the 58.2 percent success rate among the supplementary sample of new girls was found to be associated with a significant bias with respect to parental socioeconomic status. To correct for this bias, female participants have been differentially weighted in all analyses to achieve a distribution on SES that approximates that observed for male participants. As parental socioeconomic status is a primary independent variable within this paper, special consideration should be paid to this bias.

The sample size is 1803, however, 17 cases are missing because they fell outside the criteria of one of the four main ethnic groups: Non-Hispanic White, Non Cuban Hispanic, Cuban, and African American. In addition, there were 4 cases missing on the outcome of interest, psychological distress. Similarly, missing neighborhood level data was responsible for 48 missing cases and those who did not conform to one of the four family types (26 cases) considered were omitted. Parental socioeconomic status data were missing for 9 cases. The final sample size is 1702 cases.

Parent Interviews were also conducted at wave 1. The success rate for these thirty-minute telephone interviews was 67 percent. Parents were asked a separate set of items about themselves and the respondent. The parent interview included items such as: early child emotional and behavioral problems, early family characteristics, as well as parents' own education, income, and occupation.

Research Setting

The city of Miami and surrounding Dade County, Florida was the setting for this study. Although visitors tend to view Miami as a tropical paradise, complete with exotic vegetation, warm weather, and miles of beautiful beaches, residents of Miami understand the dual nature of the city (Vega and Gil, 1998). It is a bicultural city (Hispanic and Anglo) with multiple ethnic enclaves, each with its own set of rules and customs, as well as social hierarchy (Portes and Stepick, 1993). Miami does not conform to traditional models of cities in terms of ethnicity,

social class, or religious patterns. Unlike many depictions of urban city life, Miami does not resemble the large cities of the Northeast with which many researchers have been concerned. In order to survive in Miami, one must adopt multiple cultures, retreat into one's own cultural enclave, or move (Portes and Stepick, 1993). With such clearly defined boundaries based on ethnicity and culture, neighborhoods in Miami are perhaps necessarily meaningful entities.

Multi-level Modeling Issues and Concerns

In the relationship between multi-level social and structural characteristics and individual-level mental health, there are several methodological issues that must be addressed. First, research has supported the hypothesis that neighborhood characteristics are associated with poor health and the association unfolds with poor mental health a result of living in economically and socially deprived neighborhoods. This hypothesis is known as social causation. However, an equally plausible explanation for this observed relationship is that individuals with poor mental health suffer a variety of setbacks that select them into lower quality neighborhoods. Therefore, lower quality neighborhoods may be composed of a greater proportion of individuals with mental health problems. It is likely that both processes operate simultaneously and cross-sectional data are particularly vulnerable to this interpretation ambiguity (Bingenheimer and Raudenbush 2004). Although longitudinal data do not resolve this issue entirely, studies using longitudinal data are less likely to suffer from selection issues.

Second, drawing inferences and conclusions about individual-level mental health from multi-level characteristics may be prone to bias known as the ecological fallacy. As stated earlier, the ecological fallacy occurs when making inferences about individuals' mental health outcomes based on the attributes of a group. Schwartz (1994) argues that cross-level inference is a validity problem and not unique to ecological-level analyses. Ecological variables can make a unique contribution to individual outcomes provided inferences are not made about the same concept at the aggregate and individual level (i.e. neighborhood ses to individual ses; group mental health to individual mental health). For this study, social context is conceptualized as an ecological-level construct from which no inferences are made about individual context and individual mental health is not inferred from group mental health. Therefore, the ecological fallacy is not likely a methodological problem.

Third, when attempting to draw conclusions about the relationship between aggregate characteristics and individual mental health, it is necessary to control on individual-level variables (Yen and Syme 1999, Diez-Roux 2000). Perhaps the most common example of this technique is in the relationship between socioeconomic status and mental health. Although it may be that living in an economically deprived neighborhood is associated with an individual's poor mental health, this relationship may be an artifact of inter-individual differences in socioeconomic status. Not controlling for individual-level measures of socioeconomic status could potentially lead to false conclusions.

Finally, in a recent review by Bingenheimer and Raudenbush (2004), they call for more sophisticated thinking about multi-level causal inference concerning health outcomes. Specifically, they suggest that more careful thinking about the inclusion or exclusion of particular individual-level variables that may mediate or confound relationships. For example, individual SES could mediate and confound the relationship between neighborhood SES and health. Individual SES would be a mediator if neighborhood SES blocked one's job opportunities; this may lead to ongoing individual poverty, which in turn may lead to poor health. Individual SES could be a confounder if it blocks access to quality health care and one's residential options (Bingenheimer and Raudenbush 2004)². The authors note how such cases yield improper model estimations when including the potential mediating and confounding variable or not.

In this same review, the authors also confront the decision to use a single measure of neighborhood characteristics or construct an index composed of several measures. They note how any given neighborhood characteristic tends to be highly correlated with the others making interpretation of independent effects difficult. Conversely, if indices including several measures are chosen to specify the model, practical interpretation becomes more vague as results are reported in unit change in neighborhood index (Bingenheimer and Raudenbush 2004).

These methodological considerations, although acknowledged, are sometimes difficult to address in practice. Given the limitations of community-based samples (for example N size, sampling frame, etc.), it is rarely possible to specify a model that takes full account of these

² It may also be the case that this association partially runs in the opposite direction with individual SES leading to poor health and selection into poor neighborhoods (which is the causation/selection issue). Importantly, the authors note that including or excluding variables is ultimately a complex problem and more careful thought should be used in multi-level model specification.

considerations. As with any model, there are always potential competing explanations since it is not possible to consider the full range of possible contributing variables. Although this is clearly the case in the present study, the data allow for the estimation of the unique contribution of social context to individual mental health while considering meaningful potential explanatory variables.

Assessing Neighborhood Context

Studies of neighborhood characteristics have employed an array of operational definitions (for a review see Ginther et al. 2000). Some studies have used traditional Census-block and Census-tract level structural measures, others have used subjective accounts of neighborhoods, and still others have used both. For example, Aneshensel and Sucoff (1996) claim that neighborhood typologies are necessary to study differences in adolescent mental health. They argue that neighborhoods should be examined using typologies because they capture the impact of the unequal distribution of SES across race/ethnic profiles in their sample area, Los Angeles. Similarly, Kasarda (1993) operationalized neighborhood disadvantage in terms of 4 types using tract-level census data: poverty neighborhoods, extreme poverty neighborhoods, distressed neighborhoods, and severely distressed neighborhoods. He showed regional distribution of such neighborhoods by ethnicity over time. Alternatively, Ross (2000) believes that neighborhood context is best captured using subjective accounts of neighborhoods called perceived neighborhood disorder. Although Ross used Census-level measures of neighborhood disadvantage in the model, her study supports the idea that subjective perception of neighborhoods is what matters for psychological distress. Similarly, Ross and Mirowsky (2001) find the same association whereby neighborhood disorder is the strongest mediator when examining physical health outcomes.

More recently, Silver et al. (2002) used nine census-level measures to create three indices of neighborhood characteristics. Building on the work of Faris and Dunham (1929) and using measures laid out by Sampson et al. (1997), they show that some indices matter for some outcomes while others matter for other outcomes. However, the neighborhood disadvantage index was the most powerful predictor of all studied outcomes. Krieger (1991, 1992) has used another approach, combining census occupational data into meaningfully grouped class-based measures of neighborhood SES that have been shown to be associated with physical health outcomes such as breast cancer. Additionally, researchers have used broad measures of

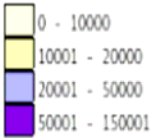
neighborhood context such as average family income (Datcher 1982), percent of workers with professional/managerial jobs (Crane 1991), percentage of economically disadvantaged school peers (Evans, Oates, and Schwab 1992), and percent of households in poverty (Aaronson 1997).

Measures

Following the logic of Silver et al. (2002) and Sampson, Raudenbush, and Earls (1997), an exploratory principal components factor analysis was conducted on a number of 1990 Census items traditionally used in research on neighborhood characteristics. The 1990 Census was chosen because this year approximated the time frame during which adolescents were first interviewed (6th and 7th grade during the 1990-1991 school year). These measures correspond to neighborhood conditions adolescents would have experienced while growing up and making the transition to adulthood. Although approximately 50 respondents had incomplete information from which to gather neighborhood characteristics, this represents only a three percent loss of the total sample. The items chosen derive from and are thought to represent theoretically meaningful constructs such as: neighborhood disorganization, poor institutional resources, and a deleterious environmental and developmental setting. In addition, the location of the study provides a useful area to study neighborhood characteristics: Miami-Dade County. To show how a subset of neighborhood measures are arrayed across Census Block Groups, Figures B and C present the median family income and poverty percentage of Census Block Groups in a cross-section of Miami-Dade County. A Varimax rotation, an orthogonal rotation method that simplifies the interpretation of factors, of the Census items produced three unique components: neighborhood disadvantage, immigrant concentration, and residential mobility. Eigenvalues were 7.25, 2.69, and 1.32, which explained 52%, 19%, and 9% of the variance, respectively. Results are presented in Table 1.

Data Classes

Dollars



Features

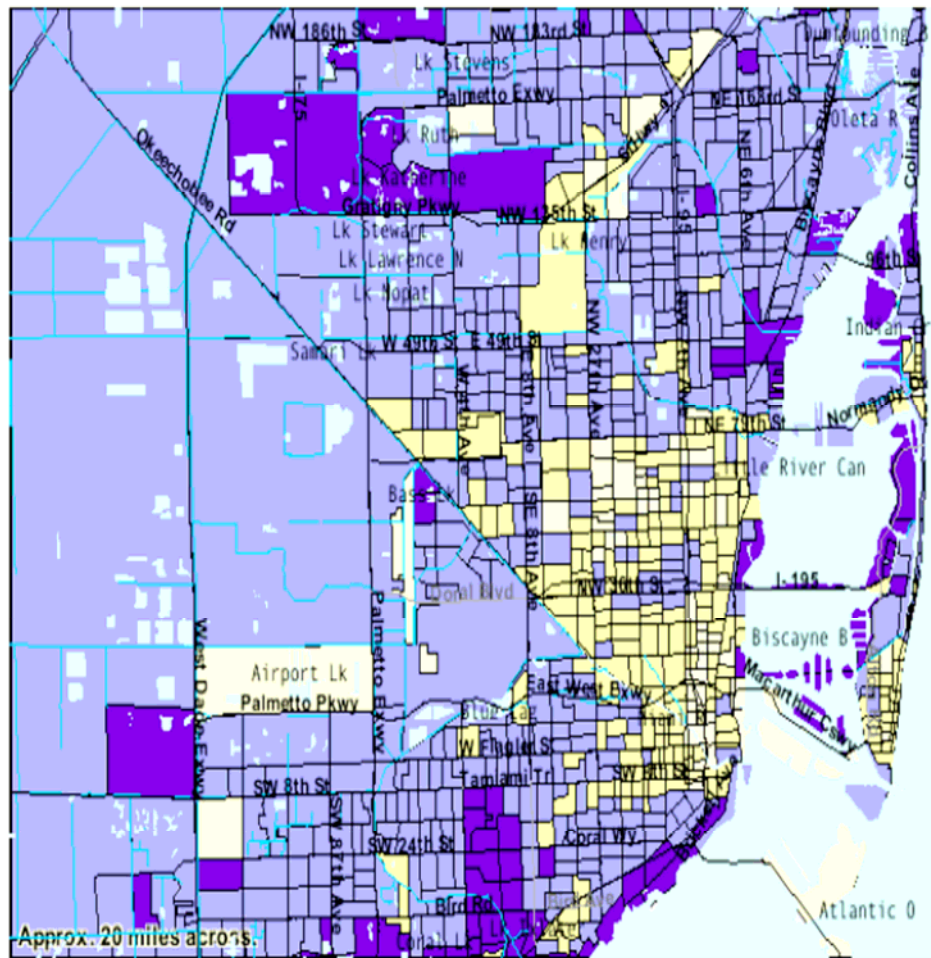
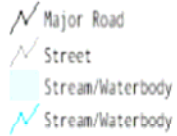


Figure B. Median Household Income among 1990 Census Block Groups in Cross-section of Miami-Dade County.

Data Classes

Percent

- 0.0 - 39.9
- 40.0 - 100.0

Features

- Major Road
- Street
- Stream/Waterbody
- Stream/Waterbody

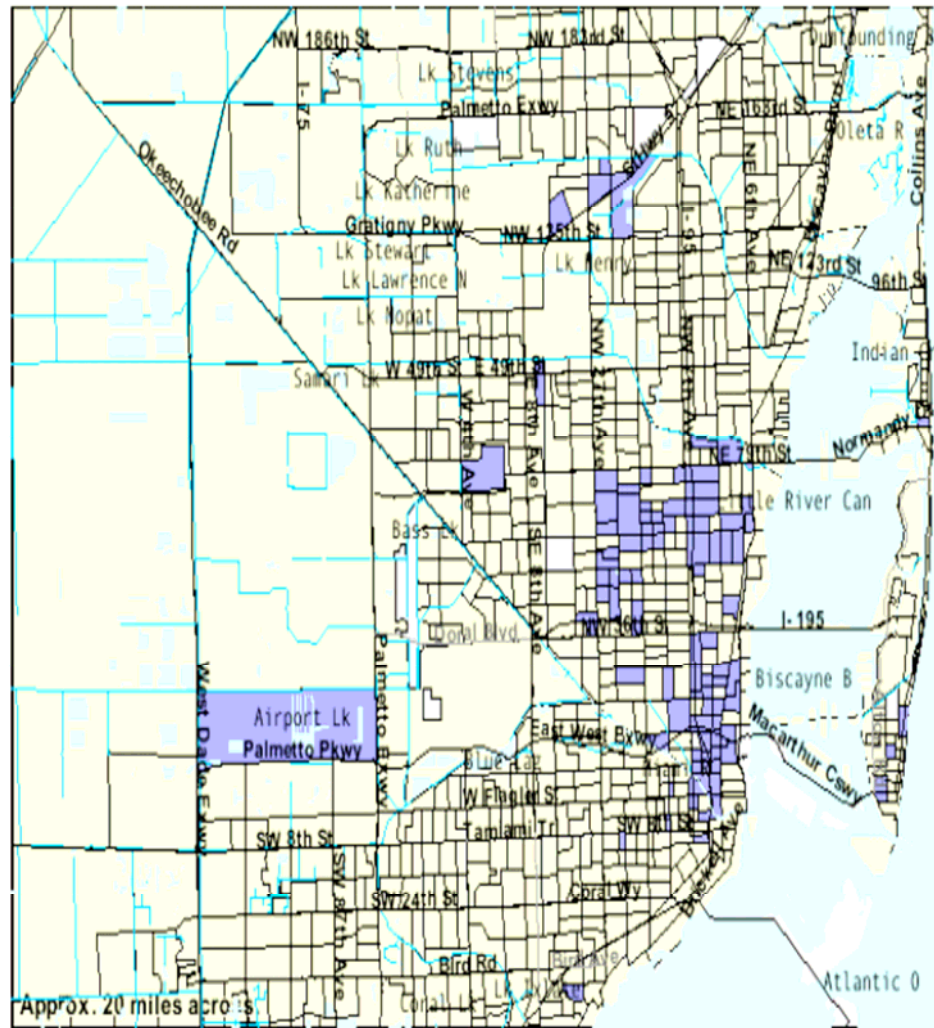


Figure C. Percent of Families below the Poverty Line among 1990 Census Block Groups in Cross-section of Miami-Dade County.

