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Understanding Disproportionate Minority Confinement: An Ecological Investigation of Multiple Placements of African-American Male Delinquents

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UNDERSTANDING DISPROPORTIONATE MINORITY CONFINEMENT: AN ECOLOGICAL INVESTIGATION OF MULTIPLE PLACEMENTS OF AFRICAN-AMERICAN MALE DELINQUENTS

By

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ABSTRACT

UNDERSTANDING DISPROPORTIONATE MINORITY CONFINEMENT: AN ECOLOGICAL INVESTIGATION OF MULTIPLE PLACEMENTS OF AFRICAN-AMERICAN MALE DELINQUENTS

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This study explores the problem of disproportionate minority confinement. Personal, environmental, family, and juvenile justice system variables were used to represent successive levels of the social ecology of 171 African-American male adolescents who were adjudicated and placed in restrictive treatment facilities for delinquency. Descriptive data show that sample youth average 15.5 years of age at intake, 2.89 felony offenses, 2.44 prior placements, and 15 months in the most recent placement. Sixty-five percent came from single parent families, and 86% lived in urban environments.

Confirmatory factor analysis of stress, coping, and family functioning measures indicated that this sample evidenced significant differences from the normative samples upon which the instruments were constructed. New scales were developed from existing items to improve measurement of these clinical constructs for this sample.

Correlational analysis did not support expected associations of age at intake, status offenses, felony offenses, adjudications, family tensions stressors, and a

ventilation coping strategy, with number of out-of-home placements. Number of placements was positively correlated with family functioning and single parent family type, and negatively correlated with length of stay and program completion. Length of stay was positively correlated with successful release type, and aftercare placement in a home setting, and negatively correlated with age at intake, felony offenses, number of prior placements, and total out-of-home placements.

Simultaneous multiple regression indicated that ecological sets of variables are the best predictors of both number of placements and length of stay in the most recent placement, when compared to demographic, offense and placement history, clinical characteristics, and family characteristics models. For number of placements, the family characteristics model was also a significant predictor, and for length of stay, the demographic model was also significant.

This study offers suggestions for further research, and outlines implications for policy and practice. Preliminary work for path analysis and systems dynamics modeling are included.

To my wife Kathryn, for her love, shown through patience, consideration, and unwavering support during many difficult times. To my children, Angela and Thomas, for sacrificing parts of their father to the lengthy process of this doctoral study. Also, to my mother, Shirley, for her unconditional love, and to my father, Gerald, for his example of hard work and joyful living.

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I am indebted to Boysville of Michigan for opportunities beyond expectation. Brother Francis Boylan, csc, and Paul Neitman approved use of the data for this project. Steve Kapp helped me understand the value of applied research and nurtured a great friendship.

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INTRODUCTION

Placement of children and adolescents out of their family homes has a long history in the United States. Removing young people from their homes has been the "treatment of choice" for two hundred years. While such a practice may provide particular advantages, it also produces accompanying limitations on personal freedoms which should be considered carefully in a free society. Questions of justice for offenders and victims are raised, as well as matters of equity in decision making, and the application of social power.

This study was undertaken to better understand the problem of disproportionate confinement of African-American adolescent males in juvenile justice settings. African-American males are more likely to be placed out of the home than their European-American counterparts, and to be escalated to more restrictive placements for relatively less serious offenses (Snyder & Sickmund, 1999). Many African-American males, once placed out of their homes, also face a compounding process of continued confinement as decision-makers employ escalating forms of social control (Snyder & Sickmund, 1999). The current investigation focuses on variables associated with accumulation of out-of-home placements, and the duration of the most recent placement,

for a sample of African-American male delinquents, in order to improve understanding of the higher incarceration rates for minority youth.

The author's motivations for completing this study represent a range of personal and professional concerns. Experience in the field with delinquents and their families fuels not only a curiosity about the relationship of the included variables, but also a commitment to improving the operation of a system that attempts to meet dual needs. In both treatment-oriented and correctional settings, it has proven difficult to integrate public safety and effective interpersonal intervention. Work with involuntary clients in highly restrictive environments highlights issues of self-determination and social control. Cultural sensitivity sharpens a focus on the particular vulnerability of African-American male youth to policies favoring placement and external control. The values of the Social Work profession, especially a concern with social justice, underlie this attempt to deepen available knowledge and illuminate possible alternatives for intervention at the treatment and policy levels.

This study applies a systemic framework and ecological orientation to find the fit of factors at the individual, family, community, and juvenile justice system levels, in order to explain forms of out-of-home placement for African-

American male delinquents. Existing quantitative data at each level, from a large multi-site agency, were analyzed with techniques that are appropriate for ecological understanding. Primary analyses use descriptive, correlational, and regression techniques. Preliminary work for path analysis is presented, and disproportionate minority confinement is discussed from a Systems Dynamics perspective to realistically represent the feedback inherent in the social ecology of the participants.

Existing research provides a basis for this investigation as indicated below, but also evidences notable gaps in specific knowledge of the environmental and personal characteristics of African-American male delinquents. Although the analyses undertaken in this study are subject to limitations on generalizability, and suffer from less than ideal psychometrics, they still offer knowledge about this particular sample of participants and serve to explicate relevant ecological relationships. The specific research questions investigated in this study include the following:

1. What personal, family, and environmental characteristics describe African-American male delinquents who experience out-of-home placements?

2. What are the observed associations of personal, family, and environmental variables for African-American

male delinquents who experience out-of-home placements?

3. Which sets of variables best explain out-of-home placements for African-American male delinquents?

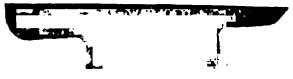
Within its limitations, this study is intended to have value for practice, policy, and further research. Findings should be applied tentatively, but offer incremental information for directing clinical intervention and prevention with African-American youth that centers on reducing the negative personal impacts of ecological factors. Policy decisions focused on reduction of disproportionate minority confinement may be supported by clearer specification of the factors that can be controlled to stem the tide of confinement. Implications for further research include identification of potentially relevant variables that are not addressed in this study, suggestions for improved measurement, and explication of foci for qualitative study.

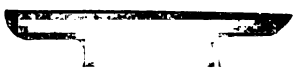
This work is organized in a way that is intended to introduce the reader to several interrelated aspects of the social ecology of African-American delinquent males, describe the procedures used to conduct the study, and then present and discuss specific findings for further application.

Three brief chapters set the context for the study

through review of the current state of knowledge about disproportionate minority confinement, development of practice and policy, and research on the ecological factors that are included in this study. Chapter One summarizes the current state of knowledge about disproportionate minority confinement, and the Afrocentric perspective. The second chapter outlines the historical context of out-of-home placement of delinquent youth, including modern policy and practice developments, and emergent theories that purport to explain delinquent behavior. The third chapter presents research on the relevant ecological variables such as stressors, coping, and family functioning.

Additional chapters present the structure and findings of the study. The fourth chapter offers a statement of the problem and describes the methodology and research techniques used to conduct this investigation. Chapter Five details characteristics of the youth in the study sample, depicts a profile of the typical youth in this group, identifies significant relationships between included variables, evaluates various regression models designed to explain forms of out-of-home placement, and presents a correlational schematic that ties together the levels of the ecological system. Chapter Six critically discusses the study findings, and outlines implications for future investigations, policy, and practice.





Chapter 1

Disproportionate Confinement of African-American Adolescent Males

Differential disposition of juvenile cases involving European-American and African-American youth has been identified as a long-standing problem of significant proportion (Hsia & Hamparian, 1998). Charges of racial discrimination in Juvenile Court proceedings were initially raised during the Civil Rights movement of the late 1960's (Ferdinand, 1991). Subsequent policy measures were enacted, including the Juvenile Justice and Delinquency Prevention Act of 1974. This act, as amended in 1988 and 1992, issues a mandate to reduce over-representation of minority youth in confinement. The timelines for compliance have been extended, however, and results vary by state (Howell, 1998). Despite efforts on the federal and state levels, African-American delinquent youth continue to be over-represented in secure settings as compared to their European-American counterparts.

The administrator of the Office of Juvenile Justice and Delinquency Prevention has stated that an effective juvenile justice system should treat every offender as an individual and provide needed services to all (Bilchik, 1998). A persistent inequity in disposition of cases associated with race brings real human consequences and counters such a system goal. Concern with the problem of over-

representation of African-American youth in restrictive settings has led to acceptance of the term disproportionate minority confinement (Hsia & Hamparian, 1998).

Research on Disproportionate Minority Confinement

The bulk of published research on the phenomenon of disproportionate minority confinement centers on establishing and amplifying the extent of the problem. Other related studies offer limited insight into causes, potential interventions, and broader policy implications.

McGarrell (1993), in a study of differential confinement rates across states, found that those states with expanding "non-White" populations have tended to incarcerate juveniles at a higher rate since the mid-1970's compared to those states whose proportions have remained relatively steady. This finding is interpreted to mean that increased levels of punitive responses to juvenile crime are linked to heterogeneity in the population, which could indicate discriminatory practices.

Prevalence studies were conducted to outline the scope of the problem of disproportionate minority confinement. These studies estimated that one in seven African-American males would be confined prior to his 18th birthday, while the estimate for European-American youth was only one in 25 (Hsia & Hamparian, 1998). Another study indicates that African-American males of all ages are seven to ten times

more likely to be incarcerated than comparable groups of European-Americans (Brinson, 1994). While these investigations were based on national data and yielded only estimations as results, they provide some support for the conclusion that minority youth continue to be disproportionately confined.

The Office of Juvenile Justice and Delinquency Prevention (Sickmund, Snyder, & Poe-Yamagata, 1995) concluded that African-American youth are significantly over-represented at all levels of the juvenile justice system. African-American youth comprise only 15% of the United States' population aged ten to seventeen, yet they represent 25% of all juvenile arrests, 49% of the known violent offenses committed by juveniles, 36% of the total adjudicated juvenile cases, 41% of youth in detention facilities, 46% of youth in long-term public institutions, and 52% of juvenile cases waived to adult criminal court. A review of these percentages also indicates that African-American youth are dealt with in a more restrictive fashion within the system, than are European-American youth, who make up a much higher percentage of the total juvenile arrests.

In addition, the data appear to show that African-American youth are at increasing risk for inclusion in the system. In 1983, minority youth represented 53% of the population in secure juvenile corrections facilities, and by 1996, the figure had increased to 68% (Sickmund, Snyder, &

Poe-Yamagata, 1997). Between 1986 and 1995, the number of open delinquency cases involving European-American youth increased by 34%, while those of African-American youth increased by 72% (Sickmund, Snyder, & Poe-Yamagata, 1995).

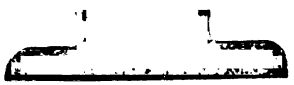
The only known longitudinal study of delinquents released from residential care who are subsequently imprisoned in adult correctional facilities also provides relevant findings (Kapp, Schwartz, & Epstein, 1994). For this sample of youth released from a private residential program in Michigan, background and intake variables such as race, family demographics, age, county of commitment, legal status (delinquent, abused/neglected, status offender), number and types of previous placements, and type of prior offense history showed no significant correlation with subsequent imprisonment as an adult. Similar findings were evident for treatment related variables such as type of residential program (campus or community-based), amount and type of treatment contacts with the family, and number of times a youth truanted from the program. Even more striking is the lack of significant correlation between outcome measures such as completion of treatment goals and type of placement at discharge with adult imprisonment.

Adopting a delinquency typology originally presented by Wolfgang, Figlio, and Sellin (1972), which structures identification of repeat offenders as 'recidivists', Kapp and his colleagues (1994) found that earlier conclusions regarding juvenile recidivists being more likely to commit

future crimes also extend into adulthood, and provide some evidence for the concept of an ongoing and dynamic criminal career. In addition to bivariate analyses, their study used logistical regression and event history analysis to examine the predictive value of a combined delinquency/race typology and found that being a "non-White" juvenile recidivist placed outside the family home post-release, was significantly related to higher likelihood of adult imprisonment. These youth had nearly a one in five chance of being imprisoned as adults, while White juvenile non-recidivists who return to their families were four and one-half times less likely to find their way into the adult prison system. Kapp, Schwartz and Epstein (1994) focused on the interaction of race, delinquent activity, family influences, and confinement. These results may also inform the construction of a dynamic model by illuminating the effects of repeated adjudications and confinements. Moreover, the prior study convincingly demonstrates the dynamic nature of confinement of African-American youth even as it is extended into adulthood.

Afrocentric Perspective

The Afrocentric perspective has been applied to many social issues. It is based on a distinction between African and European worldviews and can be traced to traditional African cultures that predated the influence of European



colonization and imperialism (Scheile, 1997). These African cultures emphasized collective identity over individualism; emotional and spiritual connection over material objectification; equal distribution of resources over concentration of resources among those perceived to have contributed most; and reciprocal interdependent responsibility of government and individual over dichotomous government and individual responsibility. The Afrocentric perspective also emphasizes an inclusion of racial and ethnic pride by highlighting the often overlooked contributions of African cultures.

From an Afrocentric point of view, Brinson (1994) considers several explanations for higher arrest and confinement rates among African-Americans. Listed are family structure, school performance, values, peer relationships, media influences, racial features, and personality factors. Brinson reasons that socio-economic status, academic achievement, childhood patterns, and coping styles are interrelated and serve as the most important determinants of maladaptive behavior in African-American youth. Although he presents no empirical data of his own, he intersperses his arguments with relevant findings from other investigations that support his points. While such an approach may not meet current standards for scholarly research, his discussion dispenses valuable nuggets of knowledge, that warrant further examination. Included are the assertions that approximately two-thirds of African-

American children live in poverty, education level of mother and length of father presence are the best predictors of academic achievement among Black children; seven to nine year-old offenders are more likely to be non-White and living with a single mother; and those youth who accept the cultural goals of society but are excluded from the means to achieve them are more likely to turn to crime. The attribution of higher confinement rates to these factors raises other empirical questions, but also emphasizes the potential role of the social ecology of the offender in the development of individual behaviors, and system dispositions.

Special Circumstances of African-American Youth

Other bodies of research indicate that African-American youth encounter factors in life that either are not contacted by European-American youth, or which do not hold the same level of personal impact. Two such factors are racism and exposure to interpersonal violence.

Racism

It may be argued that racism is at the root of any discrepancies in the rates of social problems that affect African-Americans and European-Americans. Further, as an ideology, racism operates at the meta-level of social

systems and pervades the American social ecology (Goldberg & Hodes, 1992). Seen from this perspective, the topic of racism is far too broad to address within the scope of the proposed study, but it is instructive to deal with the forms of impact it may exert on the immediate environment of the youth, such as the family functions of cohesion and control.

Goldberg and Hodes (1992) examined families of Black substance-abusing youth. With a recognition of the potential for oppression in modern society, they sought particular developmentally significant issues for minority families who are negotiating the transition of adolescent children toward autonomy. Of note were two opposing, and potentially problematic patterns that have been elsewhere related to delinquency. Encounters with racism could strengthen the external boundary of the family, thereby propelling parents and adolescents toward each other and increasing levels of enmeshment. The mechanism cited in dysfunctional examples of this process is parental "over-protectiveness", which embodies aspects of family cohesion and parental control. Alternatively, racism could drive the adolescent farther from the parents in pursuit of a break from family patterns, thereby increasing levels of disengagement. Again, family cohesion cycles beyond a functional level, and the balancing effects of parental control are overcome as the adolescent draws increased personal power. The authors conclude that racism can be considered in terms of the balance between the centripetal

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and centrifugal forces in family relationships that are central to individual development.

Interpersonal Violence

Encounters with violence are an inescapable part of the social landscape for many African-American youth, especially males. Violence touches these young people as victims and perpetrators. African-American youth are three to five times more likely than European-Americans to be murder victims; African-American teenagers commit about 80% of the violent crimes suffered by their peers, and 90% of the time the offenders and victims are males (King, 1997).

From an Afrocentric perspective, King (1997) identifies the history of chattel slavery, institutional racism, and poverty as factors contributing to this condition. He observed that one in three Africans died on the march to the coast and another one third died during the sea voyage in the enslavement period. Lynching survived abolition, as is well-documented in accounts of such public displays of violence against African-American males. Police brutality and capital punishment are included as examples of official violence. Racial discrimination and poverty are perpetuated by limited involvement of African-American youth in the opportunity structures of American life. King (1997, p. 89) states, "African-American boys...know that if they cannot dribble a basketball, hit a baseball, or sack a quarterback,

this country has little use for them..." He also indicts the popular 'warrior mentality', and the related war paradigm, as a pervasive metaphor in American life which undermines a culturally and socially appropriate value system. King concludes with a linkage of these ecological factors to the personal factors of low self-worth, lack of purpose, lack of social competencies for a hostile environment, lack of connectedness in the African-American community, and lack of a culturally specific and relevant world-view.