Table 1. Factor Analysis of Neighborhood Characteristics (N=1738).

	(1)	(2)	(3)
Percent 25+ with College Degree	.921	.133	-.003
Percent 25+ with a High School Degree	.925	.060	.062
Per Capita Income	.873	.136	.110
Median Household Income	.861	.027	.291
Median Family Income	.747	-.003	.011
Percent Workers in Professional and Executive Jobs	.921	.164	.058
Percent of Female Headed Households	-.638	.614	-.205
Percent of Males 16+ Unemployed	-.584	.436	-.167
Percent Families Below the Poverty Line	-.735	.456	-.347
Percent People Below the Poverty Line	-.755	.429	-.350
Percent Foreign Born	-.237	-.865	-.249
Percent Speak Spanish	-.198	-.882	-.214
Percent Housing Units Owned	.428	.003	.790
Percent Same House for 5+ years	-.140	.315	.832

Neighborhood Disadvantage consists of six components that include: 1) percentage of the male labor force over the age of 16 that is unemployed, 2) percentage of female headed households, 3) percent of families below the poverty line, 4) median family income (reverse coded), 5) percent of people with a bachelor's degree (reverse coded), and 6) percent of people that work in professional or executive jobs (reverse coded). Jencks and Mayer (1990) suggest that advantaged neighborhoods may provide benefits to children and adolescents, regardless of individual socioeconomic characteristics. I tested this idea by running confirmatory factor analysis with different iterations of a number of items that represent neighborhood advantage such as: percent of people with a bachelor's degree, percent of people that work in professional or executive jobs, and median family income. However, there were no statistically significant combinations of such items.

Residential Mobility is measured using percent of housing units that are rented and percent of residents not in the same house for 5+ years.

Immigrant concentration consists of two items, percent of people that speak Spanish and percent of people that were foreign born.

Family Type consists of four different combinations of families and were based on individuals' responses to the question, "Who did you live with during middle school through high school, that is about age 13 through 18?" This is a retrospective measure from the Time 1 questionnaire. Respondents were able to indicate any combination of the following choices: mother, father, grandmother, grandfather, aunt, uncle, stepmother, stepfather, foster family, sister, brother, other. The inability to determine whether brothers and sisters acted in caregiving roles made the omission of these responses necessary. Numerous combinations were reported, but cell frequencies were too small to permit individual analyses of each combination. For that reason, four family types were created by collapsing categories. Although statistical power is the primary reason for collapsing these categories, the resulting combinations still yield intuitively meaningful categories. These four family types are: mother-father families, single parent families, single parent families including other relative(s), and families that include a stepparent.

Family Socioeconomic Status is an index comprised of three measures: parent's income, occupational prestige, and education. Measures come directly from parent interviews conducted during Time 1 for approximately 67 percent of young adult respondents, with the missing estimates derived from the young adults' reports. Parents were asked about a range of

socioeconomic questions corresponding to when the young adults were in high school. Education was based on an 11-point scale with categories ranging from grade school only to doctorate degree. Occupational prestige was derived using Hollingshead's (1957) seven-point occupational prestige scale. Income is also reported on an 11-point scale ranging from less than \$10,000 to more than \$100,000. Items were standardized, summed, and then divided by the number of items on which data were available. The reasons for using a composite index of these three measures of socioeconomic status are twofold. First, measuring socioeconomic status using more than one dimension arguably provides a more comprehensive estimation of one's social position than any single indicator. For example, there are a number of occupations that are highly prestigious, require a great deal of education, but do not provide much income. Conversely, there are also occupations that pay very well, but are neither prestigious nor require much education. Using a composite measure provides a better estimate of one's location in the status hierarchy. Second, there are substantial amounts of missing cases (nearly 600) with respect to income—using it as a sole indicator of socioeconomic position would cut the sample by a third.

Positive Family Social Support was assessed using 8 items that address how the respondent feels cared for and loved by his/her family. Responses come from Time 1 interviews and ask young adults to indicate how they feel about family members they see or talk to most often. Items include: 1) "You feel very close to your family," 2) "you have family who would always take the time to talk over your problems," 3) "your family often lets you know that they think you are a worthwhile person," 4) "when you are with your family, you feel completely able to relax and be yourself," 5) "no matter what happens you know that your family will always be there for you should you need them," 6) "you know that your family has confidence in you," 7) "you feel that your family really cares about you," 8) "you often feel really appreciated by your family". All eight items consist of five response categories ranging from "Strongly Agree" to "Strongly Disagree." Items were summed to create a scale ranging from 8-40 with a mean of 34.81. Reliability analyses for this sample produced a Cronbach's Alpha of .91.

Negative Family Social Support is a five-item scale that indexes the degree to which respondents feel his/her family criticizes or places excessive demands on him/her. Items comprising this scale also come from Time 1 interviews. Items include: 1) "you often feel that your family makes too many demands on you," 2) "your family is always pointing out mistakes

you have made,” 3) “your family is always telling you what to do and how to act,” 4) “your family is often critical of you, Sometimes you are not sure if you can completely rely on your family,” 5) “you sometimes feel that your family expects more from you than they are willing to give”. The six items are composed of five response categories ranging from “Strongly Agree” to “Strongly Disagree.” Items were summed to create a scale ranging from 6-30 with a mean of 16.85. Reliability analyses for this sample produced a Cronbach’s Alpha of .82.

Family Cohesion is a six-item scale that assesses the respondent’s perception of how much family members share ideologically, including such characteristics as loyalty, pride, and values. Items are derived from Time 1 interviews and include: 1) “Family members respect one another,” 2) “you share similar values and beliefs as a family,” 3) “you really do trust and confide in each other,” 4) “family members feel loyal to the family,” 5) “you are proud of your family,” 6) “you can express your feelings with your family”. Six items consist of four response categories ranging from “Strongly Agree” to “Strongly Disagree.” The six items were summed to create a scale ranging from 6-24 with a mean of 19.30. Reliability analyses for this sample produced a Cronbach’s Alpha of .88.

Social Stress is a count of 34 major and potentially traumatic events. An individual’s given neighborhood context is likely to expose he or she to an array of potentially traumatic stressful life events. To the degree that an individual develops in an at-risk neighborhood environment, it is likely that the individual will be exposed to more lifetime traumatic events that, in turn, may influence later psychological distress. Therefore, the inclusion of traumatic events as one measure of social stress is appropriate. Items include such things as: failing a grade in school, witnessing a death, having been physically abused, or having been shot. Three events were omitted because they were common to most of the sample. The three items were: “Did you ever lose your home because of a natural disaster?” “Has anyone close to you ever died?” and “Are there any other traumatic events that have happened to you that we haven’t asked about?” The first item was omitted because the sample experienced Hurricane Andrew where nearly no respondent was left unaffected. Therefore, variations in this item do not index meaningful differences in the sample. The latter two items are similarly common or in the case of the open ended item, non-specific. Despite the omission of these three items, the 34-item count represents a more comprehensive measure of major and potentially traumatic events than has previously been examined. In order to preserve time ordering and minimize confounding

between explanatory variables and the outcome of interest, items were assessed at Time 1, but only counted if they occurred up to two years prior to the time of interview. The mean for the total sample is 6.22 events.

Psychological Distress is assessed using the Center for Epidemiological Studies depression scale (CESD). The CESD was designed as a self-reported scale to measure depressive symptomatology within the general population (Radloff 1977). The major difference between the CESD and other depression scales is that the CESD attempts not to measure clinical depression criteria, but to focus on affective and depressed mood at the time of interview. While there may include a clinical diagnosis component in the CESD, it is also able to capture symptoms related to other disorders. The version of the CESD used in this study is different in two ways. Rather than asking respondents to report symptoms that occurred over the past week, respondents were asked about their symptoms over the past month. This corresponds to the shortest time period for which DSM-IV depressive disorder can be estimated. Additionally, rather than asking respondents to report the number of days per week they experienced each of the 20 symptoms, respondents were given response categories of “not at all,” “occasionally,” “frequently,” and “almost all of the time.”

Moreover, in analyses presented in this paper, response categories of “not at all” and “occasionally” were combined. The reasons for this collapse are twofold (Taylor and Turner, 2002). First, although occasional experiences of symptoms may estimate some level of discomfort for respondents, such experience does not interfere with core role performance—a potentially deleterious outcome of elevated levels of psychological distress. Second, when response patterns were compared between Non-Hispanic Whites and African Americans data revealed that minority adolescents might have underreported the occasional experience of symptoms. In analyses, there was a substantial race difference in the odds ratio of “occasionally” to “frequently” and “all the time” responses. These differences were observed within as well as across levels of socioeconomic status suggesting that the tendency to report occasional symptoms decreases with increasing exposure to negative life situations. Reliability analyses for this sample produced a Cronbach’s Alpha of .82.

Demographic Controls include both self-reported gender and ethnicity of respondents. Ethnicity includes Non-Hispanic Whites, African Americans, Cubans, and Non-Cuban

Hispanics. In regression analyses, males and Non-Hispanic Whites are the reference categories. Original survey items from which measures were drawn are presented in the Appendix.

Data Analysis Plan

I use several statistical procedures performed using SPSS and STATA. First, I have provided the results of a factor analysis that shows how neighborhood measures cohere with each other. I show how I combined neighborhood disadvantage indicators to form an index of disadvantage. Beginning in the results section I use a series of procedures to determine model selection. I identify outliers that could potentially skew interpretations. I describe the characteristics of the outliers and what can be done to overcome strengths and limitations of including them vs. dropping them. From there, I show the zero order correlations among both the independent and dependent variables. Although family socioeconomic status is represented by an index of parent's income, occupational prestige, and education, there is reason to believe that findings may vary if these indicators are used individually as indicators of family SES. Therefore, I examine each of these components separately and explore the unique contribution of each in relation to psychological distress.

In order to understand the effects of multiple-level variables upon nested ones, hierarchical or multilevel modeling was considered. Multi-level modeling of relationships requires the clustering of meaningful groups at the second, third, etc. tiers. Such groups can include the following: neighborhoods, census tracts, census block groups, zip codes, school districts, individual schools, and families. Individuals are clustered together based on their inclusion in the aforementioned groups. In multi-level or hierarchical linear modeling, it is recognized that variation in the outcome is not solely a result of variation between individuals, but also includes variation at the higher levels (such as a neighborhood, census tract, school district or family). In mathematical terms, this means that an additional error term is introduced into the model to account for higher-level variation (Yen and Syme 1999). However, multi-level modeling requires a substantial amount of both within-group and between-group variation of the macro-level variables (for review see Heck and Thomas 2000). Although conceptually, I have a three-level nested model (neighborhoods, families, and individuals), empirically, I only

considered a two-level model for reasons associated with statistical power³. However, there was insufficient variation within neighborhoods and families in this sample to use multilevel modeling. Therefore, OLS regression was used in all models presented. I was able to use OLS regression techniques to estimate the effects of the second-level independent variables on the dependent variable while controlling for individual-level independent variables. There are, however, some problems associated with using OLS regressions for multilevel models. Using OLS can cause inefficient parameter estimates or inflated standard errors, but as Robert (1998) notes, such concerns are only minor. If anything, the results found will be conservative estimates of the true population values. In addition, I used the robust standard errors procedure in STATA to more efficiently estimate the models.

After selecting the appropriate cases and model, I provide a means table that shows values of the dependent variable as it varies across the independent variables of interest: multiple aspects of neighborhood characteristics, family structure, and family SES. Next, I apply theoretically nested stepwise OLS regressions that used social context as the primary concept of interest. Regressions unfold in a stepwise manner and begin by exploring the effects of each component of social context, demographics controlled. The order was such that neighborhood characteristics are the primary independent variables with family structure and family SES providing an important yet secondary potential explanation. Using a means table, I was able to show how both family processes and social stress varied across levels of each dimension of social context. Doing so provided the rationale for including these variables as explanations for social context differences in psychological distress. Finally, I added social stress and family processes to the regression model to explain away the focal relationship.

³ It is not likely that multiple individuals in the sample come from the same family as the initial sample was drawn from 6th and 7th grade class rosters. As such, the number of families approaches the number of individuals in the sample, and therefore, makes clustering at the family level ineffective.

CHAPTER 5

RESULTS

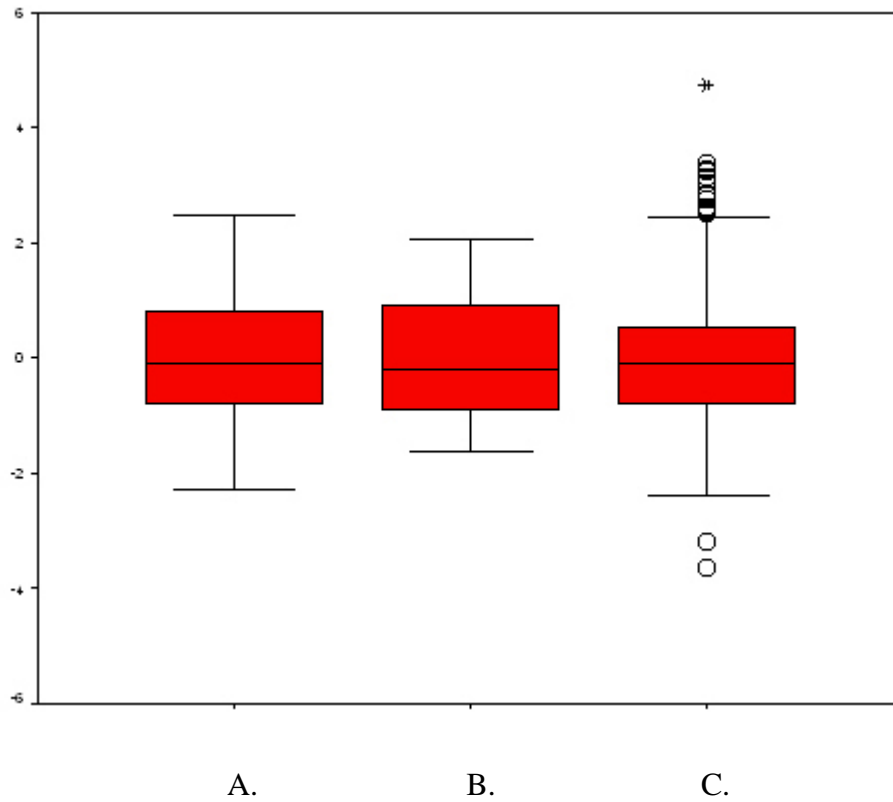
Results are presented in three sections: 1) variable, model and case selection, 2) descriptive characteristics of the three components of social context and psychological distress, and 3) OLS regressions of psychological distress on social context including a consideration of multiple dimensions and potential mediators.

Variable, Model, and Case Selection

Outliers. Because outliers can bias results and lead to false conclusions, initial analyses examined the univariate distributions of each component of social context for such outliers. Table 2 presents boxplots of neighborhood disadvantage, immigrant concentration, and residential mobility. The boxplot for neighborhood disadvantage yielded 32 values greater than 2.5 standard deviations from the mean. Only 2 such cases occur at the advantaged end of the distribution, while the remaining 30 are concentrated in the neighborhood disadvantage end. Further, the neighborhood disadvantage boxplot shows that only 2 cases in the negative end have extreme values greater than 4 standard deviations above the mean (indicating severe disadvantage). Boxplots for both immigrant concentration and residential mobility revealed no outliers. Since outliers tend to skew results, I ran subsequent analyses with and without the outliers included. Substantive results for each of the models were unchanged. Given the deteriorated physical and social structure of some neighborhoods as operationalized by Census block groups, the elevated scores for some cases are likely accurate representations. Therefore, the full array of cases are included in subsequent analyses. An examination of the distribution of family socioeconomic status revealed no outliers and family type is a categorical measure not subject to outliers.

Correlations. Table 3 presents bivariate correlations of each dimension of neighborhoods, family type, family socioeconomic status, and psychological distress. For neighborhood context, both neighborhood disadvantage and residential mobility are significantly correlated with psychological distress, however, immigrant concentration is not. An examination

Table 2. Boxplots of Neighborhood Disadvantage, Immigrant Concentration, and Residential Mobility (N=1738).



A = Residential Mobility; B = Immigrant Concentration; C = Neighborhood Disadvantage.

of the distribution of immigrant concentration in a histogram (not shown) reveals a relatively flat distribution with two mounds at plus and minus one standard deviation. Such a distribution is unlikely to have any predictive power and is reflected in the low correlation with psychological distress. However, immigrant concentration is positively correlated with residential mobility and is a theoretically meaningful construct. Perhaps in the context of additional controls and variables, immigrant concentration may make a contribution to social context as a predictor of psychological distress. Therefore, subsequent analyses will include immigrant concentration. At least one family type contrast and family socioeconomic status (as an index) are significantly related to psychological distress at the zero-order. However, it is potentially the case that separate dimensions of family socioeconomic status vary in their prediction of psychological distress. In order to examine this possibility, the zero-order relationships between parental income, education, and occupation and psychological distress are reported in Figure D. Figure D includes only those respondents who were not missing on any component of parental socioeconomic status (n=1279). Results from the graph of predicted psychological distress scores reveal largely parallel slopes such that it appears there are no differences between each dimension of parental SES in the prediction of distress. However, a test of the differences in slopes indicates there are significant differences. Income had a larger effect on psychological distress at very high and very low levels of income. Again, subsequent psychological distress regressions considering the array of social context measures were run with the index of parental SES and disaggregated by the components of parental SES. Substantive results predicting psychological distress did not change. Therefore, I chose the index of parental socioeconomic status in the presented results. The primary reason for this decision, and the combining of the three measures into an index, was case loss. By examining separate dimensions of parental socioeconomic status, nearly 600 cases or fully one third of the sample would be excluded from analyses. Therefore, I believe the benefits of examining income, occupation, and education separately do not outweigh the costs of missing data.

Having established a foundation for variable and model selection, I present the descriptive findings. First, I present the findings to show a baseline relationship between social context and psychological distress. Second, using regression models, I show how social context is related to psychological distress net of controls. Finally, I show how family processes and social stress may explain this association.

Table 3. Correlations Between Independent and Dependent Study Variables (N=1702).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) Neighborhood Disadvantage	1.000							
(2) Residential Mobility	.278***	1.000						
(3) Immigrant Concentration	.076***	.365***	1.000					
(4) Single Parent	.172***	.090***	-.043	1.000				
(5) Single Parent w/ Other	.170***	.044	-.057**	-.165***	1.000			
(6) Step Family	-.024	.030	.047*	-.200***	-.122***	1.000		
(7) Family SES	-.516***	-.212***	-.190***	-.137***	-.137***	.009	1.000	
(8) CESD	.151***	.048*	.019	.039	.102***	.042	-.163***	1.000

*** p<.001; ** p<.01; * p<.05

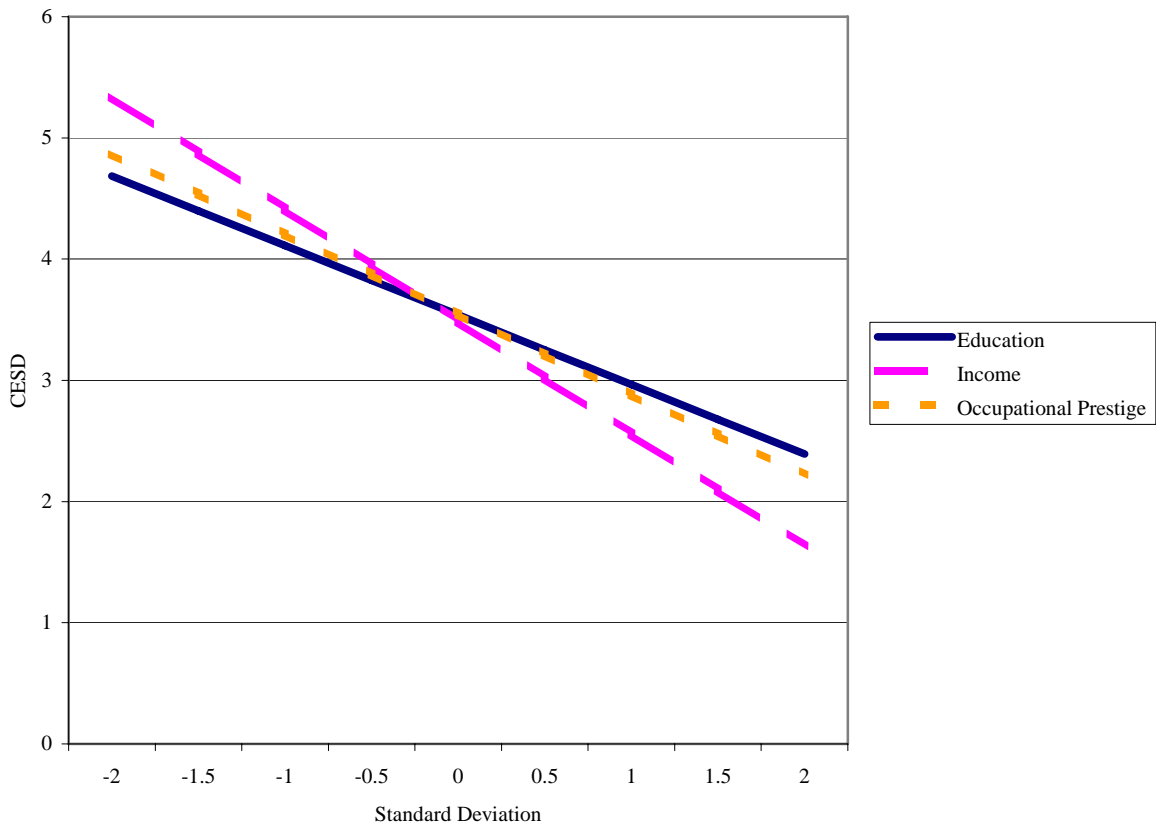


Figure D. Predicted Psychological Distress Scores by Parental Income, Education, and Occupational Prestige (N=1279).

Descriptive Characteristics

Mean psychological distress scores across social context dimensions are presented in Table 4. Neighborhood disadvantage, immigrant concentration, residential mobility, and family socioeconomic status were divided in tertiles. Examining neighborhood variables first, Table 4 shows that for both neighborhood disadvantage and residential mobility, there are monotonic increases in psychological distress. In other words, young adults growing up in neighborhoods characterized by disadvantage and mobility reported elevated levels psychological distress. Immigrant concentration, however, has the lowest average psychological distress scores in the middle tertile. Recalling the univariate distribution for immigrant concentration, this finding suggests that higher distress scores among both areas of dense and sparse immigrant concentration, but lower scores for average concentration (corresponding to the two mounds and plus and minus one standard deviation and the relatively flat valley between respectively). For family structure, mother-father families have the lowest mean CESD score and single parent families that include another relative have the highest with stepfamilies and single parents in between. For the tertiles of family socioeconomic status there are monotonic decreases in psychological distress as family SES increases. In other words, adolescents who grew up in families with more socioeconomic resources report lower levels of psychological distress.

OLS Regressions on Psychological Distress

Although mean scores show significant group differences in psychological distress for each dimension of social context, it is perhaps the case that observed mean differences are an artifact of associations with other social context, demographic, and/or explanatory variables. To examine this possibility, a series of theoretically-nested stepwise OLS regressions were computed. The following tables examine the individual and joint contributions of each dimension of social context in the absence and presence of family processes and social stress. As stated in the literature review, there has been less research examining multiple dimensions of neighborhoods in the prediction of mental health outcomes. Therefore, I begin by examining neighborhood context followed by the other elements of social context.

Table 4. Mean CESD Scores for Neighborhood and Family Context Dimensions (N=1702).

	Mean CESD Score*
Neighborhood Disadvantage	
High	4.515
Medium	3.665
Low	3.129
Immigrant Concentration	
High	4.000
Medium	3.540
Low	3.749
Residential Mobility	
High	4.171
Medium	3.739
Low	3.390
Family Type	
Mother Father	3.202
Single Parent	4.050
Single Parent w/ Other	5.099
Stepfamily	4.243
Family SES	
High	2.858
Medium	3.624
Low	4.755

* All mean differences are significant at the $p < .001$ level.

Neighborhood Context and Psychological Distress

Table 5 presents the results of a series of OLS regressions of psychological distress on demographics and the three previously identified dimensions of neighborhood context. The baseline model shows the widely documented finding of elevated levels of psychological distress among females compared to males and all three ethnic groups compared to Non-Hispanic Whites. Models 2 through 4 show how each unique measure of neighborhood context is related to psychological distress. Of the three components, neighborhood disadvantage and immigrant concentration are significantly predictive of psychological distress controlling on gender and ethnicity. Results indicate that living in a neighborhood characterized by disadvantage or with a large concentration of immigrants are associated with elevated levels of psychological distress. In addition, these findings support the proposition that multiple dimensions of neighborhood context vary in their association with psychological distress. Residential mobility by itself is not significantly related to psychological distress in young adulthood. In the final model, the three components are taken together to determine their joint and independent association with psychological distress. This model shows that, controlling on gender, ethnicity, and each dimension of neighborhood context, neighborhood disadvantage is the lone significant predictor of psychological distress.

Although this study has attempted to parcel out the unique dimensions of neighborhood context to assess joint and independent associations with other dimensions of social context, results from Table 5 indicate that the majority of the relationship between neighborhood context and psychological distress derives from a single dimension of such context. As argued in the measurement section, the neighborhood disadvantage measure reflects both socioeconomic and family characteristics. It is this measure that remains a significant predictor of psychological distress when controlling on other measures of neighborhood context suggesting that the mental health risk associated with the dynamics of housing turnover and neighbor immigrant status may be explained through associations with the relative resource deprivation and disorganization captured in the neighborhood disadvantage measure. Although dimensions of neighborhood context that assess the stability of and potential cultural barriers between neighbors may be developmentally relevant, they do not independently predict young adult mental health problems in the presence of all neighborhood measures. Therefore, subsequent analyses will include only a single measure of neighborhood context labeled neighborhood disadvantage. Although not the

Table 5. CESD Regressed on Neighborhood Disadvantage, Residential Mobility, and Immigrant Concentration (N=1738).

	(1)	(2)	(3)	(4)	(5)
Female	1.719*** (.208)	1.643*** (.214)	1.702*** (.212)	1.744*** (.211)	1.675*** (.215)
Cuban	.603* (.289)	.218 (.307)	.505 (.309)	.145 (.351)	-.051 (.347)
Other Hispanic	1.040*** (.285)	.649* (.308)	.915** (.310)	.717* (.329)	.465 (.333)
African American	1.578*** (.296)	.768* (.339)	1.507*** (.305)	1.629*** (.311)	.912* (.363)
Neighborhood Disadvantage		.477*** (.110)			.434*** (.124)
Residential Mobility			.161 (.110)		-.003 (.126)
Immigrant Concentration				.334* (.151)	.234 (.167)
Constant	2.060	2.517	2.152	2.243	2.581
Adjusted R ²	.06	.06	.06	.06	.06
Block Group Clusters	599	599	599	599	599

* p<.05; ** p<.01; *** p<.001

focus of this research, neighborhood context explains 40 percent of the African American/white and greater than 50 percent of the Other Hispanic/white differences in psychological distress, the latter of which is reduced to non significance.

Social Context and Psychological Distress

Table 6 presents the analyses regressing psychological distress on demographics and each dimension of social context: neighborhood disadvantage, family type, and family socioeconomic status. Models 1 and 2 are identical to results presented in Table 5. Models 3 and 4 separately evaluate the two additional components of social context—family type and family socioeconomic status. Individuals from non traditional family types have significantly elevated levels of psychological distress compared to young adults who grew up in mother/father families (model 3). Additional contrasts revealed a significant risk for distress between single parent families and single parent families that include another relative, but neither is significantly different from stepfamilies⁴. Model 4 shows that a one standard deviation increase in family socioeconomic status results in a decrease of .622 points on the CESD scale, demographics controlled. This suggests that adolescents from higher socioeconomic contexts have lower levels of psychological distress net of gender and race/ethnicity. Findings showing the separate significance of family type and family socioeconomic status for predicting psychological distress have been reported in previous work using this same dataset (Barrett and Turner 2005). This work advances Barrett and Turner’s research by considering all three measures of social context as shown in the final model. Controlling on gender and ethnicity, both single parent families that include another relative and family socioeconomic status make independent contributions to the prediction of psychological distress. In addition, the relationship between psychological distress and neighborhood disadvantage and step families, respectively, are of modest significance at the $p < .10$ level. Though not the specific focus of this research, the three components of social context jointly explain nearly 75 percent of the observed African American/white and Other Hispanic/white differences in psychological distress. The coefficient for gender remains relatively unchanged.

⁴ By changing the omitted dummy variable category, I tested for significant differences in distress between all family types.

Table 6. CESD Regressed on Neighborhood Disadvantage, Family Type, and Family SES (N=1702).

	(1)	(2)	(3)	(4)	(5)
Female	1.719*** (.208)	1.643*** (.214)	1.681*** (.208)	1.726*** (.211)	1.651*** (.217)
Cuban	.603* (.289)	.218 (.307)	.469 (.286)	.054 (.298)	-.163 (.310)
Other Hispanic	1.040*** (.285)	.649* (.308)	.839** (.289)	.485 (.293)	.241 (.308)
African American	1.578*** (.296)	.768* (.339)	1.188*** (.314)	1.002*** (.306)	.413 (.353)
Neighborhood Disadvantage		.477*** (.110)			.205+ (.122)
Single Parent			.570* (.259)		.343 (.270)
Single Parent with Other			1.423*** (.431)		1.217** (.436)
Step Family			.711* (.343)		.641+ (.337)
Family SES				-.622*** (.118)	-.523*** (.135)
Constant	2.060	2.517	1.879	2.530	2.533
Adjusted R ²	.06	.06	.07	.07	.08
U.S. Block Group Clusters	593	593	593	593	593

+ p<.10; * p<.05; ** p<.01; *** p<.001

Interactions

Studies that incorporate interaction terms into a statistical model do so to explore a conditional relationship (the effect of a variable on an outcome is dependent upon the level of another variable). A major aim of this study is to assess dimensions of social context in the presence of one another. It may be that effects for each dimension of social context on psychological distress are dependent on the levels of other dimensions. Therefore, a series of interaction terms were entered into the statistical model. Interactions between family type, neighborhood context, and family socioeconomic status were explored as pairs as well as a three-way interaction. Results (not shown) did not yield significant interaction effects for any relationships between dimensions of context. This suggests that the effects of neighborhood context on psychological distress are not contingent upon levels or types of family context or vice versa.