Violence among African-American youth has also been described as a socio-cultural phenomenon by Cousins (1997). Through qualitative research, he locates violence within the contexts of life in a poor, black, urban high school and community. These contexts are heavily shaped by culture, which provides the shared meanings of events and interactions. He argues that public policy, as reflected in several specific pieces of legislation enacted since the late 1960's deals with the violence of African-American youth as somehow separate from the violence that is woven into the fabric of American life. This separate treatment, he further argues, results in attributions of aberrance rather than reflection of poverty and racial discrimination in contact with mainstream culture.

Afrocentric observers emphasize the important role of culture in shaping shared beliefs, personal experiences, and the perceptions that direct social power. As is made

apparent in the next chapter, these cultural forces have long been at work in the juvenile justice arena. A careful review of historical factors suggests that prevailing prejudices about certain groups of people, personal responses to restricted social resources, and the extension of social control into the lives of individuals and families may have changed form over the past two hundred years, but little has changed in their essential functions.

Chapter 2

Major Developments in Delinquency Practice, Policy, and Theory

The evolution of confinement as the method of choice for dealing with juvenile crime provides a useful backdrop for an investigation of disproportionate minority confinement. The choice to incarcerate any children facilitates the choice to incarcerate selected groups of children at inequitable rates. The problem of disproportionate minority confinement, thus, may be understood as a current manifestation of long-standing social forces.

In relation to juvenile crime, a caring society addresses what are often perceived to be the opposing needs for social control and social treatment. The value of safety for society is juxtaposed with the value of humane treatment and socialization of the youthful offender. Rather than view these needs as adversarial forces in a dialectical process, however, in the opinion of the author, it may be more useful to recognize their complementary value, and to organize them in the structure of a double helix (Figure 1). Such a diagram represents an attempt to depict the connection between these needs in a way that realistically matches the experience of history. Although proponents of social control are often at odds with those who favor social treatment, the forces themselves appear to

be systemically linked. Historical evidence, as presented in the remainder of this chapter, reflects ongoing attempts to balance these social obligations, and may be interpreted to show that each significant development of the juvenile justice system has incorporated them in a pattern of linkage rather than conflict. This evidence is considered below.

The 'Invention' of Juvenile Delinquency

Although concern for children and the experience of juvenile crime did not begin out of the darkness in the early nineteenth century, prior to that time there was no systematic separation of juveniles from other criminals in the United States (Montgomery, 1909; Bruno, 1957). "Delinquency" was a term that was applied to all those in the "dangerous classes" who committed crimes, regardless of their age.

It has been suggested that specialized application of the term to juvenile offenders began to extend governmental control over a range of youthful activity that had previously been ignored or dealt with informally (Platt, 1977). With the rise of industrialization, families were drawn to urban centers to secure employment. In conjunction with this concentration of population, and parents working away from the home, came the advent of public education. These developments created opportunities for children to become a greater social nuisance as they came together in

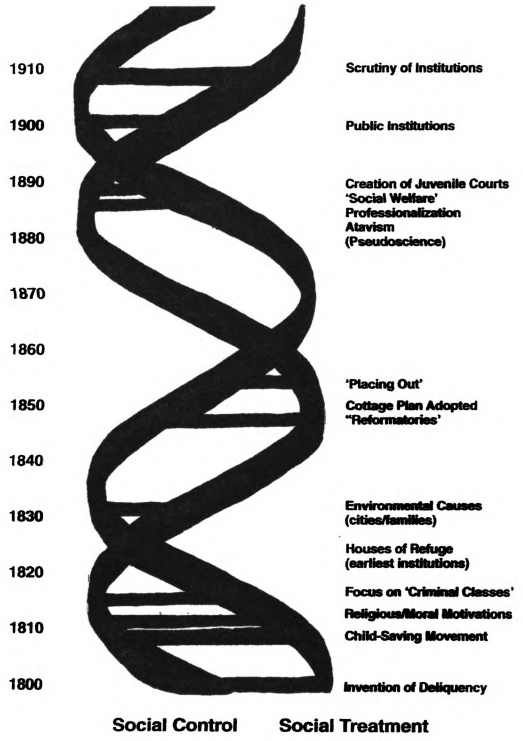

Figure 1. Complimentary Structure of Social Control and Social Treatment

consolidated peer groups (Ferdinand, 1991). If children committed crimes, they were initially dealt with by the criminal justice system and sometimes incarcerated along with adults, but such a practice did not allow effective intervention with the numbers of troublesome youth whose behavior fell short of felonious activity. Ferdinand (1991) argues that a means of bolstering the authority of the family and the school, in this context, was the construction of a new social status known as the "juvenile". He notes that the family and school retained a primary responsibility to socialize children, and the doctrine of *parens patriae* was used to legitimate the intercession of the state in cases where the primary means of control had failed.

A concern with the impact of juvenile crime caught the attention of a group of people who have come to be known as the "child-savers" (Pumphrey & Pumphrey,1961). Much of the work of the child-savers was delineated by the view of the child as a helpless victim of the excesses and inequities of society, but a dangerous victim nonetheless (Bruno, 1957). If unchecked, this victim could wreak havoc. Within these positions, it is possible to identify the earliest expressions of the needs for social control and humane treatment methods intended to change individual behaviors. The seeds of connection between a punitive external control perspective and a more benign treatment orientation were sown at this early juncture and persist to the present day.

The Quest for Cause

Much effort during the nineteenth century was directed toward identifying and outlining the causes of social problems, in order to apply increasing social resources to their redress. Crime was a troubling social problem, and criminality became a focus for such investigation. Activity of this nature was focused on construction of an explanation for the emergence of the "criminal classes" (Pumphrey & Pumphrey, 1961).

Among the earliest identified causes of delinquency were the personal attributes of individual delinquents. Disadvantaged children living in cities were regarded as intellectual dwarfs and physical and moral wrecks (Platt, 1977). A theory of personal predisposition to crime was popularized. The Chaplain of the New York House of Refuge wrote that "...young criminals, now numbered by the thousands...have fallen into crime, not through the want, as we have seen, of excellent homes, but through peculiar weakness or corrupting influences. Poor blood, low moral culture, the pinch of poverty, the habit of indulgence, predispose this class to early crime" (Pierce, 1869, p. 25). Such an explanation smacks of stereotyping and "blaming the victim" from a more modern perspective.

Later, the urban poor family was also indicted as a cause of delinquency. In the first circular of the Children's Aid Society published in 1853, Charles Loring

Brace noted that the Society was to become a means of dealing with the "...increasing crime and poverty of the destitute classes of New York". He continued to say that the poor and immigrant children "...were unable to share in what we should call a home." (Pumphrey & Pumphrey,1961, p. 123). Such remarks illustrate a view that breakdown of the family was a primary factor in the production of juvenile delinquents. Also inherent in such a perspective, is the belief that immigrant and poor families somehow abdicated their responsibility to provide moral training and behavioral control for their children. These attitudes toward the recognized underclass echo in more recent characterizations of low-income, urban, African-American families who replaced immigrants in the social strata one hundred years later.

Conditions in industrialized cities were eventually identified as a set of explanations for juvenile crime as well. Cities were generally regarded as crowded and unpleasant places for all but the very rich. Segregation by ethnic group, religion, and social class were escalating throughout the mid-nineteenth century (Leiby, 1978). The city was seen by many as the breeding ground of criminal activity. Julia Lathrop wrote that "....we take the sturdiest of European peasantry and at once destroy in a large measure its power to rear to decent livelihood that first generation of offspring upon our soil" (Platt, 1977, p. 92).

By the late nineteenth century, concerns about the urban environment and the culpability of families and individuals were drawn together in a cohesive explanation. The prevailing epistemology was one of "science", wherein everything was explained, no longer through religious imagery, but through secular, empirical, and rational constructions (Platt, 1977; Leiby, 1978). One example of such science was the theory of atavism which proposed that due to a process of genetic recombination, disposition toward crime or "lunacy" or other disorders, was revealed in every feature of the person. The body, the mind, and the behavior of the delinquent were considered to be criminal in nature (Platt, 1977). This supported an emerging belief in a criminal class that could be identified, segregated, and controlled. Dugdale's publication, in 1887, of The Jukes, a multigenerational study of one family's depravity, did much to advance this notion (Platt,1977). A more enlightened perspective may recognize these explanations as pseudoscientific, class biased, and a basis for discriminatory policy, but at the time they offered a desirable opportunity for action.

In these explanations, it is possible to trace the tracks that lead to more modern justifications for intrusive interventions in the individual and family lives of youthful offenders. Much of the content that was historically applied to the urban ethnic poor, has found its way into present day applications centered on the inner-city African-

American youth and family.

Imperatives for Intervention

As suggested above, early nineteenth century reform efforts were grounded in moral and religious imperatives. The whole notion of child-saving embodied a moral obligation to protect and provide for the most obviously dependent of society's members. Mirroring American concerns from across the Atlantic, a reformer noted that:

> "The enormity and amount of juvenile depravity is a subject which now most painfully engages the public mind. These things have long been known to the few: -- now they are made evident to the many: and it is equally clear that if the evil is not checked, it must increase. Now we see: -- therefore our sin remaineth if we strive not to remove the evil" (Carpenter, 1851, p. 135).

During the waning days of the nineteenth century, however, there was increased application, albeit rudimentary, of scientific modes of inquiry. Along with this more secular approach, came an expanded sense of public responsibility. The term "social welfare" was coming into usage as a replacement for the older term of "charities and corrections" (Leiby 1978). The change in terminology reflected a growing sense of the interdependence of people in society, as well as an increased acceptance of the need for government to shoulder responsibility for the welfare of

all its citizens.

Philanthropic voluntarism was yielding to the creation of a new technology of social treatment, with various specializations (Leiby, 1978). According to Leiby (1978), the belief systems of Christianity, Liberalism, and Mercantilism, were the driving forces of society which contributed to an unprecedented economic development. The perceived power of these forces, and the realization of substantial wealth on a societal scale, have been linked to the optimistic view of reformers that injustices and inequities could be overturned. The establishment of the Children's Aid Society, the work of the Charity Organization Societies, the beginning of the Settlement movement, and the initiation of the Juvenile Court, each represent unique and significant manifestations of the effort to improve social functioning (Bruno, 1957; Sutton, 1988). The application of material resources, and professionalization and specialization of social welfare service delivery systems, contributed to evolution of large public systems devoted to resolution of particular social problems, including juvenile delinquency.

Changing the Child

From 1815 to 1845, there was a burst of support for specialized institutions as the method of choice for treating the various individual disorders which impacted

society (Leiby, 1978). An institution offered an attractive means of meeting the need for social control by isolating identified deviants, while providing specialized intervention with individuals, and developing increased knowledge about the particular disorder through focused study (Leiby, 1978). There was a concurrent move toward more humane practices evidenced by the substitution of hard labor for corporal punishment in prisons, the use of educational rather than penal models for children, and the emerging belief that mental illness was due to physiological problems with the brain rather than possession by evil.

Institutions for changing children were referred to initially as Houses of Refuge and later as reformatories, which reflects the primary purpose of reforming the child's character. An activist outlined operational principles for reformatories as follows:

> [There must be] a strong faith in the immortality of the human soul, the universal and parental government of God, and the equal value in His sight of each of these poor perishing creatures with the most exalted of our race. Love must be the ruling sentiment of all who attempt to influence and guide these children. This love must be wise as well as kind... The reformatory must be a well-managed system, guided by undeviating order and regularity in the whole school, to which it will be evident that the master is bound as well as the scholars, and for which he will take opportunities of showing them are as necessary for their comfort and well-being as for his. Industrial training should be a part of the school. Personal cleanliness is important...no punishments of a degrading or revengeful nature will ever be employed.(Carpenter, 1851, p. 121).

To this she added that moral training and intellectual growth should also be included. These basic principles laid down in 1851, expressed with less religious language, have served to characterize the self descriptions of most child-caring institutions for the next century and a half.

In 1869, the chaplain of the New York House of Refuge, which was one of the earliest child-caring institutions, described the aims of the institution as follows:

> The object of a reformatory is not to send forth a class of highly educated and polished young persons, but to raise up out of the dust, hundreds now festering in sinful homes and vicious societies: to hold them near the truth until their minds shall be impressed with it: to teach them the use of the personal implements with which, in most cases in the humblest walks of life, they will secure an honest living: and then give them a fair start, with hard labor and an honest purpose, to create for themselves a comfortable home.(Pierce, 1869, p. 156).

Two common forms of institutions were the congregate and the cottage plans. The congregate model was used in the establishment of the New York House of Refuge in 1825, and its counterpart in Boston in 1826. The congregate system favored a facility located close to an urban center, with boys housed in large units that were relatively impersonal and highly structured. It was considered an advantage to remain in the urban environment and utilize the industrial resources of the city.

As the century progressed, however, the cottage plan emerged as a favored form for institutions. The cottage

plan was well publicized and succinctly described by juvenile corrections experts. Enoch Wines enunciated the formula that children under the age of fourteen, lacking appropriate guardianship, should come into the care of the state, whereupon they would be placed for an indeterminate period, in institutions with facilities of about forty boys each, located in the country away from the evils of the city, which would be modeled after the life of an honest family (Platt, 1977).

By the very early twentieth century, the methodology of institutional treatment of juvenile delinquency was clarified and refined, and enjoyed international application. Basic principles of this methodology included forfeiture of parental rights when parents demonstrated incompetence (presumably by virtue of the child's arrest); treatment of offenders as juveniles rather than as adults until age eighteen; indefinite sentencing to ensure an adequate period for reformation; use of probation during the post release period; use of the institution as a necessary, but temporary intervention; provision of high quality industrial training to facilitate employment after release; individualized assessment of the character of the inmates as the basis for grouping in cottage units; and sparing use of corporal punishment (Russell & Rigby, 1906).

The period of 1910 to 1920, however, introduced scrutiny of the practice of institutionalization. Several articles appeared in "The Survey", a favorite magazine of

social welfare reformers at the time, criticizing operations of the child care institutions and the juvenile court (Coffeen, 1910; Ellwood, 1910; Lattimore, 1910; Lane, 1915; Addition & Deardorff, 1919). Major objections had to do with the juvenile court practice that brought delinquent and dependent children into the same proceedings, and the level of physical care provided to children in the institutions.

A method of changing deviant children that offered an alternative to institutionalization was the controversial practice of "placing out", as championed by C.L. Brace and the Children's Aid Society. Under this program, urban waifs were to be saved from the evils of eastern cities by sending them to the wide open spaces of the western states like Minnesota and Michigan. Thousands of children were "placed out" of the old cities and indentured on farms over a span of several years (Pumphrey & Pumphrey, 1961). It became known, through studies such as that of Hastings H. Hart in 1884, that a great number of children were scattered over several states and transferred from family to family and "...became lost to the knowledge of the state..." which placed them out (Pumphrey & Pumphrey, 1961). The conceptual basis of placing out was that a child would do better in a family environment, with the benefit of hard work and contribution, than in an institution.

Creation of the Juvenile Court

The establishment of the first Juvenile Courts in Illinois and Colorado in 1899, significantly expanded the reach of government into the private lives of children and families. It has been noted that the "juvenile justice system", prior to the genesis of the Juvenile Court was a very diverse and loose collection of private and public institutions and community programs that were served by the civil court (Ferdinand, 1991). The authority of the court, while respected in the field, was informal, and provided very little control over the staffing, budgets, practice, or objectives of the programs it fed (Ferdinand, 1991).

The creation of the Juvenile Court represents a concentration of authority with the aim of matching children and appropriate interventions (Sutton, 1988). With such a mission, the Juvenile Court took on responsibility for all youthful offenders, and established itself as the central decision-making entity for all matters pertaining to the disposition of juvenile delinquents, including removal from the family home.

Modern Practice Approaches

Although the fundamental form of cottage plan institutions has been maintained throughout the twentieth century, adjunctive components and alternative approaches

have been applied (Young, Dore, & Pappenfort, 1986). These include the addition of highly structured group homes in community settings, and the integration of family involvement and family therapy models in institutional milieus, as well as intensive in-home services, multi-systemic treatment, and use of a correctional model.

This brief discussion of modern practice approaches is presented to highlight the additions and alternatives to confinement that have been attempted in recent years. It is offered to counter the impression that out-of-home placement is the only available alternative for intervention in juvenile delinquency.

Residential care, although not significantly changed in basic structure, exhibits notable shifts along dimensions of agency size and auspices, and complexity of services, from the mid-1960's into the early 1980's (Young, Dore, & Pappenfort, 1986). A trend toward smaller private agencies with greater functional complexity in service of delinquent youth has been observed. Modern delinquency treatment practices have continued to include relatively traditional institutional programs which incorporate greater emphasis on group treatment modalities and an "aftercare" component which attempts to follow youth back into their home communities.

During the late 1970's and into the early 1990's, increasing application of ecological principles in the formulation of innovative treatment approaches occurred.

The community based movement of the 1970's brought the proliferation of smaller group homes established in neighborhoods (Young, Dore, & Pappenfort 1986). The 1980's and 1990's were characterized by rapid development of family focused programming based on systems theory concepts and family therapy approaches. In more recent years, however, there has been a counteracting influence that leads to implementation of correctional rather than treatment models. These practice approaches will be explicated below.

Family Involvement

Due to clinical experience and rudimentary program evaluation efforts, it was widely accepted in the residential care field in the 1970's that treatment outcomes for delinquent youth could be improved with greater attention to family interactions and community based interventions (Coughlin, et al., 1982). The treatment literature espoused the advantages of "family involvement" in residential treatment programs (Colon, 1981; Krona, 1980; Whittaker, 1979). Such efforts included family education regarding the systemic nature of delinquent behaviors, attempts to raise the frequency and quality of family functioning , and experiments with inclusion of the family alternatively as part of the treatment team, or as the primary client. In practice, such efforts yielded numerous and costly administrative issues, but raised consciousness

of family interactions and paved the way for incorporation of family therapy models into the residential milieu. This process of integration of family and existing residential models has been described as a developmental process which encompassed grand scale shifts in attitudes, resources, and agency policies (McConkey-Radetzki, 1986). In order to smooth this transition, some agencies incorporated sophisticated computerized clinical information systems and complimentary staff development programs (Mooradian & Grasso, 1993).

Family Therapy

While outcome studies of family therapy approaches with delinquents are generally confounded by the conduct of family therapy along with other treatment components in residential settings, they are also subject to some notable conceptual and methodological difficulties. In a review of general family therapy research, Bednar, Burlingame, and Masters (1988) noted the conclusion that the family behavioral therapies are found to be as effective as other psychotherapies, but added their observation that rigorous research was limited by a lack of semantic and measurement precision.

Shadish, Montgomery, Wilson, Bright, and Okumabua (1993), conducted a meta-analysis of family therapy outcome studies published from 1963 to 1988, and found an effect

size of .53 (n = 16) for conduct disorder and delinquency treatment. Chamberlain and Rosicky (1995), conducted a subsequent meta-analysis of studies from 1988 to 1994 that specifically addressed family therapy for conduct disorder and delinquency. By using a selection strategy that combined research rigor and therapy specification, they were able to analyze studies that escaped the criticism of earlier reviewers, and found that family therapy significantly improved outcomes as compared to individual or group treatment alone. They further noted that family therapy significantly increased the likelihood that youth would either remain with, or return to, their own family after confinement. Nelson (1990) found that family focused programs were successful at preventing out-of-home placement for status offenders and other delinquents at the significantly high rates of 67% to 100%, and 50% to 90%, respectively.

Intensive In-Home Services

Intensive in-home family service programs are heavily connected to the family preservation movement that grew out of the foster care arena (Woods 1988). These programs seek to prevent out-of-home placement of youth, by committing relatively high levels of resources to the family of the youth for strictly limited periods (Woods, 1988). Such programs are based on an amalgamation of theories including

crisis intervention, family systems, social learning, and human ecology (Barth, 1989).

The most widely applied model of intensive in-home family treatment is the Homebuilders program (Kinney, Haapala, Booth, & Leavitt, 1989). Home-builders workers are available to their client families at any time during the four to six weeks of treatment. They work with two to four families at any given time. Limited goals are established with the family and evaluated weekly. Although originally intended to serve child welfare cases, the Homebuilders model gained appeal due to claims of high success rates in preventing out-of-home placement, and by emphasizing cost savings. In Michigan, the model was instituted as the Families First program for child welfare cases, and was eventually expanded to serve delinquency cases (OCYS, 1988). Although internal program evaluation efforts claimed extremely high rates of success, defined as no out-of-home placement at three months after intervention, no independent studies of effectiveness have been located.

Another common intervention is Intensive Supervision or In-Home Detention. These interventions seek to provide external control over the delinquent without physical confinement (Barton & Butts 1990). Control measures range from unpredictable contact with a supervision worker through electronic tethering. In a study designed to test the efficacy of these programs as an alternative to state wardship (which is a reasonable proxy for placement in

traditional programs), Barton and Butts (1990) followed, for two years, a primarily inner-city African-American sample of 500 youth who were randomly assigned to one of three experimental intensive supervision programs, and a control group of state wards. Their findings indicate that the intensive supervision programs successfully graduated 46% of assigned youth. The remainder were terminated due to a lack of behavioral progress. These graduates were compared to the control group. The mean number of charges filed against program youth was 2.63, while it was only 1.31 for the control group. The investigators, however, reasoned that the program youth were "at large" for longer periods of time (18.3 months for program youth and only 10.68 months for control youth), and so had a longer period of exposure for recidivism. In an attempt to equalize this discrepancy, they constructed an index to produce a "mean number of weighted criminal charges" that allowed them to compare program youth more favorably to control youth. This weighted average was 3.69 versus 3.58 for the groups respectively, and the difference was not significant. Although the authors conclude that intensive supervision is a viable alternative to traditional wardship, their research appears to align data with a preferred conclusion, and does not adequately support the assertion.

Multi-Systemic Treatment

Multi-Systemic treatment (MST) of serious and violent offenders is based on the assumption that adolescent behavior is embedded in complex and interconnected systems involving individual, peer, family, school, and community levels (Henggeler, 1991). Treatment intervention is directed at each of these levels, as well as their interfaces. MST utilizes case management, educational interventions, family therapy, and supportive interventions known as "nurturing" or "mentoring".

Sutphen, Thyer, and Kurtz (1995) implemented the model with 80 "high risk" juvenile offenders and found significant improvements in family relationships, life skills, school performance, peer relationships, and delinquent behavior. Bourduin (1995) tested the model for effectiveness in comparison with individual treatment. With a sample of 176 juvenile offenders identified as being at high risk for committing additional serious crimes, he found MST to be more effective in improving key family correlates of antisocial behavior and in ameliorating adjustment problems in individual youth. He also compared four year re-arrest rates and found MST to be more effective in preventing future criminal behavior in comparison to individual treatment.

Henggler, Melton, and Smith, (1992) cast MST as a form of family preservation, and conducted a rigorous comparison

of MST and out-of-home delinquency placement. This study used a sample of 84 serious offenders who were randomly assigned to each of the treatment conditions. A pretest/posttest format was used to compare the youth on several variables, including family relationships, peer relationships, psychiatric symptomatology, social competence, and self-reported delinquency. The investigators found no significant differences among the demographic and psychosocial variables, but a check of archival records one year later indicated that the MST youth showed significantly fewer arrests as well as self-reported offenses. Curiously, they also reported that the MST youth were confined an average of ten fewer weeks than those in the Youth Services group. This may lead a reader to question the efficacy of MST as a family preservation intervention, since the goal is to totally prevent confinement. Also raised by this study are questions regarding the specific effects of MST on the other variables that may represent its goals. Nonetheless, it appears that MST functions as an ecological intervention and is reasonably effective when compared to traditional out-of-home placement. Such knowledge also supports the value of an ecological approach to intervention with serious delinquents.

Correctional Model

Howell (1998) points out that juvenile justice approaches appear to be completing a cycle. The first major reform effort separated juveniles from adult offenders and gave rise to the specialized institution; the second phase began with formation of the juvenile court and provided legal basis for an extensive and more cohesive system; the third began in the mid-twentieth century with a focus on prevention and diversion from traditional placements; a fourth era seems to be underway wherein there is a call for once again adjudicating youth as adults. There are numerous and vocal proponents of a "get tough" approach that opposes traditional protection and treatment for delinquent youth (Howell 1998).

In concert with a conservative political climate and increased public fear of violent youth, has come what may be termed the correctional model for intervention in juvenile delinquency. It carries an emphasis on community protection rather than individual rehabilitation. Proponents of the correctional model favor lowered age limits for trial with adult status, specific sentences for identified felonies, increased discretionary powers of county prosecutors, and trading treatment dollars for increasingly secure facilities. The State of Michigan, for example, has begun implementation of a $37.6 million project involving removal of existing treatment cottage facilities and replacement

with high security buildings and perimeter reinforcements at the large W.J. Maxey Boys' Training School (Oppat, 1998). This facility has been run as an "open" group-oriented treatment "campus" for most of Michigan's serious juvenile offenders since the late 1960's. It was supplemented with the maximum security Green Oak Center, which serviced approximately one fourth the population of the open program. With this recent development, it appears that the differences in structure and objective between the two facilities are rapidly dissolving.

Modern Policy Issues

The doctrine of *parens patriae*, which serves as the legal cornerstone of Juvenile Court proceedings, has been challenged by reformers in the 1990's (Ferdinand, 1991). As the foundation for a system that allows the state to act in place of parents, the doctrine has been interpreted as an "either/or" principle, wherein children are considered to be either the responsibility of the parents, or that of the state (Weiss, 1990). Responsibility for children has been traditionally transferred from parents to government only when families fail to provide adequate control. Such a condition requires that parents be found incompetent in order for the child to be processed and placed into treatment. Such a system creates adversity between the family and the treatment providers and tends to favor out-

of-home placement. It has been suggested that an alternative, based on joint and interdependent responsibility of the family, community, and state might prove to be more effective. Support for this alternative is provided in the separate reports of five distinct commissions which studied the juvenile justice system (Weiss, 1990). Proponents of such an approach characterize it as family-centered as opposed to child-centered or bureaucracy-centered. This collaborative approach is gaining strength and is favored by some Juvenile Court judges, but is far from being fully implemented (Hatchett, 1998). Parental rights continue to be compromised, and huge numbers of juveniles are placed out of their family homes each year (Weiss, 1990).

Status as a juvenile, and acceptance of the ideal that youthful offenders have a "right to treatment", have produced several compromises to the due process protections that would otherwise be afforded those subjected to confinement. Reliance on recommendations of caseworkers in court proceedings, indeterminate sentencing, broad discretionary powers of staff in detention and treatment facilities, and informal assessments all may have eroded the protections available to juveniles. While the stated motivations have always been to act in the best interest of the child, a paternalistic discretionary system allows greater likelihood of arbitrary dispositions. Paradoxically, an interest in saving children may actually

subject them to greater intrusions on personal freedom than are experienced by adult offenders.

Some observers have raised concerns with forms of confinement in other venues such as the use of private psychiatric hospitals for delinquent behaviors (Eamon, 1994). Such use may further circumvent the requirements for due process established for juveniles processed through normal juvenile justice channels. Extending this area of concern, Johnson (1996) suggests that even broader forms of social control exist for delinquents and their families. Under the concept of "transcarceration", he includes the use of educational systems and welfare systems as modes of social control. While it may be argued that such an extension of the concept of government intrusion (and the need for due process protection) may be excessive, Johnson's notion effectively raises consciousness of additional means of social control, particularly as they apply to low-income African-Americans.

One alternative to the "right to treatment" doctrine is application of a "just desserts" model. This approach asserts that it is no longer appropriate to consider all juveniles as dependent and in need of the protection of the state (Ashford, 1988). It favors more formalized decision-making about placement based on community risk, lowered age limits for trial with adult status, increased discretion for prosecutors, and reduced numbers of offenders placed in juvenile treatment facilities.

Emergent Theories of Delinquency

The following theories outline current constructions of the factors that are thought to contribute to delinquent behavior, and presumably lead to subsequent confinements.

Strain Theory

Strain theory holds that delinquency flows from frustration due to interference with goal-directed behavior and an incongruence of values and opportunity. It is primarily sociological in orientation and focuses on the impact of individual and community interaction. Applied to the particular experience of many African-American youth, this theory may be helpful in locating the impact of oppressive opportunity structures, peer influences, and limited availability of adult males.

Classic strain theory has been presented in the work of Merton (1938), Cohen (1955), and Cloward and Ohlin (1960). These explanations are characterized by a focus on the inability of adolescents to attain long-range economic or status goals through socially legitimated processes. The image of delinquency that emerges from this branch of theory is one of the urban youth from a disenfranchised ethnic or racial group, who is systematically denied opportunities for advancement due to discriminatory practices and capitalistic motivations.

Newer versions of strain theory (Elliot & Voss, 1974; Greenberg, 1977; Empey, 1985) replace the blockage of long-range goals with a focus on more immediate social goals such as popularity with peers, academic success, athletic achievement, and developing reasonable relationships with significant adults. Success in achieving these types of goals may vary on a daily basis, so greater variability in delinquent behavior is anticipated.

A further updated version of strain theory includes the role of blockage from avoidance of painful or aversive events (Agnew, 1985). The rationale in this case states that inability to employ legitimated paths of avoidance may lead to the selection of illegal escape attempts.

Sub-Cultural Deviance Theory

According to this branch of theory, it is association with negative peers that is central to the development of delinquent behavior. The peer group is defined as a subculture. A tenet in original formulations of this theory is that association with delinquent others leads to acceptance of delinquent values, which in turn leads to delinquent behavior (Agnew, 1992). Working from a recognition of mechanisms other than the infusion of delinquent values, Briar and Piliavin (1965) assert that youth may commit delinquent acts in an effort to prove their courage or remain loyal to peers. Similarly, Short and

Strodbeck (1963) look to the significance of maintaining or enhancing status within the peer group. If peer group norms support antisocial behavior, then those norms will be reinforced, in opposition to the values of larger social systems, through personal interactions within the subculture. Johnson, Marcos, and Bohr (1987) explained delinquent behavior, in the form of drug use, through the situational pressures applied by peers.

Group membership, belonging, and individual identity emerge as factors to be considered in investigation of delinquent behavior and multiple confinements. Once a youth is labeled "delinquent" and coercively grouped with other "delinquents", existing problems with personal associations and identity may be exacerbated. Such a process holds implications for youth caught in a cycle of multiple confinements.

Rational Choice Theory

Rational Choice Theory rests upon the idea that offenders seek personal benefit or gain through delinquent behavior. Cornish and Clarke (1986) point out that the delinquent makes choices about behavior, and decides to engage in activities that provide some form of economic or psychic reward. This reward may be material or mental. They characterize this process as a rational one, but acknowledge that it is limited by the situation and

predisposition of the individual in question.

The desire to obtain personal rewards in a context that disallows approved approaches may, thus, explain delinquency and subsequent confinement. Money or excitement may be the desired outcomes of delinquent behavior, and the delinquent youth is one who deliberately decides to obtain them through illegal means. Although a greater emphasis is placed on personal decision-making, similar to Strain Theory, Rational Choice Theory implicates opportunity structures in the production and maintenance of delinquent behavior.

Social Control Theory

Social Control Theory holds that adolescents who function without the benefit of effective structure and accountability measures engage in delinquent activities. This branch of theory may be related to the development of impulse control or internalization of prosocial values (Nye 1958). In this regard, authors have focused on the complementary roles of attachment or cohesion and discipline functions within families. Nye (1958) dealt with the contribution of direct controls which he viewed as the immediate application or threat of punishments and rewards to gain compliance with social norms. Nye also recognized that the impact of direct controls would be limited outside the physical proximity of parents, and raised the importance of the psychological presence of the parent as a deterrent

to antisocial behavior. Wells and Rankin (1988) were influential in defining components of direct controls, including specification of acceptable behaviors, monitoring of youthful activity, and application of discipline.

Bahr (1979) recognized the utility of the concept of attachment between parent and child as an explanatory mechanism for adolescent motivation to conform. Research has supported the idea that parental discipline is more effective in reducing adolescent noncompliance within the context of high parent-child attachment (Wells & Rankin, 1988). Eron, Walder, and Lefkowitz (1971) found that punishment of boys who were not strongly attached to their parents seemed to instigate aggressive behaviors.

Social Control Theory centers on the role of parental behaviors and family interaction in the production and maintenance of delinquent behavior. These assertions overlap with conclusions drawn from the literature on family functioning, and provide a useful basis for construction of the models investigated in this study.

These four theories of delinquency emphasize various subsystems of the youth's social ecology. Together, they cover a spectrum of possible factors that are hypothesized to contribute to delinquent behavior. The next chapter reviews empirical knowledge about the links between these theoretical factors and delinquency.

Chapter 3

Research on Ecological Factors Related to Delinquency

Due to the ecological orientation of this study, two additional areas of the literature must be considered to locate the proposed study in the context of existing knowledge. They include the relationship of stress and coping to delinquency, and the relationship of family functioning to delinquency.

The Relationship of Stress and Coping to Delinquency

The type, duration, and intensity of stress, along with the youth's chosen means of coping, have been identified as factors that are related to delinquent behavior (McCubbin, Kapp, & Thompson, 1993; Stiffman, Dore, & Cunningham, 1996; Spaccarelli, 1997). A review of the stress and coping literature provides a basis for inclusion of these variables in the proposed analysis, and grounds construction of the multiple regression models.