The Role of Family Processes and Social Stress

The observed significance of adolescent social context for young adult mental health raises the question of what it is about neighborhood and family contexts that matters for mental health. First, it may be that non traditional family types tend to produce households in which family relationships are more likely to be problematic. Similarly, a poor neighborhood environment may put additional burden on families by eroding the supportive relationships in households. Second, an individual's given neighborhood and family context is likely to expose he or she to an array of potentially traumatic stressful life events. To the degree that an individual develops in an at-risk family and neighborhood environment, it is likely that the individual will be exposed to more lifetime traumatic events that, in turn, may influence later psychological distress⁵. To test these possibilities, Table 7 explores neighborhood and family context mean differences in both family processes and social stress. Table 8 adds to the regression model shown in Table 6 by including family processes and stress to the current social context-psychological distress relationship. Results indicate significantly lower levels of family

⁵ Although it can be argued that a number of factors may have contributed to individuals experiencing adverse social contextual backgrounds, this is not the focus of this research. Instead, I am concerned with whether social context during a critical developmental period may have enduring mental health consequences in young adulthood 10 years later. I do not examine what scenarios led to adolescents' social context prior to their reported social context in adolescence.

Table 7. Mean Stress and Family Process Scores for Neighborhood and Family Context Dimensions (N=1702)*.

	Stress	Family Support	Family Cohesion	Adverse Relations
Neighborhood Disadvantage				
High	.168	34.368	18.989	17.689
Medium	.015	34.822	19.308	16.602
Low	-.207	35.484	19.730	16.020
Family Type				
Mother Father	-.298	35.768	19.931	16.218
Single Parent	.317	33.951	18.627	17.056
Single Parent w/ Other	.424	33.951	18.397	18.069
Stepfamily	.282	34.084	18.960	17.248
Family SES				
High	-.200	35.727	19.766	15.817
Medium	.067	34.729	19.322	16.703
Low	.113	34.142	18.852	17.921

* All mean differences are significant at the $p < .001$ level.

support and higher levels of stress among the adolescents from disadvantaged social contexts. Results are consistent across the type of social context (neighborhood disadvantage, family type, and family socioeconomic status).

The findings from Table 7 suggest that adolescents from adverse environmental and familial circumstances are exposed to lower levels of supportive relationships and higher levels of stress, but are these variables the mechanisms that explain the social context-psychological distress linkage? To address this question, results from an OLS regression in Table 8 examines whether the relationship between social context and psychological distress may be mediated by family processes and social stress. Models 2 through 7 (the baseline model in Table 8 is the same as the final model from Table 6) assess the independent and joint significance of family processes and social stress. Models 2 through 4 add each of the three measures of family process one at a time and model 5 explores their joint and independent significance. Model 6 adds the measure of social stress by itself and model 7 includes both family processes and social stress. The final model includes a consideration of all study variables and assesses their joint and independent contributions to the prediction of psychological distress.

Neighborhood Disadvantage, Family Processes, and Social Stress

An examination of the neighborhood disadvantage coefficients across the models in Table 8 yields both independent and joint mediation effects. Models 2 through 4 show each dimension of family process considered separately mediates the neighborhood disadvantage/psychological distress relationship accounting for between 20 and 25 percent of the neighborhood disadvantage effect. Separately, each family process variable reduces the coefficient for neighborhood disadvantage by about 20 percent to non significance, suggesting that family relations partially explain the marginal neighborhood contextual effects on psychological distress. Model 5 examines the joint significance of family processes and together reduces the coefficient for neighborhood disadvantage by 33 percent rendering it a non significant predictor. Model 6 examines the mediating role of social stress independent of family processes. Results yield a 10 percent reduction in the coefficient for neighborhood disadvantage. In the final model, both family processes and social stress are examined jointly and they account for a 35 percent reduction in the coefficient for neighborhood disadvantage. Additionally, family

Table 8. CESD Regressed on Neighborhood Disadvantage, Family Type, Family SES, Family Process, and Social Stress (N=1702).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female	1.651*** (.217)	1.640*** (.204)	1.657*** (.208)	1.522*** (.205)	1.625*** (.202)	1.850*** (.216)	1.740*** (.205)
Cuban	-.163 (.310)	-.060 (.298)	-.238 (.305)	-.051 (.302)	-.121 (.299)	-.047 (.309)	-.067 (.298)
Other Hispanic	.241 (.308)	.297 (.290)	.007 (.291)	.324 (.294)	.151 (.285)	.293 (.304)	.180 (.284)
African American	.413 (.353)	.764* (.333)	.207 (.343)	.692* (.334)	.567+ (.336)	.225 (.355)	.445 (.344)
Neighborhood Disadvantage	.205+ (.122)	.152 (.117)	.162 (.116)	.162 (.118)	.137 (.114)	.186 (.119)	.133 (.112)
Single Parent	.343 (.270)	-.105 (.253)	.289 (.264)	-.075 (.253)	-.056 (.246)	-.124 (.274)	-.263 (.254)
Single Parent with Other	1.217** (.436)	.817+ (.427)	.994* (.418)	.799+ (.433)	.747+ (.425)	.765+ (.440)	.553 (.430)
Step Family	.641+ (.337)	.183 (.325)	.444 (.331)	.319 (.336)	.167 (.327)	.098 (.329)	-.082 (.321)
Family SES	-.523*** (.135)	-.353** (.127)	-.357** (.130)	-.399** (.132)	-.290** (.126)	-.418** (.133)	-.253* (.124)
Family Support		-.256*** (.029)			-.167*** (.039)		-.159*** (.039)
Adverse Family Relations			.224*** (.024)		.135*** (.024)		.127*** (.024)
Family Cohesion				-.329*** (.039)	-.059 (.048)		-.037 (.049)
Stress						.895*** (.130)	.479*** (.133)
Constant	2.533	11.53	-1.042	9.017	7.410	2.662	6.914
Adjusted R ²	.08	.17	.15	.15	.20	.12	.21
Block Group Clusters	593	593	593	593	593	593	593

+ p<.10; * p<.05; ** p<.01; *** p<.001

processes and social stress make independent contributions in the prediction of psychological distress.

Family Type, Family Processes, and Social Stress

Examining family type coefficients across Table 8 yield similar results to those for neighborhood disadvantage. Results shown in models 2 through 4 indicate that family process variables independently mediate the family type—psychological distress relationship. The coefficient for single parent with other relative is reduced by approximately 20 to 33 percent and, depending upon the family process variable, is reduced to marginal significance ($p < .10$ level). In addition, family process variables reduce the marginally significant coefficient for step families by approximately 70 percent. Taken together, family processes reduce the coefficient for single parent families that include another relative by nearly 40 percent and stepfamilies by nearly 75 percent. The inclusion of stress exposure in model 6 partially explains family type differences in psychological distress. Single parent families with other relative remains modestly significant and the $p < .10$ level after a nearly 40 percent reduction in the coefficient. The coefficient for step families yielded an 85 percent reduction. The final model that accounts for the joint effects of family processes and social stress reduces family type contrasts to non significance, all study variables controlled. Family processes and social stress also reverse the direction of the coefficient for single parent (from .343 to -.263). However, this relationship was not significant in the baseline model and is therefore indistinguishable from zero.

Family SES, Family Processes, and Social Stress

When entered separately, each dimension of family process reduces the coefficients for family SES by approximately 30 to 35 percent, but significant differences remain. Thus, the effects of family socioeconomic status on psychological distress cannot be fully explained by variation in the levels of supportive family relationships. Together in model 5, family processes account for almost 45 percent of the relationship between family SES and psychological distress, but again, significant family SES differences in psychological distress remain. Adding social stress by itself in model 6 yielded a 20 percent reduction in the coefficient for family socioeconomic status. In the final model the joint effects of family processes and social stress accounted for greater than half of the family SES—psychological distress relationship, all study

variables controlled. However, despite the substantial mediating effects of family processes and social stress for other dimensions of social context, the relationship between family SES and psychological distress remained significant.

Social Statuses, Family Processes, and Social Stress

Table 8 shows that the variables considered here do little to explain the higher levels of distress experienced by female respondents. Controlling on all study variables, females have significantly higher psychological distress scores than males. Similarly, the mediating variables of family processes and social stress add little to understanding the non significant relationship between race/ethnicity, social context, and psychological distress. Controlling on all study variables, there are no significant differences in psychological distress between Non-Hispanic Whites and each minority group.

Summary

Results support the proposition that social context matters for psychological distress. First, examining multiple dimensions of neighborhood context yielded support for exploring their relationship with psychological distress. However, when considered together, neighborhood disadvantage was the only significant predictor of distress. Second, neighborhood disadvantage was marginally significant when considered in the context family type and family socioeconomic status. However, family context measures did remain significantly predictive of distress. Finally, these analyses suggest that the family processes and stressors that accompany various social contexts represent some of the mechanisms by which context matters for psychological distress. Detrimental social contexts place one in an environment characterized by stressful life situations and adverse family relationships that place the individual at risk for psychological distress. Implications for these findings will be addressed further in the discussion section.

CHAPTER 6

DISCUSSION

In this paper, I examined the relationship between adolescent social context and young adult mental health. In doing so I address three specific research aims: 1) To provide descriptive analyses of adolescent social context, including multiple dimensions of neighborhood and family context; 2) to explore the joint and independent contributions of adolescent social context for young adult mental health; and 3) to consider the role of family processes and social stress in explaining the relationship between social context and psychological distress. To address these aims, I analyzed data from a community-based sample of young adults in South Florida.

The following section provides interpretations of the findings. This section is divided into several parts including: Overall findings, discussion of specific aims, implications for theory and practice, generalizability and limitations, future research, and conclusion.

Overall Findings

As a whole, results from this study support the hypothesis that adolescent social context is associated with psychological distress in young adulthood. Past research has demonstrated that both neighborhood and family context are associated with mental health problems (Aneshensel and Sucoff 1996, Silver, Mulvey, and Swanson 2002, Gore, Aseltine, and Colton 1992) and Pearlin (1989) has argued that mental health risk and protective factors arise out of such contexts. This study contributes to past research by conceptualizing social context broadly during a transitional developmental period and estimating its effects for young adult psychological distress. Specifically, this study contributes to the field in several important ways: 1) it conceptualizes and operationalizes social context from two areas of study: neighborhoods and families, 2) I employ retrospective longitudinal data to measures set in time to assess the effects of adolescent social context for young adult psychological distress, 3) I consider the joint and independent effects of social context on psychological distress, and 4) I assess the explanatory significance of social stress and family processes that may arise as a consequence of one's social context.

The findings presented here indicate that adolescent neighborhood and family context matter for psychological distress in young adulthood. By exploring multiple dimensions of context, research on the detrimental effects of poor neighborhoods and adverse family situations is extended through a consideration of their joint and independent effects. Finally, a consideration of social stress and family processes contribute to current evidence about the mechanisms linking social context to mental health outcomes.

After descriptive analyses revealed associations between social context and psychological distress, my focus turned to the mental health significance of neighborhood and family characteristics in the context of one another. Discussion of these findings will address neighborhood and family context separately followed by a discussion of their joint and independent significance.

Neighborhood Context and Mental Health

Past research has shown an array of objective neighborhood characteristics to be associated with young adult mental health including: neighborhood economic conditions, concentration of immigrants, housing stability, etc. (i.e. Silver, Mulvey, and Swanson 2002). Research has used single indicators or groups of variables to assess such neighborhood characteristics. This study examined several indicators and used a factor analysis (shown in Table 1) that revealed neighborhood measures considered here constituted three separate components: neighborhood disadvantage, residential mobility, and immigrant concentration. However, residential mobility was not significantly independently predictive of psychological distress. Though past research has shown neighborhood turnover to be associated with adverse outcomes (Ross, Reynolds, and Geis 2000). The results presented here do not support such a linkage. It was also the case, that when the full array of neighborhood measures were considered simultaneously, immigrant concentration was no longer a significant independent predictor of psychological distress. This left the measure of neighborhood disadvantage as the only significant independent predictor of mental health problems. The finding that neighborhood disadvantage was the only significant independent predictor of psychological distress among the neighborhood measures was not anticipated given the theoretical salience of other domains of neighborhood context. However, the neighborhood disadvantage measure is comprised of indicators that are largely economic and family-oriented (i.e. percent of single parent families,

percent unemployed, etc.). The other two measures of social context (family type and family socioeconomic status) address both economic and family situations and the full array of social context measures suggests an empirical overlap across these measures. Thus, neighborhood disadvantage is distinct from, as evidenced by the factor analysis, both immigrant composition and residential turnover.

My analyses examining the association between neighborhood disadvantage and psychological distress were consistent with past research demonstrating elevated levels of psychological distress among individuals residing in more disadvantaged neighborhoods (Wheaton and Clarke 2003, Aneshensel and Sucoff 1996, Wight et al. 2005). In other words, growing up in a neighborhood characterized by high levels of unemployment, non traditional families, and poverty is associated with higher levels of psychological distress in young adulthood. Why then might young adults who grew up in disadvantaged neighborhoods be more likely to have higher levels of psychological distress? Such neighborhoods tend to lack institutional resources such as quality schools, infrastructure, parks, and after-school programs. The lack of quality resources places greater burden upon individual families to provide such resources for their offspring. In addition, neighborhoods that lack these resources tend to be characterized by higher levels of social disorganization. As suggested by social disorganization theory, when residents of such neighborhoods are unable to agree upon common goals and establish social ties with one another, these environments tend to be characterized by high levels of delinquency, crime, drug use, and a host of other social problems associated with higher levels of psychological distress.

Family Context and Mental Health

Consistent with previous research (see Barrett and Turner 2005, Gore, Aseltine, and Colton 1992), findings with respect to the family context dimensions revealed support for both family structure and family socioeconomic status as significant predictors of young adult mental health. Results showed individuals who reported growing up in non traditional family types reported higher levels of psychological distress compared to mother/father families. In addition, individuals from single parent families that included another relative had significantly higher psychological distress scores compared to single parent families.

Although these results are consistent with past research that shows non traditional family types to be at greater risk than traditional mother/father families, why might respondents from single parent families that include another relative be at greater risk for mental health problems than individuals from single parent families? It is perhaps the case that the stability of the family structure and not the family structure itself is what matters for mental health outcomes (Boyce 1985). Single parent families that include another relative are indicative of a changing household family structure where the family environment is characterized by changes and economic problems (Mechanic and Hansell 1989). Multiple non traditional caretakers can potentially come and go creating an atmosphere of disruption. Therefore, family structure may be a marker for more dynamic family situations and processes over time.

Family socioeconomic status was also a significant independent predictor of young adult psychological distress. That the income, education, and occupational prestige of one's parents during developmental years were predictive of later well-being was expected and consistent with past research on social location and health (Kohn 1969; 1972, Ross and Wu 1996, Brooks-Gunn et al. 1997). Socioeconomic status in adolescence has been shown to be associated with mental health problems in young adulthood (Miech et al. 1999). The findings for both family structure and family socioeconomic status differences in psychological distress in this sample have been reported elsewhere by Barrett and Turner (2005).