Conceptual Issues Regarding Stress and Coping

Stress and coping occupy deep space in the clinical literature. Although several models of stress and coping have been advanced, it is instructive to review one such model that is representative of modern conceptualizations in

the field. Millgram (1989) points out that the term "stress" has suffered from diverse application and ambiguous definition. Two decades earlier, stress was commonly defined as any change in one's environment that elicits a high degree of emotional tension which interferes with normal patterns of response, and that requires behavioral adaptation. Millgram offers an alternative that views stress as an "imbalance between stimulus demand and response supply" (1989, p 401). In this manner, stress is redefined as an interactive process of the person within an environment. Stressful events are referred to as "stressors" and responses are seen as "stress mediating variables". Possible responses are stress reactions (transient maladaptive behaviors), stress disorders (crystallized clinical syndromes), and coping. Adaptive attempts to mediate stress are referred to as coping, which is based on cognitive appraisal of available intrapersonal and social resources, and may take the form of problem-focused or emotion-focused coping behaviors. Millgram (1989) allows for "objective" and "subjective" appraisals of the level of loss and personal responsibility associated with a particular stressor, and acknowledges the important role of personal meaning attached to an event.

A complement to Millgram's conception of stress as an imbalance comes from the sociological literature on mental health. Pearlin (1989) suggested that the structural arrangements within which individuals are embedded determine

the stressors they encounter, the stress mediators they are able to mobilize, and their inner experiences of stress. Such a conceptualization locates social statuses such as age and gender as independent variables. From this perspective, other investigators have concluded that stress is an intervening variable between social status and psychological functioning (Aneshensel, Rutter, & Lachenbruch, 1991). In other words, social position organizes the sources of stress encountered, and methods of coping available for a given individual, and shapes psychological adaptation. This framework offers advantages in its recognition of ecological impacts, and has received support from other researchers (Turner, Wheaton, & Lloyd, 1995). A further extension of this branch is provided by Rosella (1993) who highlighted the role of "disadvantaged social contexts" in placing low-income black youth at risk for physical and mental health difficulties including depression and delinquency. In this manner, the combined effects of poverty and race may be seen as a social status that exerts powerful impact on mental health and other behavioral outcomes.

Research on Stress and Coping Related to Delinquency

Prior practice experience indicated that children of divorce, violence, alcoholism, and incest were over-represented in adult clinical populations, thus, researchers in the 1970's and 1980's focused on the development of

statistical risk models and found that stress factors such as poverty, neighborhood violence, parental absence, and employment instability increased the likelihood that children would become delinquent, drug-addicted, or chronic mental health cases (Butler, 1997).

Some researchers have focused specifically on delinquency as an outcome variable and made attempts to investigate the relative contributions of stress and coping (McCubbin, Kapp, & Thompson, 1993; Stiffman, Dore, & Cunningham, 1996; Spaccarelli, 1997). Two tracks of such research are considered below. One attempts to establish a linkage of stress to the production of delinquency, and the other searches for the more specific relationships of particular stressors and coping strategies to delinquent behaviors.

Among the first category of studies is that of Vaux and Ruggiero (1983). Their study was one of the earliest published attempts to employ a retrospective design and correlational approach to determine whether there was a significant association between life stress and delinquency. Regression analysis indicated that life changes added significantly to age and socio-economic status in predicting violence, theft, drug use, and property damage for their sample. Due to their careful definition of delinquency and adequate measurement of life stress, as well as the inclusion of a non-institutional group of subjects, this study advanced understanding of the relationship among the

variables. A more recent example of the same approach is provided by Deutsch (1989). That study used a similar design to determine that under-socialized youth had experienced a greater number of stressful events during their early lives than had their more socialized peers.

In an attempt to advance knowledge of stress and coping in relation to delinquency, Hoffman and Su (1997) investigated potential gender differences. They noted that the general stress literature identified gender as a mediator of stress and adjustment, but concluded that for their delinquent sample, stressful events exert a similar short-term impact on adolescent males and females. These results may be interpreted to indicate that there is a connection between stress and delinquency for both genders.

Studies of specific linkages include the following examples. Utilizing an apparently all female sample, de Anda, Javidi, Jefford, Komorowski, and Yanez (1991) investigated potential differences in stressors faced and coping employed among groups of pregnant and non-pregnant substance abusing adolescents. Although high levels of exposure to stress were reported by both groups, the only significant difference in types of stressors was the greater role of family members as sources of stress for the substance abusing youth. It was also noted that the pregnant sample indicated a higher use of "adaptive" coping strategies such as cognitive control, affective release, and relaxation, while the substance abusing group used

"maladaptive" strategies such as behavioral excess, substance abuse, denial, and withdrawal.

Focusing on a group of confined delinquents with a history of serious offenses, Burton, Foy, Bwanusi, and Johnson (1994) found that juvenile delinquents are a high risk group for exposure to trauma and the development of stress-related symptomatology. The wording of this conclusion is important in that there is a recognition of the limitations of the retrospective design. These findings also illustrate the limitations imposed on understanding the effects of systemic feedback by the correlational approach.

A similar focus was taken by Steiner, Garcia, and Matthews (1997), who utilized multiple forms of data collection and a comparison group to investigate relationships between Post Traumatic Stress Disorder and delinquency. Thirty-two percent of the delinquent sample met full diagnostic criteria for PTSD, and an additional twenty percent met partial criteria. One half of the sample indicated that the traumatic event was witnessing interpersonal violence. The sample also experienced significantly higher levels of distress, anxiety, and depression, and lowered impulse control, and suppression of aggression as compared to the non-clinical age and sex matched comparison group.

Further establishing the connections between specific stressors and adjustment for delinquents is the work of Spaccarelli (1997). With a sample of violent delinquents

and a low-violence comparison group, it was determined that greater exposure to serious physical abuse and domestic violence involving weapons, and greater use of aggressive control-seeking behaviors in response to stress, was evident for the violent group.

In a longitudinal examination of the linkages between particular stressors and the emergence of violent behavior in adolescents, it was found that almost a third of the variance in violent behaviors was predicted by a combination of personal variables and environmental variables (Stiffman, Dore, & Cunningham, 1996). This study carried the advantages of a large inner-city sample with seventy percent African-American participants, repeated interview data collection techniques, multiple geographic sites, and an eight year time span with four waves of analysis. Specific stressors found to be significantly related to violent behaviors include high community unemployment rates, history of physical abuse, and having mentally ill family members. In addition, an unspecified group of "stressful events" as contrasted with "traumatic events" was the only environmental variable to retain significant predictive value across all four waves. While the article does not provide adequate information regarding the operational definition of "stressful events", it does provide confirmation for the role of stress in the production of violent behaviors in adolescents.

In a study undertaken with youth in residential

treatment for delinquency, several specific findings regarding the relationship of coping and adjustment in the forms of program completion and post-placement success were obtained (McCubbin, Kapp, & Thompson, 1993). Youth who primarily utilized professional support, spiritual support, and low activity coping strategies were significantly more likely to successfully complete a group treatment program with a family therapy component, and to do better upon release to the community. By contrast, youth who used ventilation (e.g. swearing and open expression of anger), friendship support (e.g. being close with a friend or boy/girlfriend), relaxation (e.g. daydreaming and listening to music), and family problem-solving (e.g. talking with family members and doing things with the family) had greater difficulty completing treatment goals and adjusting to the community after release from the program. These results are carefully interpreted to mean that the fit between the youth and the expectations of the program are critical to success, rather than to say that certain coping strategies are generally more successful for delinquent youth regardless of their environment.

Taken together, this body of research provides support for the conclusion that stressors and coping strategies are significantly associated with the development and maintenance of a broad range of delinquent behaviors. Moreover, these relationships have been demonstrated for males and females, and for African-American and European-

American youth. In this way, knowledge about the sources of stress encountered and forms of coping employed by an adolescent may provide a useful basis for understanding the youth's entry into the juvenile justice system and subsequent out-of-home placement.

The Relationship of Family Functioning to Delinquency

In the next two sections, the contributions of family theory and research are considered.

Conceptual Issues Regarding Family Functioning and Delinquency

Family theory has cultivated a rich field of literature that overlaps family therapy, and incorporates conceptual models of family interactions, and specific schemes for measurement of family processes that propose complex constructions verging on minor family theories. Conceptual models include the Distance Regulation Model (Kantor & Lehr, 1990), and the Paradigmatic Model (Constantine, 1986). Several scales have also been developed to measure internal family functions and their relationship to clinical issues. They include the Family Environment Scale (Moos & Moos, 1981), the Beavers-Timberlawn Family Evaluation Scale (Beavers, 1985), the Family Assessment Device (Epstein &

Bishop, 1983), and the Family Adaptability and Cohesion Evaluation Scales (Olson, Portner, & Bell, 1982). While each of these tools has relative strengths, the last was chosen to measure family functioning variables in this study (see Chapter 4).

Linkages of family processes and delinquent behavior are frequently studied. These studies usually issue from either a family systems or criminology perspective. Two primary processes of family functioning that notably assert themselves in family and delinquency literature are family cohesion and parental control. As is made evident through thoughtful reading of the literature, various theorists and researchers use mildly variant terms to refer to remarkably similar constructs. Family cohesion, parental attachment, parental bonding, affectionate bonding, and family emotional support, may all be thought of as representing the connectedness or attachment between the adolescent and his or her parent(s) (Beavers, 1985; Epstein & Bishop, 1983; Olson, Portner, Bell, 1982; Moos & Moos, 1981). Likewise, terms such as parental leadership, parental monitoring, discipline, family problem-solving, and family adaptability share a common theme which may be seen as the family process of parental control (Beavers, 1985; Epstein & Bishop, 1983; Olson, Portner, Bell, 1982; Moos & Moos, 1981).

Research on the Relationship of Family Cohesion and Parental Control to Delinquency

A paradigm shifting approach to family therapy was designed during a clinically-oriented action-research effort at the Wiltwyck School for Boys, which was a residential center serving the delinquent population of New York City. This approach, which has subsequently been applied to diverse populations and presenting problems is known as Structural Family Therapy (Minuchin, Montalvo, Guerney, Rosman, & Schumer, 1967). This seminal research produced an outline of the structure of low-income families of male delinquents. With a focus on family relationship patterns, the authors identified two extreme forms, which they termed "enmeshment" (dysfunctional emotional closeness between parent and child) and "disengagement" (dysfunctional emotional distance between parent and child). The authors noted that, in their sample, fathers or stable father-figures were absent. This composition left child-rearing completely to the mother. While the researchers were careful not to attribute extreme forms of functioning to single parent families in general, they noted that in the families studied, the mothers were available for attachment and nurturant needs, but anxious about having to provide control functions. In enmeshed families, mothers would experience their sons' acting out as their own personal failure, which evoked a complimentary response in the son.

The authors summarized this response as, "If I steal, I hurt my mother", rather than, "If I steal, I am a thief." They concluded that the child does not learn to take responsibility for his actions, because there is no clear demarcation between the behavior of mother and child. In disengaged families, the mother would rarely inquire about the day-to-day life of the child, thereby abdicating the supervision role required of parents. The authors concluded that neither extreme prepares the child for dealing with stress and conflict, or for focusing attention on solutions to problems external to the family. Implicit in this approach are the family functions of cohesion and control, which resurface in much of the research on delinquency. Also indicated, is the primary role of stress and coping factors in adolescent adjustment.

Towberman (1994) examined associations between selected psychosocial variables and chronic delinquency, conducted a factor analysis of the related variables, and regressed these factors on chronic delinquency. Of all the derived factors, including a diverse array of relevant matters such as placement history, offense history, age at adjudication, educational involvement, and prior victimization, only the family cohesion factor was significantly associated with all dimensions of chronic delinquency. This sample included a small percentage of females, and was primarily African-American.

In a study designed to uncover supports that mediate

the impact of stressors on adolescents, it was found that emotional support from the family is a powerful mediator of peer stressors in the development of adolescent depression (Wenz-Gross, Siperstein, Untch, & Widaman, 1997). While depression is not a form of delinquency, many clinicians have noted a close connection of the two phenomena (Samuels & Sikorsky, 1990).

In an attempt to incorporate ethnicity in an examination of family processes and delinquency, Vazroni and Flannery (1997), found that higher levels of family cohesion were negatively correlated with delinquent behaviors. Their sample included European-Americans and African-Americans in early adolescence, and it was determined that family variables explained more variance for the European-Americans than for the African-Americans. They also found that parental monitoring was negatively correlated with delinquent behavior. This study lends support to the proposition that both cohesion and control factors have effect and significance in preventing the generation of delinquent behaviors.

Len (1988) interviewed 63 incarcerated adults regarding the connections they made between parental discipline and their own criminal behavior. While 70% were incarcerated for crimes against persons, and 81% reported suffering harsh parental punishment or violent abuse, only 12 of the 63 verbalized a connection. The author points out that the criminal tradition of "doing your own time" may involve a

form of rugged individualism which mitigates against openly admitting that anyone else had responsibility for the decision to commit crimes. Another psychological explanation offered is the expectation that the child is supposed to love his or her parents even though the parents beat the child (Len, 1988). While the perception of inmates is certainly valuable in understanding the ways in which they may process their own life events, the high level of association between parental disciplinary practices and their children's commission of violent crimes in this sample cannot be taken lightly.

In an investigation of the relationship between family processes and self-reported and official delinquency records, interviews and record reviews of all seventh and eighth graders in Rochester, N.Y. were completed (Krohn, Stern, Thornberry, & Jang, 1992). This study used a sample that was mostly male and African-American, but no gender or race comparisons were made. Correlations were calculated to display associations between several family cohesion and parental control variables with both self-reported and officially recorded delinquency. Both parents and their adolescent children were asked to provide data on the family processes. For both parents and adolescents, high ratings on cohesion variables such as "attachment" and "involvement" were negatively associated with both measures of delinquency. In addition, the control variable "supervision" held the same pattern. For the adults,

"consistency of discipline" was negatively associated with both delinquency measures, while it was only associated with self-reported delinquency for the adolescents. For the adolescents, also negatively associated with self-reported delinquency were "positive parenting" and "communication". These may be perceived as factors which integrate aspects of cohesion and control.

Sheilds and Clarke (1995) studied the relationships of family cohesion and parental control with self-reported delinquency. The authors noted that previous research indicated that affective family interactions, including acceptance and responsiveness to child needs are negatively associated with delinquent behaviors, as is a control strategy which establishes flexible limits without being excessively demanding. In their investigation, the sample consisted of 480 adolescents, slightly over half of whom were male, with only 13% of "minority" status. For these young people, high "family cohesion" was negatively associated with delinquency. Due to what may have been psychometric problems with the measures or inadequate conceptualization of the parental control variable, however, no significant relationships between the degree of flexibility in parental control and delinquency were found. This finding is not consistent with those of similar studies.

While higher levels of disturbance in the family characteristics of cohesion and control are linked to higher

levels of violent offenses among youth of all ethnic groups, there are some specific findings relevant to African-American youth. In a study of 362 low income African-American and Latino youth, a subgroup of violent offenders reported poorer discipline, less cohesion, and less involvement in their families than the non-offending or non-violent offending groups, and the groups were not differentiated by the commonly listed variables of frequency or early onset of delinquent behavior (Gorman-Smith, Tolan, Zelli, & Huesmann, 1996). In addition, it was found that the African-American youth from families with stronger beliefs in family duty and family loyalty were less likely to be violent delinquents.

As a body, studies of the associations of cohesion and control to delinquency provide firm support for the primary role of the relationship between parents and their children in the generation and maintenance of illegal adolescent behavior. Consistent across investigations, is the significant and powerful effect of sustained parental efforts to value the child, be responsive to the child's needs, and maintain some developmentally appropriate connection into adolescence. In addition, the notable, but somewhat less clear contribution of parental control may operate on the basis of a non-linear or threshold function. It also may be that parental discipline is really a proxy for cohesion, in that only parents who care and are attached to their children will provide consistent yet flexible

limits. Also, since findings reveal associations of extreme forms of discipline with delinquency, perhaps harsh or violent parental actions are experienced as something other than cohesion and are more reflective of limited parenting skills, parental self-absorption, or inaccurate assessment of the needs of the child. In other words, a parent who attempts to control child behaviors with harsh measures, may be responding with limited resources, or out of a desire to limit the child's behavior for the adult's own benefit. It appears that further research on these issues is warranted. Particular associations among these factors with African-American youth should also be investigated.

Chapter 4

Method

This chapter includes subsections that present a statement of the problem to be addressed, a description of the selection of participants, an explanation of the procedures used to collect and organize data, a presentation of the research design, discussion of the measures applied, and an outline of data analysis techniques employed.

Statement of the Problem

As may be gathered from the included review of the historical and research literature, a great deal of effort has been directed toward uncovering the connections between personal and environmental factors in the production of delinquent behaviors in adolescents. Taken together, prior research has been successful in developing separate pictures of successive levels of the social ecology. It is clear that social factors such as limited opportunity, personal experience of stress and coping, and family functioning in the areas of cohesion and control, are linked to delinquent behaviors. A reasonable case has also been made regarding the inequitable representation of African-American males in secure settings across the United States, and the mounting risk of increasingly punitive responses to juvenile crime committed by this group of youth.

There are, however, some gaps in existing knowledge as it relates to these issues. The specific needs of African-American youth have not been systematically investigated. Prior research indicates that there are at least some relationships among relevant variables that differ for sub-samples of African-American and European-American youth, but no located studies focus exclusively on these issues as they pertain to the youth at greatest risk. A linkage of delinquency and placement has been assumed in much of the literature, but only limited knowledge is available regarding the social ecologies of youth who are most likely to be confined once delinquent behavior has been detected. In addition, patterns of placement, including specification of models of environmental and personal factors which either mediate or explain repeated confinements, have not been made available. The problem of repeated placements of African-American male adolescents may also be understood through application of dynamic systems modeling that allows investigation of cybernetic feedback in the ecological system.

This study may be located as an extension of the literature on delinquency, with a specification of the associations of personal and environmental variables that perpetuate a high risk situation for a growing population of American youth. In this way, the present study attempts to address intellectual, moral, social, and practical problems. Intellectually, there is a challenge to specify ecological

linkages of the person-in-environment and apply a methodology that extends the correlational approach to focus on the feedback in natural systems. Morally, the undue risk of confinement for African-American youth requires better understanding and improved intervention. The social problem of delinquency and the expenditure of public resources for control and change is one of historical proportions that still cries out for more effective means of decision-making. Finally, on a practical level, the efforts of policy-makers and treatment providers may benefit from a clearer understanding and an expanded view of the needs and risks involved for African-American male youth.

While this study provides some answers to the questions raised by a review of the existing literature, it is apparent that the use of an existing data set, the restrictions of a retrospective and correlational design, and the non-probability sample drawn, impose limitations on the external validity of its findings. In this way, the intended goal is incremental knowledge rather than grand theory building.

Participant Sample

Participants in this study were drawn from the total population of African-American male adolescents placed at Boysville of Michigan during the full operation of the agency's clinical information system from 1985 to 1993.

They may be considered to comprise a purposive sample, as they were selected by the criteria of race, sex, official report of delinquency, out-of-home placement, and completion of a full set of clinical assessment instruments (described below in the Measures section). The completion of the clinical measures is the only known difference between these youth and the remainder of the African-American males placed at the agency during this period. Including the variables contained in the clinical measures was crucial to the ecological focus of this study. The total sample numbers 171. A more thorough presentation of selected participant characteristics is included in Chapter 5 as part of the descriptive analysis.

The sample size is adequate for the analyses conducted. Adequacy of the sample size was assessed following the procedure specified by Tabachnick and Fidell (1996). With an interest in both overall models and individual variable effects, it was determined that a sample size of 110 cases would support up to six independent variables in standard multiple regression, with significance set at .05, and an expected effect size of .15. With 171 cases, a margin of safety is observed for smaller observed effect sizes, distribution problems, or measurement error.

Data Management Procedures

This study took place in the context of an agency that serves delinquent youth in multiple locations. Boysville of Michigan was selected as the host agency for a number of reasons. It is the largest private agency in Michigan that serves delinquent youth and their families and provides a range of services to diverse clients. Its out-of-home placements cover the spectrum from foster care, through community based group homes, to campus based residential settings, and alternative detention facilities.

Data for this study were collected through client intake procedures and clinically-relevant measures that were integrated into the clinical information system of the host agency (Grasso & Epstein, 1987). They may be considered to be archival data, in that they were routinely collected into an historical database.

Agency staff were responsible for data collection. Measures were obtained at the initiation of the most recent out-of-home placement (intake to a Boysville program), except for release data which were necessarily obtained at the termination of placement. Demographics and offense history were retrieved from the case file and through an interview by the intake worker; stress, coping, and family functioning data were obtained through self-report from participants; and placement termination data were reported by a member of the youth's treatment team.

At each agency site, the intake worker was responsible for completion of the intake form following an interview of the youth, parent if available, and the delinquency services worker; the family therapist administered the clinical measures of stressors, coping strategies, and family functioning to the youth; and the treatment director reported case closing information at the point of release from the placement. All staff who contributed to data collection were trained in data collection techniques, and provided with a research manual which documented responsibilities and procedures as well as definitions of all terms.

The purposes of data collection (for assessment of individual treatment needs, and further study of aggregate characteristics of the agency's client population), were fully explained to participants by the intake worker, assent obtained from the youth, and informed consent obtained from a responsible adult (parent(s) and/or delinquency services worker). Participants verbally agreed to complete the clinical assessment instruments for treatment and research purposes. All participants indicated that they understood that they were not compelled to complete the instruments; they could choose which information, if any, to submit; that all treatment services would be provided regardless of completion of the instruments; and that any youth (or guardian) could choose to terminate participation in the study at any time, without penalty.

Each participant was issued a unique numeric identifier to ensure confidentiality and facilitate data tracking. No list of names or other means of identifying participants by name was available to the researcher, therefore, anonymity exists within the study.

The placement and ecological variables were entered into a specially constructed data file for this analysis. Categorical variables were recoded as dichotomous variables for inclusion in the regression models. Distributions were analyzed for kurtosis and skewness and, where appropriate, were transformed to improve the analyses, as recommended by Tabachnick and Fidell (1996). These are specified in the Measures section.

Research Design

This study employs a retrospective correlational design. Variables are measured for a single sample at single respective data collection points and associations among them, and with outcome variables, are identified. It may be considered a naturalistic or observational design, in that naturally occurring events are the object of investigation, and the experiences of the participants are not subject to experimental manipulation. The study may also be termed exploratory in its attempt to better understand a social problem about which little is known. The design suits the explanatory intent of the

investigation.

Although it suffers from limits on control of variables and threats to external validity, this design retains notable utility in this application. This correlational design carries the advantages of access to a reasonably sized homogeneous sample of confined African-American males; potential for in-depth quantitative examination of the relationship of several relevant variables at the personal, family, and community levels; and greater opportunity to develop understanding about this sample than would be possible in a controlled experiment based on the limited state of knowledge about this problem. Although an existing dataset carries the convenience of readily accessible data, this design was chosen for more than its mere convenience. It is important to note that the comprehensiveness of these data are necessary to inform an ecological investigation. A non-experimental design also obviates moral difficulties with random selection and assignment of minority youth to confined conditions and attendant compromises to public safety. The strengths and limitations of this design will be further discussed in Chapter 6.

Measures

In addition to agency developed forms, assessment inventories designed for research and practice were selected

by the agency to provide information that would be useful for intervention and investigations such as the present study. They are described in detail below.

Intake Form

The Intake Form is an agency developed tool that is designed to collect client characteristics at entry. A single trained staff member at each agency site completed the form to ensure consistency in data collection. Variables are measured primarily in categorical form.

Adolescent - Family Inventory of Life Events and Changes (A- FILE)

Growing out of research and practice with family stress across the life cycle, the A-FILE is a fifty item self-report instrument designed to record normative and non-normative life events and changes an adolescent perceives his or her family has experienced during the past twelve months (McCubbin, Patterson, Bauman & Harris, 1981). A-FILE also records these events as experienced prior to the past year. The instrument provides an index of the adolescent's vulnerability to the stressors encountered by all family members. A-FILE was developed for completion by adolescents of junior and senior high school age.

The primary measure derived from A-FILE is Total Family

Life Changes. Internal reliability (Chronbach's Alpha) is .69. Test-retest reliability is .82.
Subscales, with their respective internal and test-retest reliabilities, include Family Transitions (.53/.80), Sexuality (.45/.90), Losses (.46/.82), Responsibilities and Strains (.76/.69), Substance Use (.63/.81), and Legal Conflict.(.62/.81).

A confirmatory factor analysis of the AFILE scales was used to test the reliability and validity of the published scales for this sample. The reader is referred to Chapter 5 for extensive description of this analysis and the processing of results. This analysis indicated that, regardless of modification, the original scales would not pass the test for parallelism (statistical distinctiveness from each other), although some variations did pass the significance test for internal consistency. It appeared that the items in AFILE might be unidimensional, but even as a single scale, it was not possible to pass the test for parallelism when these items were included in a factor analysis with the coping and family functioning items.

A review of the literature on development of the AFILE indicated that the scales were not constructed through factor analysis, but rather by conceptually clustering items into types or categories of stressors (McCubbin & Patterson 1991). A subsequent factor analytic procedure was used to assign factor loadings to the items and compute the scale reliabilities. Such an approach is based on a recognition

that the items refer to events, and that contact with a particular stressor will not necessarily correlate with that of another stressor, especially over the short time span to which these items are referenced. For example, two notable losses, such as the death of a parent and the death of a sibling, may not be statistically associated over the course of one year, unless there is a common cause of death such as the same accident, or a rapidly rising genetic predisposition. It is, perhaps, as likely that the death of a parent will not be related to the death of a sibling even though they may both be experienced and conceptually grouped as losses. From a logical perspective, therefore, exploratory factor analysis would not be an appropriate procedure to use to cluster items.

The new scale, Family Tensions, was constructed through application of a conceptual strategy similar to that used by the original authors of the instrument, and validated through confirmatory factor analysis (see Chapter 5). Items that address arguments and conflicts within the family were selected and tested in a confirmatory factor analysis with the items of the original scales of Losses and Transitions, which were used as distinct representations of the original scales. Only Family Tensions passed tests for internal consistency and parallelism. Its alpha was computed to be .71. It was included as the only stressor measure in the correlation and regression analyses. Its inclusion is consistent with theory and clinical knowledge about the

sample. Original AFILE items assigned to Family Tensions and their new factor loadings are shown in Table 1.

Table 1 Family Tensions Items and Factor Loadings

Item	Factor Loading
29. A family member has emotional problems.	.41
37. Increase in arguments between parents.	.60
39. Parents and teenagers have increased arguments over use of the car or hours to stay out.	.57
40. Parents and teenagers have increased arguments over choice of friends and/or social activities.	.48
41. Parents and teenagers have increased arguments over attendance at religious activities.	.57
42. Parents and teenagers have increased arguments over personal appearance (clothes, hair, etc.).	.39
43. Increased arguments about getting jobs done at home.	.52
44. Increased pressure for a member in school to get "good" grades or do well in sports or school activities.	.32

Adolescent Coping Orientation for Problem Experiences (ACOPE)

In concert with developmental theory, ACOPE is a fifty-four item self-report instrument designed to identify the behaviors adolescents find helpful in managing problems or difficult situations as they strive for a functional balance

of independence and connection with parents (Patterson & McCubbin, 1983). The instrument provides information about the coping strategies the adolescent prefers when faced with personal or family stressors, or difficult life changes in general. Subscales and their internal consistency reliabilities include Ventilation (.75), Low Level Activity (.75), Self-Reliance (.69), Emotional Connections (.75), Family Problem-Solving (.71), Passive Problem-Solving (.71), Spiritual Support (.72), Friendship Support (.76), Professional Support (.50), High Activity Level (.67), Humor (.72), and Relaxation (.60).

A confirmatory factor analysis was conducted to assess the psychometric properties of this instrument for this sample of African-American male delinquents. For more information about this analysis and its results, please see Chapter 5. Despite exhaustive attempts to maintain versions of the original subscales, they did not meet acceptable levels of internal consistency and independence from one another for this sample.

Two factors emerged from confirmatory factor analysis. The original Ventilation scale was supported. Its internal consistency alpha for this sample was .72. A new subscale was derived and named Personal Investment, because it encompassed applications of various personal strengths to developing and caring for one's self. Personal Investment showed an alpha of .80. In addition, both of these factors passed tests for internal consistency and parallelism when

included in a factor analysis with the stressor and family functioning items (see Chapter 5). Original ACOPE items and their new factor loadings in Ventilation are shown in Table 2, and those included in Personal Investment are shown in Table 3.

Table 2 Ventilation Items and Factor Loadings

Item	Factor Loading
19. Get angry and yell at people.	.74
22. Let off steam by complaining to family members.	.40
26. Swear.	.45
28. Blame others for what's going on.	.78
49. Say mean things to people; be sarcastic.	.57

Table 3 Personal Investment Coping Items and Factor Loadings

Item	Factor Loading
10. Get more involved in activities at school.	.67
13. Try to improve yourself (get body in shape, get better grades, etc.).	.64
25. Organize your life and what you have to do.	.66
27. Work hard on schoolwork or projects.	.73
30. Try to help other people solve their problems.	.61
41. Do things with your family.	.63
48. Sleep.	.46

***Family Adaptability and Cohesion Evaluation Scales* (FACES II)**

Based on family theory and family therapy, the FACES II is a thirty item self-report measure that is designed to identify the degree of adaptability and cohesion employed by a family (Olson, Portner & Bell, 1982). Family Adaptability is defined as the ability of the family system to change its power structure, role relationships, and relationship rules in response to situational and developmental stress. It is a concept that captures the degree of flexibility that the family uses to change in the face of life demands. Family Cohesion is defined as the emotional bonding family members experience with one-another.

The dimension of Adaptability has an internal reliability of .78, and includes the sub-dimensions of Assertiveness, Leadership (Control), Discipline, Negotiation, Roles, and Rules. These sub-dimensions closely approximate aspects of Parental Control that were noted in the literature review.

The dimension of Cohesion has a computed reliability of .87 and includes the sub-dimensions of Emotional Bonding, Family Boundaries, Coalitions, Time, Space, Friends, Decision-Making, and Interests and Recreation. These sub-dimensions capture aspects of Family Cohesion that arose in the literature review.

Although the original conceptualization of these dimensions incorporated a complicated "Circumplex Model"

wherein the dimensions were considered to be curvilinear, methodological and theoretical challenges have been mounted, and a linear interpretation is now considered to be more acceptable (Perosa & Perosa, 1990; Green, 1991; Olson & Tiesel, 1991). This means that it would be possible to type families according to their particular combination of the levels of Adaptability and Cohesion. Levels of Adaptability (from low to high) include Rigid, Structured, Flexible, and Chaotic. Levels of Cohesion (from low to high) include Disengaged, Separated, Connected, and Enmeshed.

By arranging the levels of Adaptability and Cohesion in a four-by-four figure, it is possible to identify sixteen distinct types of family functioning. These are shown in Figure 2. They include Chaotic-Disengaged, Chaotic-Separated, Chaotic-Connected, Chaotic-Enmeshed, Flexible-Disengaged, Flexible-Separated, Flexible-Connected, Flexible-Enmeshed, Structured-Disengaged, Structured-Separated, Structured-Connected, Structured-Enmeshed, Rigid-Disengaged, Rigid-Separated, Rigid-Connected, and Rigid-Enmeshed.

Respondents are asked to complete the instrument twice, once to provide their assessment of how things are now (Real), and then how they would like things to be (Ideal), so a measure of satisfaction is also possible. For purposes of this study, only the "Real" measure was considered.

A confirmatory factor analysis was conducted to assess the psychometric properties of the FACES II for this sample

of African-American families of delinquents based on the youth's present perception. For further information about this procedure and its results, refer to Chapter 5. The original intent was to use separate Parental Control and Family Cohesion factors, and a representation of family type in the correlation and regression analyses. Despite exhaustive attempts to maintain the original subscales, they did not show adequate combinations of alphas and significance of internal consistency and parallelism. In fact, the primary scales of Adaptability and Cohesion did not survive the confirmatory factor analysis.

		<----Low----------COHESION----------High--->			
		Disengaged	Separated	Connected	Enmeshed
^					
High					
A		Chaotic-	Chaotic-	Chaotic-	Chaotic-
D	Chaotic	Disengaged	Separated	Connected	Enmeshed
A					
P		Flexible-	Flexible-	Flexible-	Flexible-
T	Flexible	Disengaged	Separated	Connected	Enmeshed
A					
B		Structured-	Structured-	Structured-	Structured-
I	Structured	Disengaged	Separated	Connected	Enmeshed
L					
I		Rigid-	Rigid-	Rigid-	Rigid-
T	Rigid	Disengaged	Separated	Connected	Enmeshed
Y					
Low					
v					

Figure 2. Sixteen Types of Family Functioning

It was determined that for this sample, the distinction between Adaptability and Cohesion was not significantly measured by the instrument. As a result, a single scale of Family Functioning was constructed. This scale consists of items that represent aspects of Family Cohesion and Parental Control. It showed an alpha of .88. In addition, it passed tests for internal consistency and parallelism when included in a factor analysis with the stressor and coping items. It is the best measure of cohesion and control that is allowed by the existing dataset, but it necessarily combines these two key factors of interest. A decision was made to enter the family functioning factor into the analyses, rather than to proceed with separate factors that were not adequately measured. Original FACES II items that were retained in the Family Functioning factor are shown in Table 4.

Case Closing Report

The Case Closing Report is an agency developed tool designed to record administrative and program completion information at the time the youth is released from the facility. Specific instructions for completion of all items are provided to staff members. Variables are measured primarily in categorical form.