Social Context and Mental Health

Because this research was concerned with multiple dimensions of adolescent social context, I was able to address the question of what dimensions of social context were significant predictors of young adult mental health when all measures were considered simultaneously. Prior work by Barrett and Turner (2005) using this same sample has shown family type and family SES to be associated with psychological distress. My research extended their work by including neighborhood disadvantage for a more comprehensive estimation of social context. Considered together, the three measures of neighborhood and family context addressed either an economic or family situation external to the respondent, and thus, are less likely to suffer from

reverse causation⁶. When considered simultaneously, a clearer picture of the relative impact of neighborhood and family context dimensions on psychological distress emerged. Family context remained independently predictive of psychological distress, but neighborhood context remained only modestly predictive (at the $p < .10$ level). However, one should be cautious in the interpretation of mediation effects when all context measures are considered together. Some portion of the variance is shared between all measures (as indicated by the correlations presented in Table 3), but I can only state what relationships remain independently predictive of psychological distress, controlling on the others. Therefore, the dimensions of family context (including both family type and family socioeconomic status) partially explain much of the relationship between neighborhood disadvantage and young adult mental health. It is also likely that the reverse of this is true—neighborhood context partially explains the relationship between family context and psychological distress.

There are several potential explanations for this finding. First, it may be that an adolescent's more immediate contextual conditions arising from family situations are more relevant than their community conditions. In analyses not shown, family socioeconomic status had the largest standardized regression coefficient of the neighborhood and family context measures. Second, as Aneshensel and Sucoff (1996) suggests, at least some part of the neighborhood-family dynamic can be viewed from the social selection perspective. That is, non traditional family types and families with fewer resources tend to move into neighborhoods characterized as disadvantaged primarily because these neighborhoods offer affordable housing. Thus, these results are supportive of Rutter and Quinton's (1977) research showing family context partially explains neighborhood differences in mental health problems. This trend suggests that variations in the concentrations of these types of families within neighborhoods are explaining the apparent neighborhood effects. Finally, the theoretical position of nested adolescent environments proposed by Bronfenbrenner (1977) is supported by the finding that family context may provide a partial explanation for neighborhood context differences in distress.

That single parent families remained a significant predictor of psychological distress is also consistent with past research (Aseltine 1996). Single parent families, even those that

⁶ In other words, the outcome of interest, psychological distress, is unlikely to influence the aggregate neighborhood characteristics or family circumstances during adolescence, particularly when psychological distress is measured in young adulthood.

contain a non-parent in a caretaking role, may represent a context that is detrimental to the mental health of adolescents in the household. However, it was surprising to find that single parent families did not differ from mother/father families in terms of their prediction of psychological distress. One possible explanation for this is the shared variance with the measure of neighborhood disadvantage. As stated in the measurement section, one component of the neighborhood disadvantage measure was the percent of single parent families in a neighborhood. It is potentially the case that single parent families in neighborhoods and reported single parent families by respondents would be highly correlated, which would inflate standard errors causing these coefficients to become non significant. However, a correlation matrix revealed only a .212 correlation between the two measures. Another potential explanation is that single parent families tend to have fewer economic resources (Fields 2003), a concept captured in the family socioeconomic status measure. Thus, the shared variance between single parent family structure, family socioeconomic status, and neighborhood disadvantage reduces the impact of single parent families to non significance. Finally, Bronfenbrenner (1986) suggests intrafamilial relations are affected by extrafamilial conditions such as neighborhood characteristics. Although the family is the principal context in which adolescents develop, external domains such as schools, neighborhoods, and parents' employment can affect the family context. In other words, both measured and unmeasured social context is likely influencing family type differences in distress.

The relationship between family socioeconomic status and young adult psychological distress remained significant in the presence of neighborhood disadvantage and family type. As stated earlier, an examination of standardized partial regression coefficients (results not shown) showed family SES to be the strongest predictor. This finding is consistent with a large body of research documenting the relationship between socioeconomic status and mental health (Dohrenwend and Dohrenwend 1969, Turner and Lloyd 1999, Warheit, Holzer, and Schwab 1973) and has implications for the relative importance of different contexts⁷. The robust effect of family SES on young adult psychological distress in the presence of other measured contexts is suggestive of importance of more proximal adolescent family economic context. However,

⁷ It is likely the case that family socioeconomic status is explaining the majority of the relationship between social context and mental health. In analyses not presented in this paper, when both neighborhood disadvantage and family structure were entered into regression models, each remained significantly associated with young adult mental health controlling on one another. When family socioeconomic status was introduced into the equation, most of the significant relationships between neighborhood disadvantage, family structure, and psychological distress were explained.

family SES is shaped by a host of structural conditions related to a family environment. Families from poor neighborhoods tend to be exposed to elevated levels of stress, which have direct effects on distress, but also indirectly affect distress by eroding supportive family relationships. Similarly, neighborhood conditions are a marker for the quality of life experienced by families in terms of availability and quality of paid employment, and community-level resources like day care and recreational facilities. Families that live in neighborhoods with few of these resources are not afforded their protective benefits. Thus, micro-level differences within families may be more relevant for the mental health of family members than more exogenous neighborhood conditions. Two of these factors, exposure to social stress and family processes, were examined in this paper and are discussed in the following section.

Potential Mediators

Building on Pearlin's (1989) assertion that the structural contexts of people's lives condition their exposure to supportive mechanisms and stress, I tested theoretically meaningful potential mediators including multiple family processes and social stress. The data allowed for consideration of a range of family process variables and social stressors. Each dimension of family process, family support, adverse family relations, and family cohesion, made a separate contribution to the prediction of psychological distress. In addition, family support and adverse family relations made independent contributions though both a decrease and increase in psychological distress scores, respectively, controlling on all measures of family process. Most compelling, however, was that, with the exception of family socioeconomic status, family process variables explained away the social context/psychological distress relationship. These findings suggest that adverse neighborhoods and non traditional family arrangements tend to be characterized by low levels of family support and cohesion and higher levels of adverse family relations. Recalling findings from Table 7, individuals residing in adverse neighborhoods and family situations reported lower levels of supportive family relationships. Stress theory suggests that detrimental environments lead to an erosion of such supportive resources and findings from this research tend to support this proposition (Turner, Wheaton, and Lloyd 1995). These processes explain much of the detrimental effects of adverse social contexts in the prediction of psychological distress. Though the neighborhood context and family structure differences in psychological distress were partially explained through family processes, family socioeconomic

status remained a robust predictor. One interpretation of this enduring relationship was proposed by Link and Phelan (1995) who suggested that socioeconomic status is a “fundamental cause” of disease (a further discussion of this idea will be presented later). As adolescents are inexorably tied to their family’s socioeconomic status, it stands to reason that this relationship extends to adolescents, and as the results suggest, has enduring consequences.

The second potential mediator I examined was social stress. As results have shown, in much the same way as family process, social stress mediates the relationship between social context and psychological distress. This is so because adolescents from disadvantaged neighborhoods and non traditional families with fewer resources are placed in an environment that exposes them to more stressful life experiences.

The explanation for the mediation of neighborhoods and family structure were outlined above (i.e. these situations put one at risk for more stressful events and negative family relationships), but the lack of explanatory power concerning family socioeconomic status is more complex. Evidence has suggested that socioeconomic status is related to stress exposure (Turner, Wheaton, and Lloyd 1995). In one study, the relationship between SES and psychological distress was substantially explained by variations in exposure to stress (Turner and Lloyd 1999). My use of only a single measure of stress exposure could explain the lack of explanatory power of stress in explaining the relationship between parental SES and distress.

In addition, socioeconomic status is a prominent explanation for family type differences in psychological distress (Albrecht et al. 1996, McLanahan 1997). The following section explains Link and Phelan’s (1995) assertion that there are some social conditions, particularly low socioeconomic status, that are “fundamental causes of disease.” Their proposition bears upon many of the explanations for residual SES differences in psychological distress.

Social Conditions and Fundamental Causes of Disease

Fundamental causes of disease are those that cannot be explained by addressing the mechanisms that link them to disease outcomes. Some social epidemiologists have suggested that the association between socioeconomic status and physical and mental health outcomes persists despite the changes in the intervening mechanisms. For example, advances in the identification and treatment of mental health problems as well as greater access to health care were intervening mechanisms, when addressed, were thought to explain the association between

SES and health. However, the SES/health relationship has persisted primarily through access to resources including knowledge, power, prestige, and personal and social resources despite advances in the intervening mechanisms. Given the dynamic nature of disease, those with the most resources are most readily equipped to deal with risks associated with the changing disease landscape. For example, evidence from the stress process model suggests variations in personal and social resources and stress exposure explain the socioeconomic differences in depression (Turner and Lloyd 1999). However, these resources vary by level of SES, and those at higher levels of SES are more likely to develop protective resources as well as be exposed to fewer stressful experiences.

The resources described above are the ones primarily addressed in this paper. Knowledge, power, and prestige are all components of family SES indexed by occupation, education, and income. Social supportive resources represent family processes within families. Therefore, if the index of parental SES is estimating variations in these resources, it is likely that the SES/distress association will persist. However, past research has shown this relationship to be explained by variations in stress and resources. The failure of social stress and family processes to explain this association may lie in the inadequate measurement of stress in the study. Because this study employed a single measure of stress, it may be unmeasured differences in stress exposure that are contributing to the observed relationship between parental SES and distress.

The fundamental causes of disease hypothesis suggests a possible explanation for the enduring family SES-psychological distress relationships shown in the research, but unmeasured variations in stress exposure may also be contributing to the finding. Family SES mediates both family type and neighborhood disadvantage differences in psychological distress. In addition, family SES differences in distress remain even when controlling on some of the mechanisms thought to explain the relationship such as family processes and social stress.

Summary

Taken together, the linking mechanisms of social stress and family processes explain the majority of the relationship between social context and psychological distress. However, an adolescent's immediate family socioeconomic environment is a fundamental cause of distress not fully explained by such mechanisms. This suggests that adolescent social context sets up an

environment that may be either protective or detrimental depending upon which end of the continuum one is located. For example, living in a poor neighborhood in a single parent family with few resources exposes an adolescent to a host of potentially traumatic events and relationships that have been shown to contribute to enduring mental health disadvantage. At the aggregate level, it appears that it is these traumas and relationships define the aspects of social context that matter for the mental health of young adults.

Implications for Theory and Practice

As shown in Figure E, social context is conceptualized as being part of the stress process model. Along with social statuses, social context puts individuals at varying exposure to social stressors and supportive or adverse relationships. Stress and family relationships in turn ameliorate or exacerbate social context differences in mental health outcomes. However, different from social statuses like gender and ethnicity, social context is much more fluid. Family compositions, residential locations, and relative resources can change across time. Moreover, as adolescents move into adulthood and start families of their own, the dynamics of residence and family of origin may become less relevant to current psychological distress. However, recent research does suggest that adolescent developmental circumstances and environments have enduring mental health consequences (Luo and Waite 2005, Wickrama et al. 2005). This research supports the proposition that family situations and social stressors that arise from social context have lasting mental health effects after adolescence.

Findings from this study also bear upon the proposed theoretical model. Some findings provide support for past theories while other findings do not. This study specifically relates to portions of two theories: Bronfenbrenner's theory of ecological development and Jencks and Meyer's differential association theory. First, Bronfenbrenner noted how higher order social contexts such as neighborhoods may operate directly on outcomes or indirectly through nested contexts such as families. Findings from this research support the latter supposition as indicated by the substantial reduction in the coefficient for neighborhood context in the presence of family context. Second, Jencks and Meyer proposed several ways in which neighborhoods may affect adolescents. Findings from this study provide support for their assertion that disadvantaged neighbors may have little or no direct effect on adolescents. Because adolescents tend to seek

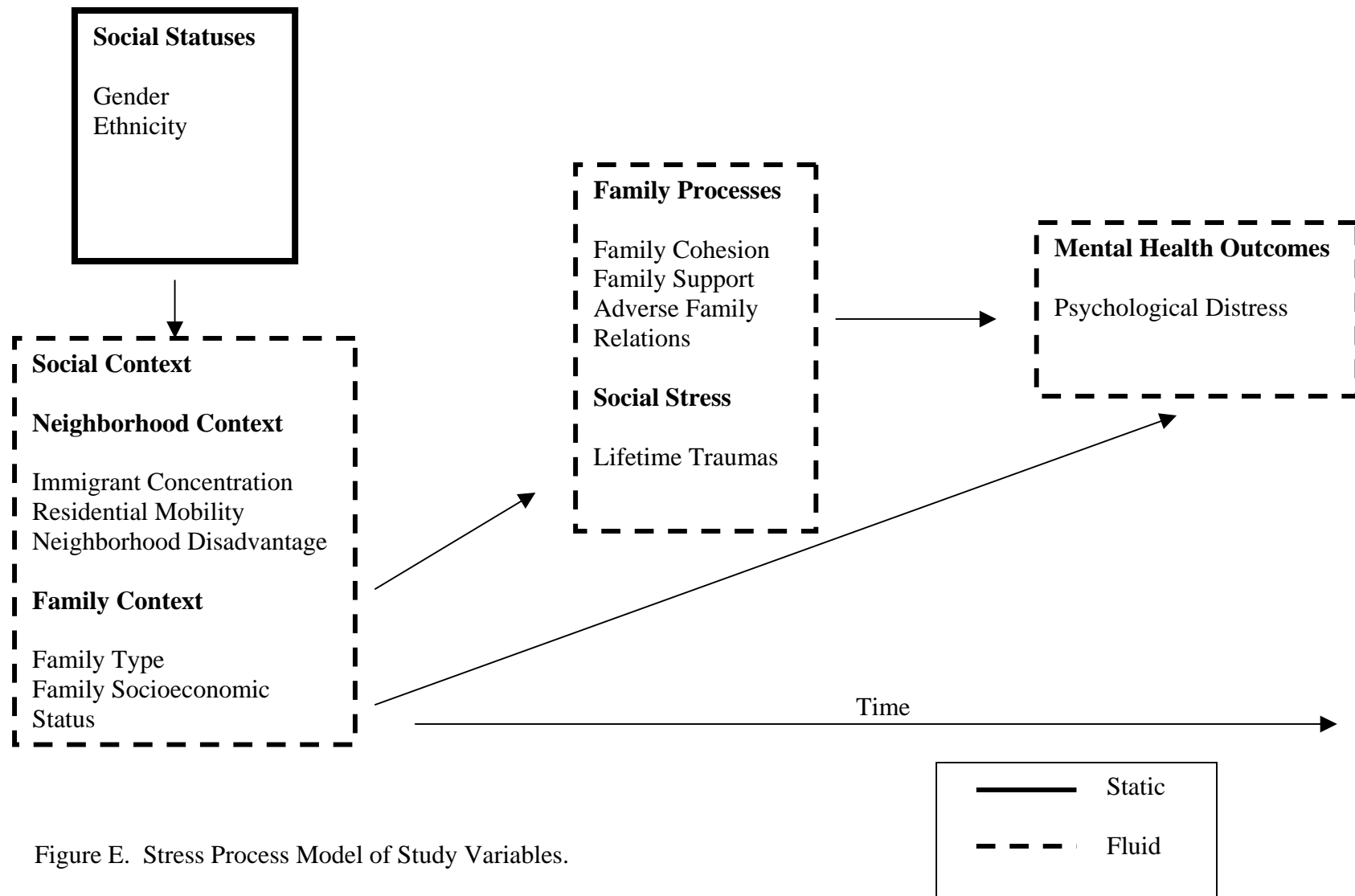


Figure E. Stress Process Model of Study Variables.

out others similar to them, the effects of neighbors, beneficial or detrimental, are unlikely to have an effect on mental health outcomes. However, another avenue of neighborhood effects proposed by Jencks and Meyer suggests that neighbors may not have a direct effect, but the neighborhood composition (collective resources, positive role models, etc.) does. Findings that include a consideration of neighborhood context support this piece of the theory.