Table 4 Family Functioning Items and Factor Loadings

Item	Factor Loading
From Family Cohesion	
1. Family members are supportive of each other during difficult times.	.62
3. It is easier to discuss problems with people outside the family than with other family members.	.59
7. Our family does things together.	.61
19. Family members feel closer to people outside the family than to other family members.	.63
21. Family members go along with what the family decides to do.	.68
From Family Adaptability	
2. In our family, it is easy for everyone to express his/her opinion.	.61
4. Each family member has input in major family decisions.	.58
8. Family members discuss problems and feel good about the solutions.	.57
10. We shift household responsibilities from person to person.	.52
16. In solving problems, the children's suggestions are followed.	.57
18. Discipline is fair in our family.	.54
22. In our family, everyone shares responsibilities.	.67
26. When problems arise, we compromise.	.48

Variables and Operational Definitions

It was not deemed practical to conduct an exhaustive investigation of all potentially relevant variables in this study. It must, therefore, be noted, that although racism is unmeasured in this study, it is assumed to be an environmental feature for this African-American sample. It may be embedded in urban environments that are essentially segregated, opportunities that are systematically limited, and juvenile justice system decisions that lead to placement. Other relevant factors such as variation in quality of legal advice and policies of individual judges have not been measured. Included variables, their definitions, and the instruments with which the data are gathered are listed below.

Dependent/Criterion Variables

Two forms of out-of-home placement are considered in this study. They were selected as representations of different aspects of disproportionate minority confinement. *Out-of-Home Placements* captures the frequency of confinements, and *Length of Stay* represents the duration of the most recently completed placement.

Out-of-Home Placements is addressed in three forms. *Prior Placements* is the number of out-of-home placements previous

to the most recent Boysville placement, as recorded on the Intake Data Sheet. *Number of Placements* is defined as the number of prior out-of-home placements, plus one for the Boysville placement. It is used in the correlational and regression analyses. *Total Placements* is a version of this variable that is computed by summing the number of prior placements, the Boysville placement, and any out-of-home placement in the post-release period. Due to the issue of singularity and the need for temporal ordering, *Total Placements* is used for the correlational schematic that takes into account all program variables. The original distributions of these placement variables evidenced problems with kurtosis and skewness and were transformed using a natural log transformation following directives offered by Tabachnick and Fidell (1996). For descriptive and regression analyses, the observed distributions of *Prior Placements* and *Number of* Placements were used for consistency of interpretation. For the correlations and correlational schematic, transformed *Adjudications, Prior Placements,* and *Total Out-of-Home Placements* were employed in order to improve the analysis.

Length of Stay (LOS) is a measure of the duration of the most recent confinement as recorded on the Case Closing Report. It is indicated by dates of intake and release, which are then used to compute units in months reported to two decimal places. This variable showed a normal

distribution.

Independent/Predictor Variables

Age at Intake is recorded on the Intake Data Form. For purposes of this study, it is used in a computed form of years to two decimal places.

Family Type is recorded on the Intake Data Form. This categorical variable is recoded as the dichotomous variable *Single Parent Family* using dummy coding to represent Single Parent Family or Not Single Parent Family. Code 0=1 Reconstituted, 2 Nuclear, 4 Foster, 5 Adoptive, 6 Extended. Code 1=Single Parent.

County of Residence is reported on the Intake Data Form. This categorical variable is recoded as the dichotomous variable *Urban Environment* in order to measure the contribution of an urban environment. It is recognized that this variable holds a place as a proxy for what could be a more advanced measure of the youth's environment. Wayne, Oakland, and Macomb counties were included as the recognized "tri-county" metropolitan area of the city of Detroit; Saginaw county was included because of its inclusion of the city of Saginaw; and Genessee county was included because it contains the city of Flint. All other counties were coded as Not Urban. This coding scheme was uncomplicated by

sample youth coming from counties with marginal urban areas, and a relatively high degree of confidence in its ability to represent urban environments has been imparted.

Intake Living Situation (the approved legal residence immediately prior to the most recent placement) is recorded on the Intake Data Form. This categorical variable was recoded as the dichotomous variable *Intake from Home*. Code 0=3 Group Home, 5 Jail, 6 Youth Home, 7 Shelter, 8 Private Care Facility, 9 State Institution, 10 Mental Hospital, 11 Other. Code 1=Family as described in Family Type, 2 Family other than as described in Family Type, 4 Independent Living.

Status Offenses is defined as the number of status offenses officially reported in the case file and recorded on the Intake Data Form. Status offenses involve behaviors such as truancy, curfew violation, possession of tobacco, and incorrigibility that are violations of the law only when one has not yet reached the age of majority.

Felony Offenses is defined as the number of felony offenses officially reported in the case file and recorded on the Intake Data Form. Felony offenses are serious crimes against persons or property.

Adjudications is defined as the number of juvenile court

adjudications officially reported in the case file and recorded on the Intake Data Form. Adjudications refer to juvenile court appearances wherein the adolescent was found guilty of a law violation.

The youth's contact with stressors is represented by the *Family Tensions* scale explained above. It was constructed from the included AFILE items and was scored as a simple count of the youth's affirmative responses to the items, using the most recent twelve month time frame.

The youth's use of coping strategies is represented by the *Personal Investment* and *Ventilation* scales explained above. These were constructed from the ACOPE. Scale scores were calculated by obtaining the mean of all included item responses for each participant.

Parental Control and Family Cohesion are represented by the *Family Functioning* scale explained above. It was constructed from the FACES II. This scale was scored by obtaining the mean of all included item responses for each participant. Responses for reverse stated items were reflected as outlined for the original instrument.

Successful program completion is measured by attainment of Integrated Treatment Plan Objectives as reported on the Case Closing Report. This is a staff assessment of the youth's

progress toward the treatment goals that were outlined during the initial treatment planning conference. This categorical variable is recoded as the dichotomous variable *Successful Program Completion.* Code 0=3 Some, 4 None, 5 Not Applicable. Code 1=1 All, 2 Most.

Reason for Release is recorded on the Case Closing Report. Successful completion is defined by types of "acceptable" discharge from placement. This categorical variable was recoded as the dichotomous variable *Successful Release.* Code 0=3 Administrative Discharge, 4 Administrative Termination, 5 Court Termination, 6 State Termination, 7 Inactive (extended truancy). Code 1=1 Boysville Release, 2 Administrative Release.

Post Placement Destination is recorded on the Case Closing Report. This categorical variable is recoded as the dichotomous variable *Aftercare Home Placement.* Code 0=3 Foster Care, 5 Private Residential, 6 Group Home, 7 County Residential, 8 Psychiatric Institution, 9 State Institution, 12 Non-Secure Shelter, 13 Other, 14 Unknown (usually used for youth who are truant from the authorized placement). Code 1= 1 Parent's Home, 2 Relative's Home, 4 Adoptive Home, 10 Independent Living, 11 Armed Services.

Planned Analyses

Psychometrics

The measurement characteristics of the published clinical assessment instruments (AFILE, ACOPE, and FACES II) were assessed using confirmatory factor analysis. Hunter's CFA program in Package was used for this analysis (Hunter & Hamilton, 1992). This was undertaken to establish the validity of these measures for an exclusively African-American male delinquent sample.

Initially, a separate confirmatory factor analysis of each instrument was run to test the overall measurement models and to identify and eliminate low quality items. Items that cross-loaded on two or more factors were eliminated, as were those whose factor loadings were less than .2. Next, a confirmatory factor analysis of all the surviving items from all three measures was run to test the independence of the stressor, coping, and family functioning constructs. These constructs were supported. This set of items was then used to fine tune new scales as described above, reviewed for conceptual clarity and then tested for item quality and independence of factors. The results of these factor tests are explicated in Chapter 5.

Description of Sample

Frequencies and distributions of all included variables were obtained to describe the characteristics of the participants. Mean and modal values were also used to construct a narrative description of the normative youth in this sample.

Associations

Correlations among all pairs of included variables were obtained to identify significant relationships in the form of Pearson product-moment correlations, significant at the .05 level.

Multiple Regression Analysis

Standard multiple regression was used to explain two forms of out-of-home placement. Blocks of variables were regressed onto Number of Placements and Length of Stay, using a simultaneous procedure. This method was deemed more appropriate than hierarchical or stepwise procedures due to the lack of empirical knowledge about the relationships of the independent and dependent variables, and the exploratory nature of the study. The form of analysis used here may be interpreted as a way of comparing limited sets of independent variables to see which set best explains the dependent variables. The blocks were constructed on the bases of logical consistency of variables with others in the

block, theoretical and practice value of understanding the contribution of the block, and temporal order of the variables.

Schematic of Correlations

A correlational diagram was used to present an overall model of the observed variables that explains a youth's Total Out-of-Home Placements. Despite its appearance, it should be noted that this is not intended to represent a path analysis. This diagram was constructed post-hoc with the observed correlations among the variables. It accounts for their temporal ordering, but is not intended to satisfy strict requirements regarding a priori ordering of variables that apply to structural equation modeling or other path modeling techniques. It is presented in Chapter 5 for its heuristic value.

Chapter 5

Results

This chapter presents the findings of the study. It provides the reader with the facts that were obtained from the research conducted, explanatory comments, and the author's description of what is important and noteworthy. Discussion of interpretations, implications, and meanings of the findings are contained in Chapter 6. Sections of this chapter include information about the confirmatory factor analyses, description of the sample, findings from the correlational analysis, findings from the regression analyses, and a presentation of the correlational schematic. These sections are structured to present results that are relevant to each respective research question and hypothesis.

Research Questions

The research questions emerged from practice and an interest in improving compliance with the policy mandate, as set forth in the juvenile justice code, to reduce disproportionate confinement of African-American male youth. They were specified through a review of the literature on disproportionate minority confinement and ecological factors that impact African-American delinquents. The research questions addressed, and their respective hypotheses are

shown in Table 5.

Table 5 Research Questions and Hypotheses

Research Question 1: What personal, family, and environmental characteristics describe African-American male delinquents who experience out-of-home placements?

Hypothesis 1: The typical African-American male placed out-of-the home is approximately sixteen years old, from a single parent family, living in an urban environment, who has been adjudicated for repeated delinquent offenses.

Hypothesis 2: This sample does not significantly differ from the agency population in age, offense history, or placement history.

Research Question 2: What are the observed associations of personal, family, and environmental variables for African-American male delinquents who experience out-of-home placements?

Hypothesis 3: Number of Placements will be significantly and positively correlated with Age at Intake, Status Offenses, Felony Offenses, Adjudications, Family Tensions, and the Ventilation coping strategy.

Hypothesis 4: Number of Placements will be significantly and negatively correlated with use of the Personal Investment coping strategy and Family Functioning.

Research Question 3: Which sets of variables best explain out-of-home placements for African-American male delinquents?

Hypothesis 5: An ecological set of variables including age at intake, single parent family type, adjudications, and family functioning will better explain Number of Placements than will blocks that contain demographics, offense history, clinical characteristics, or family characteristics alone.

Hypothesis 6: An ecological set of variables including Age at Intake, Felony Offenses, use of a Ventilation coping strategy, and Number of Prior Placements, will better explain length of stay in the most recent placement, than will blocks that contain demographics, offense history, clinical characteristics, family characteristics, or placement history alone.

Psychometrics of Clinical Assessment Instruments

The purpose of conducting confirmatory factor analyses of the published instruments used to measure stressors, coping, and family functioning, was to ensure valid and reliable measurement of the clinical constructs involved in the study. While the intent was not to challenge the work of those who developed these widely used instruments, it was noted that the samples used for development of these measures may have differed greatly from the participant population targeted by this study. An implicit set of hypotheses stipulated that a homogeneous sample of African-American delinquent youth in placement may have contact with different stressors, use different combinations of coping activities, and experience different patterns of family cohesion and control, than did the samples used for production of the original scales. The AFILE used an initial sample of 30 youth from a suburban high school, and a subsequent sample described only as 500 junior and senior high school students (McCubbin & Patterson, 1991). Although three successive samples were used to develop the ACOPE scales, each of these samples was characterized as upper-middle to high socio-economic status (Patterson & McCubbin, 1991). The FACES II scales were constructed with "non-problem" families who were predominately Lutheran and white (Fredman & Sherman, 1987). While previous work had established particular norms and cutting points for scoring

these instruments for application to a "non-White" population (Grasso, 1985), it was deemed important to verify the latent variables contained in the instruments or to develop more appropriate scales if they were warranted. The results of the confirmatory factor analyses of the AFILE, ACOPE, and FACES II are described in separate sections below. Significance of the internal consistency chi square, tests for deviation from a unidimensional within-cluster correlation matrix that allows for a variation in item quality (Hunter & Hamilton, 1992). Internal consistency is assessed on the basis of item-factor correlations. Significance of the parallelism chi square tests for parallel with allowance for variation in item quality (Hunter & Hamilton, 1992). Parallelism refers to a form of external consistency of a scale. If items of a scale measure the same construct, then their pattern of relationships to items outside the scale should be similar. This pattern is assessed with ratios of scale items to other included items.

AFILE

Results of the confirmatory factor analysis for the AFILE items, shown in Table 6, indicated that the scales included in the instrument were problematic in application to this sample. The published internal consistency reliabilities were noted to be relatively low (see Chapter 4), and none of the original scales had acceptable

combinations of alpha, significance of internal consistency, and significance of parallelism. The stressor measure was, thus, called into question. In line with the exploratory purpose of the study in relation to the specified sample, rather than broad generalization of findings or comparison to other populations, it was decided to use the existing items to construct new scales with acceptable psychometric properties in this application.

Table 6 Psychometrics of Published Scales of AFILE

Original Scale	Alpha	Int/Consist Chi Square	df	p	Parallel Chi Square	df	p
Transitions	.503	115.671	90	.036	49.390	65	.925
Sexuality	.335	1.294	5	.936	30.507	15	.010
Losses	.441	46.751	20	.000	48.137	30	.019
Responsibilities and Strains	.752	246.237	170	.000	77.791	90	.817
Substance Use	.481	1.956	5	.855	19.959	15	.174
Legal Conflict	.039	N/A	-	-	5.601	2	.061

Note: N/A indicates that the scale had only two items, and it was not possible to compute the internal consistency chi square.

For the AFILE, a complication to scale modification was introduced by a methodological issue regarding the construction of stressful event measurement scales. Clearly, the AFILE items refer to stressful events or what

fits into stress theory as "stressors" (Pearlin, 1989), but the fit of these events into scales could not be adequately accomplished by a statistical procedure alone. The developers of the AFILE made explicit their decision to conceptually cluster the items, without the expectation that they be statistically related, into stressor categories (McCubbin & Patterson, 1991). The conceptual categories were submitted to confirmatory factor analysis to validate the scales, and assign factor loadings to the items, as reported in Chapter 4. The literature supports this position by noting that stressors do not necessarily cluster together in neat scales because of the low frequency of serious stressors, such as loss by death (McCubbin & Patterson, 1983). Thus, the incidence of one stressor may not be correlated with the incidence of another stressor that would conceptually fall into the same category. Other researchers have utilized an alternative strategy that applies weights to life events which reflect the relative amount of change required by the individual to adapt to the circumstances of the event (Dohrenwend & Dohrenwend, 1978; Newcomb, Huba, & Bentler, 1986). Such a strategy is inappropriate for the purpose of the AFILE as an inventory of life events. Moreover, it is also inappropriate for the present study which considers the presence or absence of stressors in relation to outcome variables rather than focusing concern on the degree of personal adaptation as a measured variable.

For this study, an approach similar to the one used for original AFILE scale development was used. Once low quality items were removed as described in Chapter 4, the items were conceptually grouped into categories and then submitted to confirmatory factor analysis. One acceptable scale for stressors was developed from the AFILE items. The emergent scale was named Family Tensions because it included items that centered on emotional and behavioral conflicts between family members (see Chapter 4 for a complete list of items and factor loadings). This scale exhibited acceptable psychometrics and was clearly discriminated from items in the instrument's original Losses and Transitions scales, which were used to test its parallelism. These characteristics are shown in Table 9.

ACOPE

Confirmatory factor analysis of the ACOPE items alone indicated that only the Ventilation, Diversions, and Social Support scales showed acceptable alphas, significance of internal consistency, and significance of parallelism. These values are shown in Table 7.

When the AFILE, ACOPE, and FACES II items were combined for confirmatory factor analysis of the stressor, coping, and family functioning constructs, however, only the Ventilation scale showed acceptable values. Another acceptable scale emerged, which was named Personal Investment, to represent its combination of self-development

Table 7 Psychometrics of Published Scales of ACOPE

Original Scale	Alpha	Int/Consist Chi Square	df	p	Parallel Chi Square	df	p
Ventilation	.718	25.921	14	.026	85.125	55	.006
Diversions	.778	35.483	27	.127	134.639	77	.000
Self-Reliance	.608	25.134	14	.033	125.033	55	.000
Social Support	.691	10.320	14	.738	88.046	55	.003
Solving Family Problems	.769	28.342	14	.013	72.547	55	.057
Avoiding	.499	38.808	9	.000	122.182	44	.000
Spiritual Support	.667	0.000	2	-	25.246	22	.285
Close Friends	.649	N/A	-	-	11.006	11	.443
Professional Support	.347	N/A	-	-	15.291	11	.170
Demanding Activity	.770	18.668	5	.000	38.903	33	.221
Humor	.592	N/A	-	-	11.791	11	.380
Relaxing	.459	5.407	5	.368	90.492	33	.000

Note: N/A indicates that the scale had only two items, and it was not possible to compute the internal consistency chi square.

and support for others. Results of the confirmatory factor analysis of the Ventilation and Personal Investment scales are shown in Table 9. Items included in both scales are listed in Chapter 4. Again, the decision to better specify the measures for this sample was validated.

FACES II

An initial confirmatory factor analysis of the FACES II items alone indicated that the sub-scales did not possess acceptable combinations of alphas, significance of internal consistency, and significance of parallelism for this sample. These values are presented in Table 8.

The two primary scales, Adaptability and Cohesion, passed the test for significance of parallelism. They also showed acceptable alphas, probably due to a relatively high number of items, but did not meet the significance test for internal consistency. When the FACES II items were combined with the AFILE and the ACOPE items to test the latent constructs, their significance of parallelism disappeared.

Therefore, items from both scales were combined to construct one scale of Family Functioning as described in Chapter 4. Its psychometric properties were acceptable, as may be seen in Table 9. The performance of this scale substantiated the decision to test and reconstruct the scales.

Table 8 Psychometrics of Published Scales of FACES II

Original Scale	Alpha	Int/Consist Chi Square	df	p	Parallel Chi Square	df	p
Cohesion	.779	214.915	119	.000	27.322	15	.026
Emotional Bonding	.601	N/A	-	-	7.278	13	.887
Family Boundaries	.400	N/A	-	-	7.426	13	.879
Coalitions	.374	N/A	-	-	5.956	13	.948
Time	.540	N/A	-	-	31.101	13	.003
Space	.291	N/A	-	-	35.715	13	.000
Friends	.305	N/A	-	-	14.570	13	.335
Decision-Making	.347	N/A	-	-	10.072	13	.688
Interests/ Recreation	.039	N/A	-	-	27.866	13	.009*
Adaptability	.739	138.408	90	.001	24.850	13	.024
Assertiveness	.284	.070	2	-	71.864	26	.000
Leadership	.347	N/A	-	-	24.286	12	.019
Discipline	.291	N/A	-	-	29.558	13	.005
Negotiation	.729	.000	2	-	15.667	26	.944
Roles	.473	N/A	-	-	19.570	13	.106
Rules	.182	N/A	-	-	18.457	13	.141

Notes: N/A indicates that the scale had only two items, and it was not possible to compute the internal consistency chi square.
* indicates that the chi square without gradient is reported, because value with gradient could not be computed.

Table 9 Psychometrics of Scales Derived From AFILE, ACOPE, and FACES II

Instrument	Scale (Derived)	Alpha	Int/Consist Chi Square	df	p	Parallel Chi Square	df	p
AFILE	Family Tensions	.710	35.620	27	.124	24.155	14	.044
ACOPE	Ventilation	.720	12.736	9	.175	23.745	8	.003
ACOPE	Personal Investment	.820	16.100	20	.710	24.655	12	.017
FACES II	Family Functioning	.874	90.938	77	.132	37.014	24	.044

Description of the Sample

The first research question focuses on a description of the sample. Hypothesis 1 specifies the combination of expected characteristics at the individual level. Hypothesis 2 is concerned with the sample being representative of the overall agency population of African-American males.

Research Question 1: What personal, family, and environmental characteristics describe African-American male delinquents who experience out-of-home placements?

To address this question generally, descriptive statistics for each of the original variables were obtained. (Categorical rather than dichotomous forms, and untransformed distributions of the continuous variables, were used to simplify interpretation.) These descriptive statistics include frequencies, means for continuous variables, standard deviations, and maximum and minimum values of the distributions. Frequencies and percentages for each level of the categorical variables are considered.

The youngest delinquent taken into this placement was not quite 13 years old, while the oldest was midway through his seventeenth year. These values reflect the rules governing juvenile justice in Michigan at the time, which set minimum and maximum ages for intake at 12 and eighteen 18, respectively. The average age of the sample is about 15.5 years old with a standard deviation of 1.04.

Youth from single parent families predominated at 112, or 65.5%. The remaining participants totaled 37 (about 21.5%) from two parent nuclear families, 18 (10.5%) from extended families, two (about 1%) were adopted, and only another two came from foster families. It should be noted that the inclusion of foster families here is a departure from the definition of foster care as an out-of-home placement, which is due to the agency's definition of family type. For purposes of the correlation and regression analyses, the recoded version of this variable (Single Parent Family Type) is used instead, and the small number of

affected cases is seen to present little difficulty for interpretation.

The vast majority of youth came from the metropolitan Detroit area, with 105 from Wayne county, 11 from Macomb county, and 4 from Oakland county, representing 70% of the sample. Counties within 50 miles of Detroit that serve as commuter bases include Lapeer and Livingston with five and six cases respectively, combining for about 6% of the total. Primarily urban counties, such as Genessee and Saginaw containing the large cities of Flint and Saginaw, provided another 10.5 % of the cases, with ten from Flint and eight from Saginaw. The remainder of the youth came from obviously rural counties. They totaled 20 cases and about 13% of the sample.

The bulk of these youth, 137 or 80%, came into placement directly from their family homes. The next largest subgroup, nine or just over 5%, came from private facilities such as other residential programs. Shelters used for child welfare cases contributed seven youth comprising about 4% of the cases. Restrictive programs provided the remainder of the cases, with six (3.5%) from county youth homes, five (about 3%) from group homes, two (1%) from a state institution, and two from county jail. Only one youth came from a family setting other than that indicated in his family type, and one case had missing data.

The offense history, court involvement, and placement experience of these youth reveals much about their

delinquent careers. Ranges, means, and standard deviations for offenses, adjudications, and prior placements are summarized as delinquent careers in Table 10.

Table 10 Delinquent Careers of Participants

	Minimum	Maximum	Mean	SD
Status Offenses	0	2	.50	.71
Felony Offenses	0	13	2.89	2.45
Adjudications	0	16	2.58	2.25
Prior Placements	0	21	2.44	2.62

The range of status offenses had a low value of zero and a high value of two. Only 21, or about 12% of the youth, committed two status offenses, while 44 (about 26%) had a record of one. The records of 106, or 62%, of the youth showed no status offenses. The mean number of status offenses is .50, with a standard deviation of .71. Felony offenses are more numerous among the sample. The average number of recorded felony offenses is 2.89 with a standard deviation of 2.45. The range of values goes from zero to 13. Only three youth (less than 2%) committed felony offenses at the levels of 11, 12, and 13 each, while 28

(just over 16%) committed none. One felony offense was attributed to 29 youth, or 17%, of the sample. A sizable group committed two to five felonies. Twenty-seven youth (about 16%) committed two felonies and the same number committed three felonies. Four felonies were recorded for 28 youth or about 16%, and five felonies for 11 (just over 6% of the sample). The remainder of the youth committed from six to nine felonies, with six committed by six youth (3.5%), seven by seven youth (about 4%), eight by three youth (under 2%), and nine by two youth (just over 1%).

Involvement with the juvenile court is a necessary condition for out-of-home placement under normal circumstances, but five youth (almost 3% of the sample) showed no adjudications on their records. This is probably explained by the fact that a case originally classed as a child welfare case, could be "escalated" in placement if the youth's behavior becomes troublesome in the opinion of the case worker. Thus, the initial basis for out-of-home placement is provided by child protection laws, but the child undergoes de facto categorization as a delinquent. Most youth had records of one to four adjudications, with a notable drop in frequency above that point. Fifty-three, or 31%, had one adjudication, 48 (about 28%) had two, 29 (17%) had three, and 20 (almost 12%) had four. Four youth, or about 2%, had five adjudications each, the same number had six, and three had seven adjudications. One youth each showed adjudications at the levels of nine, ten, 11, 15, and

16. The average number of adjudications was 2.58, with a standard deviation of 2.25.

The previous placement data show that only 39, or about 23%, of the youth had not been placed out-of-the-home prior to agency intake. The bulk of the cases were clustered between one and five inclusive. Thirty youth (17.5%) had been in one placement, and the same number had two placements. Thirty-six (about 21%) were placed out of the home three times prior, 13 (about 7.5%) had four prior placements, and nine (about 5%) had been in five prior placements. Three youth (less than 2%) had been in six placements, four youth (just over 2%) were placed seven times, three youth placed eight times, and two placed ten times. One youth was placed out of the home 12 times, and one exceptional case showed 21 prior out-of-home placements. Using these data, the mean number of out-of-home placements was 2.44, with a standard deviation of 2.62.

A total of 102 youth, or about 60%, had experienced two or more out-of-home placements prior to the most recent Boysville entry. With the addition of cases where there was one placement prior to this Boysville intake, the total number of youth with multiple placements (including the most recent placement) rises to 132. This comprises 77% of the sample.

Encounter with stressors is represented in the form of Family Tensions. As may be seen in Table 11, for Family Tensions, youth responded with a range of scores from one

through eight events over the 12 months immediately preceding placement. The average was just over five, with a standard deviation of about two. Most youth were clearly clustered in the upper range of the distribution. Twenty-eight (over 26%) reported eight stressors, 30 (17.5%) identified seven, 24 (14%) noted six, and another 30 listed five events. The remainder showed one to four events, with seven (about 4%) indicating one Family Tension stressor, 20 (almost 12%) reporting two, and 16 (about 9.5%) each reporting three and four stressful events.

Table 11 Experience of Family Tensions Stressors

Minimum: 1	Maximum: 8	Mean: 5.19	SD: 2.12	Events	Frequency	%
				1	7	4%
				2	20	12%
				3	16	9.5%
				4	16	9.5%
				5	30	17.5%
				6	24	14%
				7	30	17.5%
				8	28	16%
				Totals	171	100%

Use of coping strategies was assessed with the Personal Investment and Ventilation scales. Shown in Table 12 is the range of scores for Personal Investment, which span from just over one to five. The average score was 3.36, with a

standard deviation of .84. Ventilation showed a range from one to five, with a mean of 2.74 and a standard deviation of .80. These values indicate that both forms of coping are often used by youth in this sample.

Table 12 Coping Strategies Used by Participants

Personal Investment	Minimum: 1.14	Maximum: 5	Mean: 3.36	SD: .84
Ventilation	Minimum: 1	Maximum: 4.80	Mean: 2.74	SD: .80

In order to test for a preference of one coping strategy over the other, a Coping Difference score was computed by obtaining standardized scores (z scores) for Personal Investment and Ventilation, and then subtracting each participant's Ventilation score from his Personal Investment score. Using scores above zero to represent youth who preferred Personal Investment coping to Ventilation coping, 84 cases were counted. Eighty-seven youth preferred Ventilation coping, when scores less than or equal to zero were counted.

Results for the Family Functioning scale showed a range of scores from 1.23 to 4.54, with a mean of 3.10 and a standard deviation of .64. These scores represent a moderate level of family cohesion and control.

Length of stay ranged from a low of less than one month (.73) to a high of 32 months. The mean was just over 15

months, with a standard deviation of 6.50. Completion of treatment goals showed 11 youth (about 6.5 %) completed all goals, 49 (about 29%) Most, 76 (over 44%) Some, 23 (13.5%) None, and 12 (7%) Not Applicable. This category would be used for cases where discharge occurred too soon for the initial assessment and formal treatment planning conference to be completed, which was required within the first 30 days of placement. Summing the percentages for the All and Most categories shows that only about 35% of the youth successfully completed their treatment goals.

Release type, however, indicates that most youth in the sample were satisfactorily released from the program. This is based on two categories. Boysville Release was reported for 61 youth (almost 36%) and Administrative Release included 40 youth (over 23%) for a total of about 59%. The remaining categories may be seen as unsatisfactory discharges. Administrative Discharge accounted for 29 youth (17%), Administrative Termination 25 (about 14.5%), Court Termination 12 (7%), State Termination three (less than 2%), and only one youth was discharged due to Inactive status.

As may be seen in Table 13, post placement destination data show that upon release, 82 or 48% of the youth returned to their parent's home, 12 (7%) went to live with a relative, seven (about 4%) started independent living, and one entered the Armed Services. The placement of 22 (almost 13%) was unknown. The rest were placed in other out-of-home placements. Fourteen (about 8%) entered a group home

program, 11 (about 6.5%) were sent to state institution, 12 (7%) entered foster care, two (about 1%) went to a private residential program, and one entered a county residential program. The remaining seven (about 4%) went to a non-secure shelter.

Table 13 Post-Placement Destination

		Frequency	Percentage
	Parent's Home	82	48%
	Relative's Home	12	7%
	Independent Living	7	4%
	Armed Services	1	–
Home Placements		102	60%
	Group Home	14	8%
	State Institution	11	6.5%
	Foster Care	12	7%
	Private Residential	2	1%
	County Residential	1	–
	Non-Secure Shelter	7	4%
Out-of-Home Placements		47	27%
Unknown		22	13%

Note: Detail does not add to totals due to rounding.

Hypothesis 1: The typical African-American male placed out-of-the home is approximately sixteen years old, from a single parent family, living in an urban environment, who

has been adjudicated for repeated delinquent offenses.

This hypothesis was addressed by reviewing the descriptive statistics outlined above. It is supported by the data. The typical African-American male delinquent in this sample is 15.5 years old. He comes from a single parent family and resides in the Detroit metropolitan area. His illegal behavior seems to have escalated rapidly. He has either not engaged in minor juvenile infractions, or else has been able to elude court attention for them, as his formal record shows no pattern of status offenses. He has, however, been apprehended for serious crimes. His juvenile record includes three felony crimes against persons or property and he has been petitioned by the juvenile court and found to be delinquent three times. He came into the most recent placement directly from his home, but he has been placed elsewhere on two prior occasions.

He experiences a significant amount of family tension involving arguments with his parent over many of his personal choices including friends, dress, use of time, and involvement in activities. To cope with these and other sources of stress, he uses active problem solving methods to develop himself and help others, but also resorts to yelling, swearing, and threatening others when he gets upset. His family usually operates with moderate levels of emotional closeness and parental monitoring of his actions, but there may be fluctuations in these functions under

difficult conditions.

He will stay in this placement well over a year. During that time, he will be expected to make progress toward treatment goals that are established by his staff team, but will perform only moderately well and achieve only some of what was set out for him. Nonetheless, he will be satisfactorily discharged from the facility and will return to his parent's home.

Hypothesis 2: This sample does not significantly differ from the agency population in age, offense history, or placement history.

Because one important criterion for sample selection was completion of all the clinical assessment instruments, it was deemed valuable to test whether this sample significantly differed on key attributes from youth admitted to the agency who did not complete the clinical instruments.

To test this hypothesis, the means of the sample for age at intake, adjudications, status offenses, felony offenses, and the number of previous placements were compared with all other agency cases that met the conditions of race, gender, and intake during the same years as the sample. The only known difference between these groups was that the research sample had completed all clinical assessment instruments. The overall population numbered about 1700 youth after the research sample was removed. The

means of the sample were compared with the means of the population using a one sample *t*-test, with results shown in Table 14. Agency population values were used as the test values, a two-tailed test was computed, and a 95% confidence interval was constructed.

Mean age at intake for the sample was 15.49 years, and for the population it was 15.86 years. This difference (.37) amounts to only about four and a half months, but it is statistically significant (p=.000). The confidence interval shows that in 95 of 100 cases the difference would be nearly non-significant (l=-.529, u= -.214). It should be noted, however, that for most clinical purposes, this difference in age is probably not relevant.

Table 14 Comparison of Study Sample With Agency Population

	Sample Mean	Agency Mean	*t*	df	signif.	95% conf. int.
Age at Intake	15.49	15.86	-4.661	170	.000	*l* -.529, *u* -.214
Status Offenses	.50	.40	1.096	170	.058	*l* -.0004, *u* .210
Felony Offenses	2.89	1.35	8.204	170	.000	*l* 1.170, *u* 1.910
Adjudications	2.58	1.94	3.754	170	.000	*l* .310, *u* .980
Prior Placements	2.44	2.77	-1.625	170	.106	*l* -.720, *u* .007

Offense history showed mixed results. The mean number of Status Offenses for the sample was .50 and the agency population value was .40. The difference of .10 was not

significant (p=.058). Felony Offenses showed a mean of 2.89 for the sample against 1.35 for the population. Intuitively, this difference of an average of one and a half felonies appears to be an important difference, and the t-test for this variable (with equal variances not assumed due to the results of Levene's Test, F=77.995, p= .000) , showed it to be statistically significant (p=.000). Even using a 95% confidence interval (l=1.17, u=1.91), the difference remains significant. Number of Adjudications showed a sample mean of 2.58, with the agency group value at 1.94. This difference is statistically significant (p= .000), and it remains significant using a 95% confidence interval (l=.31, u=.97).

Number of Prior Placements indicated a non-significant difference between the means (p=.106). The sample mean stands at 2.44 and the population at 2.77.

It appears from this analysis, that the study sample, (those who completed the full set of clinical instruments) differs in some ways from the rest of the agency population of African-American males. The difference in age is notable, but not appreciable. The similarity in status offense history and placement experience indicate parity of the sample and the population. The significant differences in adjudications and serious criminal behavior, however, indicate that the sample may present an even greater risk to the community than the rest of the agency population, and that these youth may be at even higher risk themselves for

continued out-of-home placement.