The study also has implications for practice in terms of intervention and prevention of mental health problems. Results suggest that adverse social contexts in adolescence are detrimental to young adult mental health. Therefore, identification of mental health problems in young adults should not be limited to factors immediately associated with their present circumstances. Exposure to at-risk contexts occurring earlier in life may have as much to do with young adult mental health as their current situations. Though it is unlikely that public health practitioners can change the family or neighborhood context of adolescents, they may be able to provide supportive resources that limit the disadvantageous family processes and stress exposure associated with detrimental social context. In other words, it is unlikely that social context can change without large-scale changes in society and the economy, but by identifying at-risk social contexts prevention efforts can focus on those groups who would benefit from increased supportive resources. For example, adolescents from at-risk families could be targets for counseling sessions or shown ways to improve family dynamics. Though many of these programs may be difficult to implement, the information from this research suggests possible points of intervention.

Generalizability and Limitations

Given the nature of the study design, findings from this study may not be generalizable to other populations. A community-based study does allow for generalizability at the community level and has strong external validity, but respondents were all in the transition to adulthood and results may not generalize to adult or elderly populations. There are, however, strengths to analyzing data from a critical period in adolescent development. Many choices and experiences during this period (such as educational attainment, marriage, and employment) will have mental health consequences later in life. Recent research suggests that adolescent environment does have enduring consequences for adult mental health (Reynolds and Ross 1998).

Due to the limited number of cases in the sample, multilevel modeling could not be used. This limitation is important because of the nested structure of the variables of interest. Both secondary and tertiary conceptual levels were not in the operational model. However, by choosing the Census block group level of measurement, there are relatively few effects of clustering. Therefore, the findings presented here are unlikely to differ substantively from those that employ hierarchical modeling techniques. Similarly, the choice of Census block group was chosen for its conceptual meaning and ease of analysis. Perhaps clustering by larger Census divisions would have yielded different results, however, the model would be subject to the above problem of insufficient variation in clusters. In addition, the meaning of such larger groupings of neighborhoods would become a concern.

Although this study contributes to previous research by considering multiple dimensions of social context simultaneously, there are some that were not included. Two such important contexts are school and peer associations. In a given day, adolescents are in a school environment for nearly eight hours making it an important part of their socialization and development. Additionally, within the school composition are presumably a number of peer relationships. It is perhaps the case that school location and peer relationships are as relevant for the development of adolescents. Future research should focus on such contexts in addition to the ones explored in this study.

Finally, this study did not specifically assess how social context may explain ethnic and gender differences in psychological distress. Results suggest social context variations may explain ethnic differences in psychological distress, but do little to explain psychological distress differences by gender. An in-depth analysis of the role of social context in explaining status differences in psychological distress was not the main focus of this research. To examine ethnic and gender differences in mental health, a different theoretical framework, literature, and model would need to have been chosen, and doing so was beyond the scope of this study.

Future Research

Because this study contributes to both research on neighborhood and family context, it opens several research opportunities for the future. First, a broader conceptualization of social context should be studied including both school and peer contexts. These situations are likely to have varying associations with mental health outcomes. Second, research should consider the

developmental processes and situations that occur prior to adolescence. It may also be the case that social context in early childhood could affect mental health in later life. Third, future research should consider how subjective neighborhood context influences mental health outcomes. Adolescents' perceptions about the safety and condition of their surrounding environment may be relevant for mental health outcomes. Finally, future research should focus on identifying how social context differs by ethnicity. As noted earlier, the framework for many studies of social context has been limited to considering relatively homogenous ethnic populations or comparisons of African Americans and Non-Hispanic Whites. Future research should focus on the experience of Hispanics, Asians, and American Indians. It is likely that neighborhood and family context will vary by these ethnic groups and may have consequences for their mental health.

CHAPTER 7

CONCLUSION

The present study attempted to extend research on the implications of social contextual conditions for mental health across the life course. Using a community-based ethnically diverse sample of young adults in South Florida, I examined the role and significance of social context in adolescence for psychological distress in young adulthood. Findings suggest that the external family and neighborhood environment matters for mental health of young adults. Though some dimensions of social context were explained through family processes and social stress, family socioeconomic status remained a robust predictor of psychological distress in the presence of mediators and controls. These findings suggest that future mental health research should consider the developmental environment during adolescent periods as well as immediate interpersonal relationships.

APPENDIX A

SECTION U - WELL-BEING

The questions I am going to ask you now have to do with how you have been feeling lately. How often in the last month have you had each of the following feelings or experiences? Answer by saying you have felt this way "not at all", "occasionally", "frequently" or "most of the time" in the last month. These categories are shown on page 44 of your response booklet. You should say "not at all" if you felt this way as a result of medicine prescribed by a doctor.

	NOT AT ALL (1)	OCCASION-ALLY (2)	FREQUENTLY (3)	ALMOST ALL THE TIME (4)
U1. You were bothered by things that usually don't bother you.	1	2	3	4
U2. You did not feel like eating.	1	2	3	4
U3. You felt that you could not shake off the blues.	1	2	3	4
U4. You felt that you were just as good as other people.	1	2	3	4
U5. You had trouble keeping your mind on what you were doing.	1	2	3	4
U6. You felt depressed.	1	2	3	4
U7. You felt that everything you did was an effort.	1	2	3	4
U8. You felt hopeful about the future.	1	2	3	4
U9. You thought your life had been a failure.	1	2	3	4
U10. You felt fearful.	1	2	3	4
U11. Your sleep was restless.	1	2	3	4
U12. You were happy.	1	2	3	4
U13. You talked less than usual.	1	2	3	4
U14. You felt lonely.	1	2	3	4
U15. People were unfriendly.	1	2	3	4
U16. You enjoyed life.	1	2	3	4
U17. You had crying spells.	1	2	3	4
U18. You felt sad.	1	2	3	4
U19. You felt that people disliked you.	1	2	3	4
U20. You could not get going.	1	2	3	4

SECTION D - FAMILY COHESION/PRIDE

(RB, P. 10) These next questions also deal with relationships within your family. Please use the scale shown to tell me how much you agree or disagree with each of the following statements about your family.

D1. Family members respect one another.

Strongly Agree 1	Agree 2	Disagree 3	Strongly Disagree 4
---------------------	------------	---------------	------------------------

D2. You share similar values and beliefs as a family.

Strongly Agree 1	Agree 2	Disagree 3	Strongly Disagree 4
---------------------	------------	---------------	------------------------

D3. You really do trust and confide in each other.

Strongly Agree 1	Agree 2	Disagree 3	Strongly Disagree 4
---------------------	------------	---------------	------------------------

D4. Family members feel loyal to the family.

Strongly Agree 1	Agree 2	Disagree 3	Strongly Disagree 4
---------------------	------------	---------------	------------------------

D5. You are proud of your family.

Strongly Agree 1	Agree 2	Disagree 3	Strongly Disagree 4
---------------------	------------	---------------	------------------------

D6. You can express your feelings with your family.

Strongly Agree 1	Agree 2	Disagree 3	Strongly Disagree 4
---------------------	------------	---------------	------------------------

SECTION C - SOCIAL SUPPORT FAMILY

Turn to page 9 in your response booklet. Now I would like to know something about your present relationship with your family (other than your partner/boyfriend/girlfriend). For each of the statements I read to you, please use the scale shown to tell me the number of the category that best describes your experience. In answering these questions think of those family members that you see or talk to most often.

	Strongly Agree 1	Agree 2	Neither Agree Nor Disagree 3	Disagree 4	Strongly Disagree 5
C1. You feel very close to your family.	1	2	3	4	5
C2. You have family who would always take the time to talk over your problems, should you want to.	1	2	3	4	5
C3. Your family often lets you know that they think you are a worthwhile person.	1	2	3	4	5
C4. You often feel that your family makes too many demands on you.	1	2	3	4	5
C5. Your family is always pointing out mistakes you have made.	1	2	3	4	5
C6. Your family is always telling you what to do and how to act.	1	2	3	4	5
C7. When you are with your family, you feel completely able to relax and be yourself.	1	2	3	4	5
C8. No matter what happens you know that your family will always be there for you should you need them.	1	2	3	4	5
C9. You know that your family has confidence in you.	1	2	3	4	5
C10. Your family is often critical of you.	1	2	3	4	5
C11. You feel that your family really cares about you.	1	2	3	4	5

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
	1	2	3	4	5
C12. Sometimes you are not sure if you can completely rely on your family.	1	2	3	4	5
C13. You often feel really appreciated by your family.	1	2	3	4	5
C14. You sometimes feel that your family expects more from you than they are willing to give.	1	2	3	4	5

SECTION O - LIFE TRAUMAS

INSTRUCTIONS: ASK EACH ITEM ON THE LIST. FOR ANY YES, ASK **How many times did this happen?** AND CODE FREQUENCY. IF ONCE, ASK **How old were you when this happened?** AND CODE AGE IN BOTH FIRST AND LAST COLUMNS. IF MORE THAN ONCE, ASK **How old were you the first time this happened?** and **How old were you the last time this happened?** AND CODE FIRST AGE AND LAST AGE.

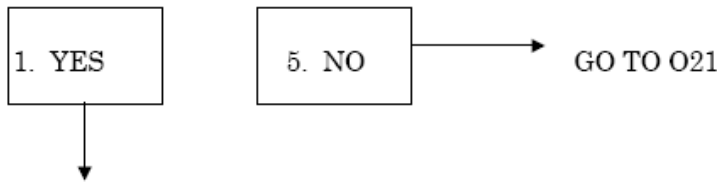
Here are some potentially more serious events that could have happened at any time in your life. Please tell me if any of these things have happened to you.

ITEM	YES=1 NO=5	A	B	C
		FREQ	FIRST AGE	LAST AGE
O1 Did you ever lose your home because of a natural disaster (IF NECESSARY, fire, flood or hurricane?)				
O2 Have you ever had a serious accident, injury or illness that was life threatening or caused long-term disability?				
O3 Have you ever witnessed a serious accident or disaster where someone else was hurt very badly or killed?				
O4 Did you ever have sexual intercourse when you didn't want to because someone forced you or threatened to harm you if you didn't?				
O5 Were you ever touched or made to touch someone else in a sexual way because they forced you in some way, or threatened to harm you if you didn't?				
O6 Were you regularly physically abused by one of your parents, step parents, grandparents, or guardians?				
O7 Were you regularly emotionally abused by one of your caretakers?				
O8 Were you ever physically abused or injured by a spouse/boyfriend/girlfriend?				
O9 Were you ever physically abused or injured by someone else you knew?				
O10 Did you witness your mother or another close female relative being regularly physically or emotionally abused?				

ITEM	A			B		C	
	YES=1 NO=5	FREQ	FIRST AGE	LAST AGE			
O11. Have you ever been shot at with a gun or threatened with another weapon but not injured?							
O12. Have you ever been shot with a gun or badly injured with another weapon?							
O13. Have you ever been chased but not caught when you thought you could really get hurt?							
O14. Have you ever been physically assaulted or mugged?							

ITEM	A			B		C	
	YES=1 NO=5	FREQ	FIRST AGE	LAST AGE			
O15. Have you seen someone chased but not caught or threatened with serious harm?							
O15d. If so, who?							
1. Loved one <input type="checkbox"/>							
2. Someone else you knew <input type="checkbox"/>							
3. A stranger <input type="checkbox"/>							
O16. Have you seen someone else get shot at or attacked with another weapon?							
O16d. If so, who?							
1. Loved one <input type="checkbox"/>							
2. Someone else you knew <input type="checkbox"/>							
3. A stranger <input type="checkbox"/>							
O17. Have you ever seen someone seriously injured by gunshot or some other weapon?							
O17d. If so, who?							
1. Loved one <input type="checkbox"/>							
2. Someone else you knew <input type="checkbox"/>							
3. A stranger <input type="checkbox"/>							
O18. Have you ever actually seen someone get killed by being shot, stabbed, or beaten?							
O18d. If so, who?							
1. Loved one <input type="checkbox"/>							
2. Someone else you knew <input type="checkbox"/>							
3. A stranger <input type="checkbox"/>							
O19. Have you ever been in a car crash in which someone was killed or badly injured?							
O19d. If so, who?							
1. Loved one <input type="checkbox"/>							
2. Someone else you knew <input type="checkbox"/>							
3. A stranger <input type="checkbox"/>							

O20. Has anyone close to you ever died? DO NOT USE How many times PROBE.



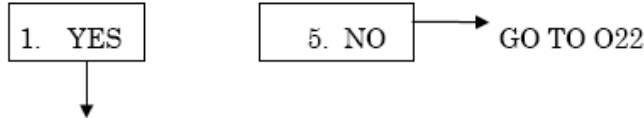
Who was that?

How old were you when this happened? IF MORE THAN ONE IN A CATEGORY, CODE AGE AT FIRST OCCURRENCE.

Anyone else?

ITEM	NO=5 YES=1	AGE
aa. Mother/Stepmother		ab.
ba. Father/Stepfather		bb.
ca. Brother Or Sister		cb.
da. Spouse /Boyfriend/Girlfriend		db.
ea. A Child Of Respondent		eb.
fa. Grandparent		fb.
ga. Another Loved One		gb.
ha. A Very Close Friend		hb.

O21. Are there any other traumatic events that have happened to you that we haven t asked about?



Please briefly describe this/these other traumatic event(s).	FREQ	FIRST AGE	LAST AGE
O21a.	aa.	ab.	ac.
O21b.	ba.	bb.	bc.

Here are a few more questions about these kinds of events.

ITEM	NO=5 YES=1	A	B	C
		FREQ	FIRST AGE	LAST AGE
O22. Have you ever been told that <u>someone you knew</u> had been shot, but not killed?				
O23. Have you ever been told that <u>someone you knew</u> had been killed with a gun or other weapon?				
O24. Has <u>anyone else you knew</u> died suddenly or been seriously hurt?				

ITEM	NO=5 YES=1	FREQ	FIRST AGE	LAST AGE
O25. Have you ever been told that <u>someone you knew</u> killed him- or herself?				
O26. Have you ever been told that <u>someone you knew</u> had been raped?				

B6. (RB, P.5) Who did you live with during middle school through high school, that is about age 13 through 18? CHECK ALL THAT APPLY.

1. Your Mother
2. Your Father
3. A Grandmother
4. A Grandfather
5. An Aunt
6. An Uncle
7. Your Step Mother
8. Your Step Father
9. Your Foster Family
10. Your Sister(s)
11. Your Brother(s)
12. Other _____

(specify)

PC1b. Who currently provides the major financial support for your family or household?
(CODED IN RELATIONSHIP TO STUDENT.)

- | | |
|----------------|--|
| 1. Mother | 8. Step Father |
| 2. Father | 9. Foster Family |
| 3. Grandmother | 10. Sister(s) |
| 4. Grandfather | 11. Brother(s) |
| 5. Aunt | 12. Insurance, Trust, Inheritance <input type="checkbox"/> GO TO PC5 |
| 6. Uncle | 13. Welfare |
| 7. Step Mother | 14. Other: _____
(specify) |

PC2. Most of the time while _____ was in high school, what kind of work did (person indicated in PC1) do for a living? That is, what was (your/his/her) main occupation?

PC2a. Can you tell me a little more about what (you did) (he/she did) on this job?

PC3. Is this still what (you/he/she) does?

1. Yes → GO TO PC4
2. No

PC3a. What kind of work (do/does) (you/he/she) currently do for a living? That is, what is (your/his/her) main occupation?

PC3b. Can you tell me a little more about what (you do) (he/she does) on this job?

PC4. How far did (you/he/she) go in school?

1. Grade/Elementary school only
2. Middle school/junior high school
3. Some High school, but did not graduate
4. High school graduate or GED
5. Technical/Vocational Training
6. Some college but no degree earned
7. Earned Associate Degree
8. Earned Bachelor's Degree
9. Some post-graduate education but no additional degree earned
10. Master's Degree
11. Doctorate Degree (Ph.D., MD, JD)

SECTION PK - INCOME

Finally, we just want to get a general idea of your family's economic status.

PK1. Can you tell me if your family's total household income, before taxes, last year was:

1. Less than \$10,000
2. \$10,000 - \$20,000
3. \$20,000 - \$30,000
4. \$30,000 - \$40,000
5. \$40,000 - \$50,000
6. \$50,000 - \$60,000
7. \$60,000 - \$70,000
8. \$70,000 - \$80,000
9. \$80,000 - \$90,000
10. \$90,000 - \$100,000
11. More than \$100,000

Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2763
(850) 644-8673 · FAX (850) 644-4392

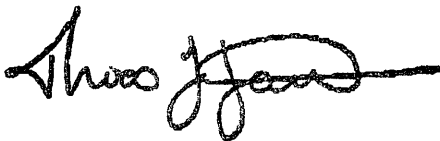
APPROVAL MEMORANDUM

Date: 12/14/2005

To:
Ryan MacDonald
MC 2270

Dept.: **SOCIOLOGY**

From: **Thomas L. Jacobson, Chair**



Re: **Use of Human Subjects in Research**
Social Context and Mental Health

The forms that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Secretary, the Chair, and two members of the Human Subjects Committee. Your project is determined to be Expedited per 45 CFR § 46.110(b) 9 and has been approved by an accelerated review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If the project has not been completed by **12/13/2006** you must request renewed approval for continuation of the project.

You are advised that any change in protocol in this project must be approved by resubmission of the project to the Committee for approval. Also, the principal investigator must promptly report, in writing, any unexpected problems causing risks to research subjects or others.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols of such investigations as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Protection from Research Risks. The Assurance Number is IRB00000446.

Cc: Jay Turner
HSC No. 2005.1032

REFERENCES

- Aaronson, Daniel. 1997. "Sibling Estimates of Neighborhood Effects." In *Neighborhood Poverty: Policy Implications in Studying Neighborhoods, Volume II*. Eds. Jeanne Brooks-Gunn, Greg J. Duncan, and Lawrence J. Aber. New York: Russell Sage Foundation.
- Adlaf, Edward M. and Frank J. Ivis. 1996. "Structure and Relations: The Influence of Familial Factors on Adolescent Substance Use and Delinquency." *Journal of Child and Adolescent Substance Abuse* 5: 1-19.
- Albrecht, Stan L., Cheryl Amey, and Michael K. Miller. 1996. "Patterns of Substance Abuse among Rural Black Adolescents." *Journal of Drug Issues* 26: 751-81.
- Amato, Paul R. and Bruce Keith. 1991. "Parental Divorce and the Well-Being of Children: A Meta-analysis." *Psychological Bulletin* 110: 26-46.
- Amato, Paul R., Laura Spencer Loomis, and Alan Booth. 1995. "Parental Divorce, Marital Conflict, and Offspring Well-being during Early Adulthood." *Social Forces* 73: 895-915.
- Anderson, R.T., Sorlie, P., Backlund, E., Johnson, N., and Kaplan, G.A. 1997. "Mortality Effects of Community Socioeconomic Status." *Epidemiology* 8: 42-47.
- Aneshensel, Carol S. 1992. "Social Stress: Theory and Research." *Annual Review of Sociology* 18: 15-38.
- Aneshensel, Carol S. and Clea A. Sucoff. 1996. "The Neighborhood Context of Adolescent Mental Health." *Journal of Health and Social Behavior* 37: 293-310.
- Aneshensel, Carol S., Richard G. Wight, and Amanda L. Boticello. Unpublished Manuscript. "Socioeconomic Status and Depressive Symptoms among Adolescents: A Contextual Analysis."
- Aseltine, Robert H., Jr. 1996. "Pathways Linking Parental Divorce with Adolescent Depression." *Journal of Health and Social Behavior* 37: 133-48.
- Barber, Bonnie L., and Jacqueline S. Eccles. 1992. "Long-term Influences of Divorces and Single Parenting on Adolescent Family- and Work-related Values, Behaviors, and Aspirations." *Psychological Bulletin* 111: 108-126.
- Barrett, Anne and R. Jay Turner. 2005. "Family Structure and Mental Health: Mediating Effects of Socioeconomic Status, Family Process, and Social Stress." *Journal of Health and Social Behavior*.
- Bingenheimer, Jeffrey B. and Stephen W. Raudenbush. 2004. "Statistical and Substantive Inferences in Public Health: Issues in the Application of Multilevel Models." *Annual Review of Public Health* 25: 53-77.
- Blau, Peter M. and O.D. Duncan. 1967. *The American Occupational Structure*. New York: The Free Press.
- Bloom, B.S. 1964. *Stability and Change in Human Characteristics*. New York: John Wiley and Sons.
- Boardman, Jason D., Brian Karl Finch, Christopher G. Ellison, David R. Williams, James S. Jackson. 2001. "Neighborhood Disadvantage, Stress, and Drug Use Among Adults." *Journal of Health and Social Behavior* 42: 151-165.
- Boyce, W. Thomas. 1985. "Social Support, Family Relations, and Children." In Cohen, Sheldon and S. Leonard Syme (Ed.), *Social Support and Health*, Toronto: Academic

- Press, Inc.
- Bradley, R.H., Corwyn, R.F., McAdoo, H.P., Garcia Coll, C. 2001. "The Home Environments of Children in the United States: Part 1, Variations by Ethnic and Income Group." *Child Development* 72: 1844-1867.
- Brofenbrenner, Urie. 1977. "Toward and Experimental Ecology of Human Development." *American Psychologist* 32: 513-531.
- Brofenbrenner, Urie. 1979. *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge, MA: Harvard University Press.
- Brofenbrenner, Urie. 1986. "Ecology of the Family as a Context for Human Development: Research Perspectives." *Developmental Psychology* 22: 723-742.
- Brooks-Gunn, Jeanne, Duncan, Greg J., and Aber, Lawrence J. eds. 1997a. *Neighborhood Poverty: Context and Consequences for Children, Volume 1*. Russell Sage Foundation: New York.
- Brooks-Gunn, Jeanne, Duncan, Greg J., and Aber, Lawrence J. eds. 1997b. *Neighborhood Poverty: Policy Implications in Studying Neighborhoods, Volume II* (pp. 23-47). New York: Russell Sage Foundation.
- Brooks-Gunn, Jeanne, Duncan, Greg, Klebanov, Pamela K., Sealand, Naomi. 1993. "Do Neighborhoods Influence Child and Adolescent Development?" *American Journal of Sociology* 99: 353-395.
- Browning, Christopher R. and Kathleen A. Cagney. 2003. "Moving Beyond Poverty: Neighborhood Structure, Social Process, and Health." *Journal of Health and Social Behavior* 44: 552-571.
- Case, Anne and Lawrence Katz. 1991. "The Company You Keep: The Effects of Family and Neighborhood on Disadvantaged Youths." National Bureau of Economic Research Working Paper No. 3705.
- Clark, Rebecca. 1992. "Neighborhood Effects on Dropping Out Among Teenage Boys." Urban Institute Working Paper PSC-DSC-UI-13. Washington D.C.: Urban Institute.
- Cohen, Albert. 1955. *Delinquent Boys: The Culture of Gangs*. New York: The Free Press.
- Cooper, M. Lynne., Peirce, R.S., & Tidwell, M.C. 1995. "Parental Drinking Problems and Adolescent Offspring Substance Use: Moderating Effects of Demographic and Familial Factors." *Psychology of Addictive Behaviors* 9: 36-52.
- Corcoran, Michael. 1995. "Rags to Rags: Poverty and Mobility in the United States." *Annual Review of Sociology* 21: 237-267.
- Crane, Jonathan. 1991. "The Epidemic Theory of Ghettos and Neighborhood Effects on Dropping Out and Teenage Childbearing." *American Journal of Sociology* 96: 1126-1159.
- Crum, Rosa M., Marsha Lillie-Blanton, and James C. Anthony. 1996. "Neighborhood Environment and Opportunity to Use Cocaine and Other Drugs in Late Childhood and Early Adolescence." *Drug and Alcohol Dependence* 43: 155-161.
- Datcher, Linda. 1982. "Effects of Community and Family Backgrounds on Achievement." *Review of Economics and Statistics* 64: 32-41.
- Diez-Roux, Ana V. 2000. "Multilevel Analysis in Public Health Research." *Annual Review of Public Health* 21: 171-192.
- D'Imperio, Rhonda L., Dubow, Eric F., Ippolito, Maria F. 2000. "Resilient and Stress-Affected Adolescents in an Urban Setting." *Journal of Clinical Child Psychology* 29: 129-142.

- Dohrenwend, Bruce P. and Dohrenwend, Barbara S. 1969. *Social Status and Psychological Disorder*. New York: John Wiley.
- Dohrenwend, Bruce P., Itzhak Levav, Patrick E. Shrout, Sharon Schwartz, Guedalia Naveh, Bruce G. Link, Andrew E. Skodol, Ann Stueve. 1992. "Socioeconomic Status and Psychiatric Disorders: The Causation-Selection Issue." *Science* 255: 946-952
- Duncan, Greg J. 1994. "Families and Neighbors as Sources of Disadvantage in the School Decisions of White and Black Adolescents." *American Journal of Education* 1003: 20-53.
- Duncan, Greg J., W. Jean Yeung, Jeanne Brooks-Gunn, Judith R. Smith. 1998. "How Much Does Childhood Poverty Affect the Life Chances of Children?" *American Sociological Review* 63: 406-423.
- Earls, Felton and Mary Carlson. 2001. "The Social Ecology of Child Health and Well-Being." *Annual Review of Public Health* 22: 143-166.
- Elliott, Delbert S., Wilson, William Julius, Huizinga, David, Sampson, Robert J., Elliott, Amanda, Rankin, Bruce. 1996. "The Effects of Neighborhood Disadvantage on Adolescent Development." *Journal of Research in Crime and Delinquency* 33: 389-426.
- Entiwisle, Doris R. and Nan Marie Astone. 1994. "Some Practical Guidelines for Measuring Youth's Race/Ethnicity and Socioeconomic Status." *Child Development* 65: 1521-1540.
- Evans, William, Oates, Wallace, Schwab, Robert. 1992. "Measuring Peer Group Effects: A Study of Teenage Behavior." *Journal of Political Economy* 100: 966-991.
- Faris, Robert E. L. and H. Warren Dunham. 1960. *Mental Disorders in Urban Areas: An Ecological Study of Schizophrenia and Other Psychoses*. New York: Hafner Publishing Co.
- Fields, Jason and Lynne M. Casper. 2001. *America's Families and Living Arrangements: March 2000*. Current Population Reports, P20-537. Washington, DC: U.S. Census Bureau.
- Fields, Jason. 2003. *Children's Living Arrangements and Characteristics: March 2002*. Current Population Reports, P20-547. Washington, DC: U.S. Census Bureau.
- Furstenburg, Frank F., and Andrew J. Cherlin. 1991. *Divided Families: What Happens to Children When Parent's Part?* Cambridge, Mass: Harvard University Press.
- Garnefski, Nadia and Rene F. W. Diekstra. 1997. "Adolescents from One Parent, Stepparent and Intact Families: Emotional Problems and Suicide Attempts." *Journal of Adolescence* 20: 201-08.
- Gil, Andres G., William A. Vega, and Frank Biafora. 1998. "Temporal Influences of Family Structure and Family Risk Factors on Drug Use Initiation in a Multiethnic Sample of Adolescent Boys." *Journal of Youth and Adolescence* 27: 373-93.
- Gillman, Matthew W. 2002. "Epidemiological Challenges in Studying the Fetal Origins of Adult Chronic Disease." *International Journal of Epidemiology* 31: 294-299.
- Gilman, Stephen E., Kawachi, Ichiro, Fitzmaurice, Garrett M., Buka, Stephen L. 2003. "Family Disruption in Childhood and Risk of Adult Depression." *American Journal of Psychiatry* 160: 939-946.
- Ginther, Donna, Robert Haveman, and Barbara Wolf. 2000. "Neighborhood Attributes as Determinants of Children's Outcomes: How Robust are the Relationships?" *Journal of Human Resources* 35: 603-642.
- Glick, Paul C. 1990. "American Families: As They Are and Were." *Sociology and Social Research* 74: 139-45.

- Glueck, Sheldon T. and Eleanor Glueck. 1950. *Unraveling Juvenile Delinquency*. Cambridge, MA: Harvard University Press.
- Gore, Susan, Robert H. Aseltine, Jr., and Mary Ellen Colton. 1992. "Social Structure, Life Stress, and Depressive Symptoms in a High School-Aged Population." *Journal of Health and Social Behavior* 33: 97-113.
- Haan, M., Kaplan G.A., and Camacho, T. 1987. "Poverty and Health: Prospective Evidence from the Alameda County Study." *American Journal of Epidemiology* 125: 989-998.
- Hauser, Robert M. 1994. "Measuring Socioeconomic Status in Studies of Child Development." *Child Development* 65: 1541-1545.
- Heck, Ronald H. and Scott L. Thomas. *An Introduction to Multilevel Modeling Techniques*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Hetherington, E. Mavis. 1979. "Divorce: A Child's Perspective." *American Psychologist* 34: 851-858.
- Hetherington, E. Mavis, Cox, Martha, and Roger Cox. 1978. "The Aftermath of Divorce." Pp. 149-176 in *Mother-Child, Father-Child Relationships*, ed. M. Matthews. Washington D.C.: National Association for the Education of Young Children.
- Hollingshead, August B. 1957. *Two Factor Index of Social Position*. New Haven, CT: Hollingshead.
- Jencks, Christopher and Susan E. Mayer. 1990. "The Social Consequences of Growing Up in a Poor Neighborhood." *Inner-City Poverty in the United States*, eds. Lynn L. E. and M. F. H. McGeary. Washington D.C.: National Academy Press.
- Kasarda, John D. 1976. "The Changing Occupational Structure of the American Metropolis: Apropos the Urban Problem." In *The Changing Face of the Suburbs*, ed. Barry Schwartz. Chicago: University of Chicago Press.
- Kasarda, John D. 1989. "Urban Industrial Transformation and the Underclass." *Annals of the American Academy of Political and Social Science* 501: 26-47.
- Kasarda, John D. 1993. "Inner-City Concentrated Poverty and Neighborhood Distress: 1970 to 1990." *Housing Policy Debate* 4: 253-302.
- Kasl, Stansilav V., and Ernest Harburg. 1975. "Mental Health and the Urban Environment: Some Doubts and Second Thoughts." *Journal of Health and Social Behavior* 16: 268-282.
- Kessler, Ronald C., K.A. McGonagle, S. Zhao, C.B. Nelson, M. Hughes, S. Eshelman, H.U. Wittchen, and K.S. Kendler. 1994. "Lifetime and 12-Month Prevalence of DSM-III-R Psychiatric Disorders in the United States." *Archives of General Psychiatry* 51: 8-19.
- Kessler, Ronald C. and Shanyang Zhao. 1999. "Descriptive Epidemiology of Mental Disorders." Pp 127-150 in *Handbook of the Sociology of Mental Health*. Eds. Carol S. Aneshensel and Jo C. Phelan. New York: Kluwer Academic/Plenum Publishers.
- Kohn, Melvin L. 1969. *Class and Conformity: A Study in Values*. Homewood, Il: Dorsey Press
- Kohn, Melvin. 1972. "Class, Family, and Schizophrenia: A Reformulation." *Social Forces* 50: 295-304.
- Krieger, Nancy. 1991. "Women and Social Class: A Methodological Study Comparing Individual, Household, and Census Measures as Predictors of Black/White Differences in Reproductive History." *Journal of Epidemiology and Community Health* 45: 35-42.
- Krieger, Nancy. 1992. "Overcoming the Absence of Socioeconomic Data in Medical Records: Validation and Application of a Census-based Methodology." *American Journal of Public Health* 82: 703-710.

- Krishnakumar, Ambika and Maureen M. Black. 2002. "Longitudinal Predictors of Competence Among African American Children: The Role of Distal and Proximal Risk Factors." *Applied Developmental Psychology* 23: 237-266.
- Krivo, Lauren J. and Ruth D. Peterson. 1996. "Extremely Disadvantaged Neighborhoods and Urban Crime." *Social Forces* 75: 619-650.
- LeClare, F.B., Rogers, R.G., and Peters, K. 1997. "Ethnicity and Mortality in the United States: Individual and Community Correlates." *Social Forces* 76: 169-198.
- Leventhal, T. and Jeanne Brooks-Gunn. 2000. "The Neighborhoods They Live In: The Effects of Neighborhood Residence Upon Child and Adolescent Outcomes." *Psychological Bulletin* 126: 309-337.
- Lewis, Oscar. 1968. *A Puerto Rican Family in the Culture of Poverty: San Juan and New York*. London: Panther.
- Link, Bruce G., Bruce P. Dohrenwend, and Andrew E. Skodol. "Socio-economic Status and Schizophrenia: Noisome Occupational Characteristics as a Risk Factor." *American Sociological Review* 51: 242-258.
- Link, Bruce G., Mary Clare Lennon, and Bruce P. Dohrenwend. 1993. "Socioeconomic Status and Depression: The Role of Occupations Involving Direction, Control, and Planning." *American Journal of Sociology* 6: 1351-1387.
- Link, Bruce G. and Jo Phelan. 1995. "Social Conditions as Fundamental Causes of Disease." *Journal of Health and Social Behavior* Extra Issue: 80-94.
- Luo, Ye and Linda J. Waite. 2005. "The Impact of Childhood and Adult SES on Physical, Mental, and Cognitive Well-Being in Later Life." *Journal of Gerontology: Social Sciences* 60B: S93-S101.
- MacIntyre Sally and A. Ellaway. 2003. "Neighborhoods and Health: Overview." In *Neighborhoods and Health*. Kawachi I, Berkman L eds. Oxford University Press, 20-42.
- Marinacci, C., T. Spadea, A. Biggeri, M. Demaria, A. Caiazzo, G. Costa. 2004. "The Role of Individual and Contextual Socioeconomic Circumstances on Mortality: Analysis of Time Variations in a City of North West Italy." *Journal of Epidemiology and Community Health* 58: 199-207.
- Massey, Douglas S. 1990. "American Apartheid: Segregation and the Making of the Underclass." *American Journal of Sociology* 96: 329-357.
- Massey, Douglas S. and Nancy A. Denton. 1993. *American Apartheid*. Harvard University Press: Cambridge MA.
- Mayer, Susan E. and Christopher Jencks. 1989. "Growing Up in Poor Neighborhoods: How Much Does It Matter?" *Science* 243: 1441-1445.
- McLanahan, Sara S. 1997. "Parent Absence or Poverty: Which Matters More?" Pp. 35-48 in *Consequences of Growing up Poor*, edited by Greg J. Duncan and Jeanne Brooks-Gunn. New York: Russell Sage Foundation.
- McLeod, Jane D. and Kevan Edwards. 1995. "Contextual Determinants of Children's Responses to Poverty." *Social Forces* 73: 1487-1516.
- McLeod, Jane D. and James M. Nonnemaker. 2000. "Poverty and Child Emotional and Behavioral Problems: Racial/Ethnic Differences in Processes and Effects." *Journal of Health and Social Behavior* 41: 137-161.
- McLeod, Jane D. and Michael J. Shanahan. 1993. "Poverty, Parenting, and Children's Mental Health." *American Sociological Review* 58: 351-366.

- Mechanic, David and Stephen Hansell. 1989. "Divorce, Family Conflict, and Adolescent's Well-Being." *Journal of Health and Social Behavior* 30: 105-116.
- Miech, Richard A., Caspi, Avshalom, Moffitt, Terrie E., Wright, Bradley R. Entner, Silva, Phil A. 1999. "Low Socioeconomic Status and Mental Disorders: A Longitudinal Study of Selection and Causation during Young Adulthood." *American Journal of Sociology* 104: 1096-1131.
- Mirowsky, John and Catherine E. Ross. 1989. "Psychiatric Diagnoses and Reified Measurement." *Journal of Health and Social Behavior* 30: 11-25.
- Moynihan, Daniel P. 1965. *The Negro Family*. Washington D.C.: US Department of Labor.
- National Institute of Mental Health (NIMH). 1999. "Depression Research at the NIMH." Web Page. Accessed on 4/22/2005. Available at <http://www.nimh.nih.gov/publicat/depresfact.cfm>.
- Park, Robert E., Ernest W. Burgess, and R. D. McKenzie. 1925. *The City*. Chicago; University of Chicago Press.
- Pearlin, Leonard I. 1989. "The Sociological Study of Stress." *Journal of Health and Social Behavior* 30: 241-256.
- Pearlin, Leonard I., Menaghan, Elizabeth T., Lieberman, Morton A., and Mullan, Joseph T. 1981. "The Stress Process." *Journal of Health and Social Behavior* 22: 337-356.
- Peeples, Faith and Rolf Loeber. 1994. "Do Individual Factors and Neighborhood Context Explain Ethnic Differences in Juvenile Delinquency?" *Journal of Quantitative Criminology* 10: 141-157.
- Portes, Alejandro and A. Stepick. 1993. *City on the Edge: The Transformation of Miami*. Berkeley: University of California Press.
- Radloff, Lenore S. 1977. "The CES-D Scale: A Self-Report Depression Scale for Research in the General Population." *Applied Psychosocial Measurement* 1: 385-401.
- Reynolds, John R. and Catherine E. Ross. 1998. "Social Stratification and Health: Education's Benefit Beyond Economic Status and Social Origins." *Social Problems* 45: 221-247.
- Robert, Stephanie. 1998. "Community-Level Socioeconomic Status Effects on Adult Health." *Journal of Health and Social Behavior* 39: 18-37.
- Robert, Stephanie. 1999. "Socioeconomic Position and Health: The Independent Contribution of Community Context." *Annual Review of Sociology* 25: 489-516.
- Ross, Catherine. 2000. "Neighborhood Disadvantage and Adult Depression." *Journal of Health and Social Behavior* 41: 177-187.
- Ross, Catherine, Reynolds, John R., and Karlyn J. Geis. 2000. "The Contingent Meaning of Neighborhood Stability for Residents' Psychological Well-Being." *American Sociological Review* 65: 581-597.
- Ross, Catherine and John Mirowsky. 2001. "Neighborhood Disadvantage, Disorder, and Health." *Journal of Health and Social Behavior* 42: 258-276.
- Ross, Catherine E. and Chia-Ling Wu. 1996. "Education, Age, and the Cumulative Advantage in Health." *Journal of Health and Social Behavior* 37: 104-120.
- Ruggles, Steven. 1994. "The Origins of African American Family Structure." *American Sociological Review* 59: 136-151.
- Rutter, Michael. 1979. "Maternal Deprivation, 1972-1978: New Findings, New Concepts, New Approaches." *Child Development* 50: 283-305.

- Rutter, M. and D. Quinton. 1977. "Psychiatric Disorder-Ecological Factors and Concepts of Causation." In H. McGurk ed. *Ecological Factors in Human Development*. Pp. 173-187. Amsterdam: North Holland.
- Sampson, Robert J. and Janet L. Lauritsen. 1994. "Violent Victimization and Offending: Individual-, Situational-, and Community-Level Risk Factors," pp. 1-114 in Albert J. Reiss and Jeffrey A. Roth, eds. *Understanding and Preventing Violence: Social Influences on Violence*, Vol. 3. Committee on Law and Justice, National Research Council. Washington, D.C.: National Academy Press.
- Sampson, Robert J., Morenoff, Jeffrey D., and Thomas Gannon-Rowley. 2002. "Assessing 'Neighborhood Effects': Social Processes and New Directions in Research." *Annual Review of Sociology* 28: 443-478.
- Sampson, Robert J., Raudenbush, Stephen W., Earls, Felton. 1997. "Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy." *Science* 277: 918-924.
- Sampson, Robert J. and William Julius Wilson. 1995. "Race, Crime, and Urban Inequality." Pp. 37-54 in *Crime and Inequality*, eds. John Hagan and Ruth D. Peterson. Stanford University Press: Palo Alto, California.
- Schwartz, Sharon. 1994. "The Fallacy of the Ecological Fallacy: The Potential Misuse of a Concept and the Consequences." *American Journal of Public Health* 84: 819-824.
- Shaw, Clifford R. and Henry D. McKay. *Juvenile Delinquency and Urban Areas*. 1942. 1969. University of Chicago Press: Chicago.
- Silver, Eric. 2000. "Extending Social Disorganization Theory: A Multilevel Approach to the Study of Violence Among Persons with Mental Illness." *Criminology* 38: 301-332.
- Silver, Eric, Edward P. Mulvey, Jeffrey W. Swanson. 2002. "Neighborhood Structural Characteristics and Mental Disorder: Faris and Dunham Revisited." *Social Science and Medicine* 55: 1457-1470.
- South, S.J. and K.D. Crowder. 1997. "Escaping Distressed Neighborhoods: Individual, Community, and Metropolitan Influences." *American Journal of Sociology* 102: 1040-1084.
- Spruijt, Ed and Martijn de Goede. 1997. "Transitions in Family Structure and Adolescent Well-being." *Adolescence* 32: 897-911.
- Taylor, John and R. Jay Turner. 2002. "Perceived Discrimination, Social Stress, and Depression in the Transition to Adulthood: Racial Contrasts." *Social Psychology Quarterly* 65: 213-225.
- Tausig, Mark. 1999. "Work and Mental Health." Pp. 255-74. *Handbook of the Sociology of Mental Health*. Eds. Carol S. Aneshensel and Jo Phelan. Plenum: New York.
- Turner, R. Jay, Wheaton, Blair, and Donald A. Lloyd. 1995. "The Epidemiology of Social Stress." *American Sociological Review* 60: 104-125.
- Turner, R. Jay and Andres Gil. 2002. "Psychiatric and Substance Use Disorders in South Florida: Racial/Ethnic and Gender Contrasts in a Young Adult Cohort." *Archives of General Psychiatry* 59: 43-50.
- Turner, R. Jay and Donald A. Lloyd. 1999. "The Stress Process and the Social Distribution of Depression." *Journal of Health and Social Behavior* 40:374-404.
- Turner, Rebecca A., Charles E. Irwin, Jr., and Susan G. Millstein. 1991. "Family Structure, Family Processes, and Experimenting with Substances during Adolescence." *Journal of Research on Adolescence* 1: 93-106.

- Upchurch, Dawn M., Aneshensel, Carol S., Sucoff, Clea A., Levy-Storms, Lene. 1999. "Neighborhood and Family Contexts of Adolescent Sexual Activity." *Journal of Marriage and the Family* 61: 920-933.
- Vega, William A. and Andreas G. Gil. 1998. *Drug Use and Ethnicity in Early Adolescence*. New York: Plenum.
- Warheit, George J., Holzer, Charles E., and Schwab, John J. 1973. "An Analysis of Social Class and Racial Differences in Depressive Symptoms: A Community Study." *Journal of Health and Social Behavior* 14: 291-299.
- Wheaton, Blair and Philippa Clarke. 2003. "Space Meets Time: Integrating Temporal and Contextual Influences on Mental Health in Early Adulthood." *American Sociological Review* 68: 680-706.
- Wickrama, K.A.S., Conger, Rand D., and W. Todd Abraham. 2005. "Early Adversity and Later Health: The Intergenerational Transmission of Adversity Through Mental Disorder and Physical Illness." *Journal of Gerontology: Series B* 60B: 125-129.
- Wickrama, K.A.S., Rand D. Conger, Frederick O. Lorenz, Glen H. Elder Jr. 1998. "Parental Education and Adolescent Self-Reported Physical Health." *Journal of Marriage and the Family* 60: 967-978.
- Wight, Richard G., Aneshensel, Carol S., Botticello, Amanda L., and Sepulveda, Joslan E. 2005. "A Multilevel Analysis of Ethnic Variation in Depressive Symptoms Among Adolescents in the United States." *Social Science and Medicine* 60: 2073-2084.
- Williams, David R. and Chiquita Collins. 1995. "U.S. Socioeconomic and Racial Differences in Health: Patterns and Explanations." *Annual Review of Sociology* 21: 349-386.
- Wilson, William Julius. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*. 1987. University of Chicago Press: Chicago.
- Yen, I.H. and S.L. Syme. 1999. "The Social Environment and Health: A Discussion of the Epidemiologic Literature." *Annual Review of Public Health* 20: 287-308.

BIOGRAPHICAL SKETCH

EDUCATION

Ph.D. Sociology (2006) Florida State University, Tallahassee, Florida. Dissertation: *Social Context and Mental Health: The Role and Significance of Neighborhood and Family*.

M.S. Sociology (2003) Florida State University, Tallahassee, Florida. M.S. Paper: *Mastery and Mental Health: Exploring Status Variations in Personal Competence*.

M.A. Sociology (2001) Texas State University, San Marcos, Texas. Thesis: *Parental Attachment and Self-Reported Delinquent Behavior*.

B.A. Sociology (1998) University of Texas, Austin, Texas.

RESEARCH/TEACHING INTERESTS

Sociology of Mental Health and Substance Use, Medical Sociology, Quantitative Methods, Statistics, Aging and the Life Course.

PUBLICATIONS

Reynolds, John, Mike Stewart, Ryan MacDonald, and Lacey Sischo. "Have Adolescents Become Too Ambitious? An Analysis of U.S. High School Seniors' Educational and Occupational Plans, 1976 to 2000." Forthcoming in *Social Problems*.