Associations Among Variables

Research Question 2: What are the observed associations of personal, family, and environmental variables for African-American male delinquents who experience out-of-home placements?

This question was addressed by computing the Pearson Product-Moment correlations between the included variables. Table 15 presents the correlations, showing two-tailed significance at $p \leq .01$ (**) and at $p \leq .05$ (*), in a diagonal matrix format. As is apparent from this matrix, even though several correlations are significant, the effect sizes are relatively low. Nonetheless, meaningful relationships among the variables may be identified. They are presented here and discussed further in the section dealing with the correlational schematic and in Chapter 6. Appendix A presents the values for these correlations corrected for attenuation (Hunter & Hamilton, 1992). This procedure shows what the correlations would be without the effect of measurement error. It is based on a formula that divides the observed correlation by the product of the square roots of the reliabilities of the variables.

The older the youth at intake, the more felony offenses

he is likely to have on his record. Younger delinquents are more likely to come from single parent families, and have shorter stays in placement than older youth. An adolescent from a single parent family is also more likely to experience a greater number of out-of-home placements throughout his delinquent career. Earning a successful release from the program is less likely for youth whose families live in cities. Those with fewer adjudications are more likely to come into placement directly from their families' homes rather than from another placement.

Felony offenders with long criminal records are not as likely to stay a long time in this placement as compared to those with fewer felony offenses. Youth with higher numbers of prior placements tend to have higher levels of family functioning as well. The youth with more placements are not likely to stay a lengthy period in this one, but they will also probably not complete many of their treatment goals.

A high number of stressors in the family is associated with a likelihood that the youth will use a coping style that ventilates his emotions, and that he will probably not return to his family home upon release from the program. Use of a ventilation coping strategy means there is less chance that a youth will engage in personal investment types of coping, but also that he will have a better chance of going home when he leaves the agency.

Higher levels of family functioning are associated with higher numbers of out-of-home placements, but the reader

should be especially cautious about judging the direction of this effect. Possible explanations are considered in the section dealing with the correlational schematic.

Longer stays in placement increase the chances of a successful release and returning to one's family home. Perhaps not surprisingly, a successful release from the program increases the opportunity to return home.

Table 15 Associations Among Demographic, Offense, Clinical, Placement, and Program Variables

	Age	Single Parent	Urban	Home Intake	Status Offenses	Felony Offenses	Adjudication	Prior Plcmnts	Family Tensions
Age	-								
Single Parent	-.151*	-							
Urban	.107	.081	-						
Home Intake	.053	-.043	.061	-					
Status Offenses	-.102	.099	-.072	.139	-				
Felony Offenses	.232**	.078	.002	.081	-.086	-			
Adjudication	-.018	-.055	.040	-.153*	-.092	.006	-		
Prior Plcmnts	-.059	.156*	-.025	.005	-.024	-.022	.046	-	
Family Tensions	.065	.024	.092	-.027	-.004	.048	.049	-.031	-

Table 15 (cont'd).

	Age	Single Parent	Urban	Home Intake	Status Offenses	Felony Offenses	Adjudication	Prior Plcmnts	Family Tensions
Personal Investment	.033	- .089	.021	.124	- .040	- .031	- .031	.026	.113
Ventilation	.085	- .003	.046	.050	- .032	- .053	.037	.012	- .292**
Family Functioning	- .042	- .107	- .003	- .035	- .031	- .113	- .008	.166*	.053
Length of Stay	- .252**	- .031	.058	.077	- .087	- .177*	- .024	- .171*	- .074
Successful Program	.030	.081	- .013	- .044	- .020	.063	- .044	- .182*	.010
Successful Release	- .073	- .054	- .196*	- .045	- .149	- .096	.053	- .036	- .095
Aftercare Home	.093	- .121	.141	.172*	- .124	- .062	- .055	- .014	- .153*
Number of Plcmnts	- .059	.156*	- .025	.005	- .024	- .022	.046	x	.079
Total Plcmnts	- .081	.196*	- .055	- .062	- .016	.002	.064	x	.109

Table 15 (cont'd).

	Personal Investment	Ventilation	Family Functioning	Length of Stay	Success Program	Success Release	Aftercare Home	Number Plcmnts	Total Plcmnts
Personal Investment	-								
Ventilation	-.202**	-							
Family Functioning	.167*	-.115	-						
Length of Stay	.059	.015	-.044	-					
Successful Program	-.127	.080	-.031	-.015	-				
Successful Release	-.050	.104	-.111	.462**	-.036	-			
Aftercare Home	.045	.183*	.085	.194*	-.020	.333**	-		
Number Plcmnts	.026	.012	.166*	-.171*	-.182*	-.036	-.014	-	
Total Plcmnts	.033	-.039	.139	-.196*	-.153*	-.106	-.281**	x	-

Hypothesis 3: Number of Placements will be significantly and positively correlated with Age at Intake, Status Offenses, Felony Offenses, Adjudications, Family Tensions, and the Ventilation coping strategy.

This hypothesis was stated in a compound fashion to simplify presentation. Actually, the correlation of each variable with Number of Placements is considered separately.

Number of Placements is not significantly correlated with any of the variables named in this hypothesis using a one-tailed test. Its correlation and level of significance with Age at Intake is r= -.059, p=.223; Status Offenses r = -.024, p= .379; Felony Offenses r= -.022, p= .387; Adjudications r= .046, p= .276; Family Tensions r= .079, p= .154; Ventilation r= .012, p= .440. Due to the weak effect sizes, as well as the failure to pass the significance level, this hypothesis is not supported.

Hypothesis 4: Number of Placements will be significantly and negatively correlated with use of the Personal Investment coping strategy and Family Functioning.

Again, this hypothesis was stated in a compound fashion to simplify presentation. The correlation of each variable with Number of Placements is considered separately.

Number of Placements is neither negatively correlated with Personal Investment nor Family Functioning using a one-

tailed test at the p=.05 level. Rather, it is positively and significantly correlated with Family Functioning r= .166, p= .015. Its values for Personal Investment are r= .026, p= .366. Due to the inverse of the predicted valence of the association between Number of Placements and Family Functioning, as well as the weak effect size and failure to pass the level of significance of the association between Number of Placements and Personal Investment, this hypothesis is not supported.

Number of Placements is significantly correlated, however, with other included variables, using a two-tailed test at the p<.05 level. Its correlations with Single Parent Family (r= .156, p= .041); with Length of Stay (r= -.171, p= .025); and with Successful Program Completion (r= -.182, p= .017) are described in the explanation of the correlation matrix above.

The need to reject this hypothesis could stem from a cycle of repeated placements. These results may reflect the impacts of one or more out-of-home placements on variables that would normally be expected to lead to out-of-home placements. For example, prior placements may have had a positive impact on family functioning through treatment efforts, or due to stabilization of delinquent behavior through external control.

The association of out-of-home placements with variables not included in the hypothesis shows that the relationship with family composition may remain relatively

constant across the span of placements. Prior experience with out-of-home placements, however, may allow the learning of skills that reduce length of stay, but do not significantly affect completion of all treatment goals.

Multiple Regression Analysis of Out-of-Home Placements

Research Question 3: Which sets of variables best explain out-of-home placements for African-American male delinquents?

This question was addressed by focusing on two dependent variables that represent forms of out-of-home placement. Simultaneous Multiple Regression was used to test models focused on Number of Placements, and Length of Stay in the most recent placement, as dependent variables. The following hypotheses specify the dependent variables and the blocks that are expected to best explain them, using the available data in standard multiple regression. By independent variable, the models are tested for significance, and compared with each other to determine greatest explanatory value based on greatest percentage of variance explained.

Because a standard multiple regression technique is used, it is important to remember that the independent variables would perform differently in other combinations. Conclusions should not be drawn regarding the importance of

an individual variable outside the context of the specific model in which it was tested. In the following presentation, the contributions of the independent variables are evaluated only as they compare with one another within their respective block.

Hypothesis 5: An ecological set of variables including age at intake, single parent family type, adjudications, and family functioning will better explain Number of Placements, than will blocks that contain demographics, offense history, clinical characteristics, or family characteristics alone.

This hypothesis is intended to test the relative value of the models as they compare to one another. While other combinations may come to mind for the reader, it should be noted that the intent was not to test all possible constructions, but rather to compare the explanatory value of various systems levels by themselves, with a more integrated systemic view. These models, therefore, were constructed as representations of systemic levels in the social ecology of the sample youth. The ecological model employed here includes variables from successive system levels in order to evaluate the additional understanding that an ecological approach supposedly allows.

Specific to the ecological model, selection of the independent variables was based on explicit rationales. Age at Intake is included under the proposition that older youth

have greater exposure to accumulation of out-of- home placements than do younger adolescents. Single Parent Families have been identified in the literature as having higher incidences of delinquency in their children (Minuchin, Montalvo, Guerney, & Rosman, 1967; Benson & Roehlkepartain, 1993; Kapp, McCubbin, & Thompson 1993; Whittaker, Tripodi, & Grasso, 1993). Adjudications are used to represent a juvenile justice system intervention that is based on a formal recognition of the youth's delinquent behavior. The family functions of cohesion and control embedded in the Family Functioning variable are shown in the literature to be high correlates of delinquent behavior.

Model 1, shown in Table 16, uses demographic variables including Urban Environment, Single Parent Family, and Age at Intake to explain Number of Placements. This model shows no problem with autocorrelation of residuals with a Durbin-Watson statistic of 1.801 (*l* 1.693, *u* 1.774, *p*= .05). It explains only about 1% of the variance (Adjusted R Square = .013), however, and fails to achieve significance (F=1.735, *p*= .162). Individual betas were also computed, and in the context of this model, only Single Parent Family (*beta*= .167, *t*= 2.157, *p*=.032) made a significant contribution. Age at Intake (*beta* = -.030, *t*= -.385, *p*=.701) and Urban Environment (*beta* = -.012, *t*= -.160, *p*=.873) were not useful variables.

Table 16 Demographic Regression Model for Number of Placements

R	R Square	Adjusted R Square	Std Error	Durbin-Watson
.174	.030	.013	2.6024	1.801

	Sum of Squares	df	Mean Square	F	Sig
Regression	35.249	3	11.750	1.735	.162
Residual	12.850	167	.0077		
Total	13.459	170			

	Unstand. Coefficients		Stand. Coefficient	t	Sig
	B	Std Err.	Beta		
Constant	4.073	3.063		1.330	.185
Age at Intake	- .0075	.195	-.030	-.385	.701
Single Parent	.918	.426	.167	2.157	.032
Urban Environ.	- .0081	.510	-.012	-.160	.873

Model 2, shown in Table 17, is composed of offense history variables. It includes Status Offenses, Felony Offenses, Adjudications, and Intake from Home. There is no conclusive reason for concern about the correlation of its residuals (Durbin-Watson = 1.755, *l* 1.679, *u* 1.788, *p*= .05), but it performs worse than Model 1 in explaining the variance of Number of Placements (Adjusted R Square = -.003) and also fails to show significance (*p*= .483). The contributions of the separate variables within this model have little value for understanding number of placements. Status Offenses shows a *beta* of -.062 (*t*= -.789, *p*=.431), felony offenses *beta* = -.025 (*t*= -.326, *p*=.745), Adjudications Beta = .121 (*t*=1.551, *p*=.123), and Intake from

Home *beta* = .055 (*t*=.694, *p*=.489).

Table 17 Offense and Placement History Regression Model for Number of Placements

R	R Square	Adjusted R Square	Std Error	Durbin-Watson
.143	.021	-.003	2.6232	1.755

	Sum of Squares	df	Mean Square	F	Sig
Regression	23.952	4	5.988	.870	.483
Residual	1142.270	166	6.881		
Total	1166.222				

	Unstand. Coefficients		Stand. Coefficient	t	Sig
	B	Std Err.	Beta		
Constant	2.981	.593		5.029	.000
Status Offenses	-.229	.291	-.062	-.789	.431
Felony Offenses	-.0027	.083	-.025	-.326	.745
Adjudications	.141	.091	.121	1.551	.123
Intake from Home	.361	.520	.055	.694	.489

Model 3 (Table 18) focuses on the clinical characteristics of the youth, and includes Family Tensions (stressor), Personal Investment and Ventilation (coping strategies), and Family Functioning. Correlation of residuals presents no significant risk with a Durbin-Watson statistic of 1.806 (*l* 1.679, *u* 1.788, *p*=.05), but the model explains only about 1% of the variance in number of placements (Adjusted R Square = .010), and is not significant (*p*=.226). Family Functioning is the individual variable in this block that performs the best as a predictor

(*beta*= .166, *t*=2.143, *p*=.034). Family Tensions (*beta*= .052, *t*= .650, *p*=.517), Personal Investment (*beta*= .018, *t*= .228, *p*= .820), and Ventilation (*beta*= .082, *t*= 1.002, *p*=.318) all serve as poor predictors within this combination.

Table 18 Clinical Characteristics Regression Model for Number of Placements

R	R Square	Adjusted R Square	Std Error	Durbin-Watson
.183	.033	.010	2.6060	1.806

	Sum of Squares	df	Mean Square	F	Sig
Regression	38.869	4	9.717	1.431	.226
Residual	1127.353	166	6.791		
Total	1166.222	170			

	Unstand. Coefficients		Stand. Coefficient	t	Sig
	B	Std Err.	Beta		
Constant	.0082	1.644		.050	.960
Family Tensions	.0064	.099	.052	.650	.517
Personal Investment	.0056	.246	.018	.228	.820
Ventilation	.266	.266	.082	1.002	.318
Family Functioning	.681	.318	.166	2.143	.034

Model 4 (Table 19) enters the family characteristics of the youth as a block, and includes Single Parent Family, Family Tensions, and Family Functioning. Its Durbin-Watson statistic is acceptable at 1.835 (*l* 1.693, *u* 1.774, *p* .05),

and the model achieves significance (p=.012), while explaining about 5% of the variance (Adjusted R Square = .046). Thus, family characteristics for this sample are a better predictor of number of placements than are demographics or offense history. Family Tensions is the least productive element of this block (*beta* = .025, t=.331, p=.741), while Family Functioning (*beta* = .309, t=2.411, p= .017) and Single Parent Family (*beta* = .414, t=2.525, p=.013) better explain number of placements in this construction.

Table 19 Family Characteristics Regression Model for Number of Placements

R	R Square	Adjusted R Square	Std Error	Durbin-Watson
.251	.063	.046	2.5581	1.835

	Sum of Squares	df	Mean Square	F	Sig
Regression	73.413	3	24.471	3.740	.012
Residual	1092.810	167	6.544		
Total	1166.222	170			

	Unstand. Coefficients		Stand. Coefficient	t	Sig
	B	Std Err.	Beta		
Constant	.297	1.121		.265	.791
Single Parent	1.041	.414	.190	2.515	.013
Family Tensions	.0307	.093	.025	.331	.741
Family Functioning	.744	.309	.182	2.411	.017

Model 5 (Table 20) uses an ecological set of independent variables in an effort to explain the variance in number of placements. As noted above, this ecological set uses Age at Intake, Single Parent Family, Family Functioning, and Adjudications, to represent successive levels of the youth's environment. Its Durbin-Watson statistic is 1.791, which indicates no significant problem with correlation of adjacent residuals (*l* 1.679, *u* 1.788, *p*.05). It is significant at the *p*=.006 level, and explains about 6% of the variance of number of placements (Adjusted R Square = .061). Although its explanatory value is quite low, it still performs as a better predictor than any of the other models constructed for this dependent variable. In this model, Single Parent Family and Family Functioning have about equal value as predictors (*beta* = .198, *t*=2.606, *p*=.010; *beta* = .191, *t*= 2.543, *p*= .012, respectively), while Adjudications (*beta* = .142, *t*=1.907, *p*=.058) and age at intake (*beta* = -.015, *t*= -.201, *p*=.841) perform less well.

Table 20 Ecological Regression Model for Number of Placements

R	R Square	Adjusted R Square	Std Error	Durbin-Watson
.288	.083	.061	2.5384	1.791

	Sum of Squares	df	Mean Square	F	Sig
Regression	96.621	4	24.155	3.749	.006
Residual	1069.601	166	6.443		
Total	1166.222	170			

	Unstand. Coefficients		Stand. Coefficient	t	Sig
	B	Std Err.	Beta		
Constant	.476	3.229		.147	.883
Age at Intake	-.0038	.189	-.015	-.201	.841
Single Parent	1.087	.417	.195	2.606	.010
Adjudications	.166	.087	.142	1.907	.058
Family Functioning	.780	.307	.191	2.543	.012

Due to the better performance of the ecological model (Model 5), as compared with the other four models, in explaining variance while meeting an appropriate level of significance, Hypothesis 5 is supported. The results of the models for number of placements are summarized in Table 21.

Table 21 Summary of Regression Models for Number of Placements

Model	R	R Square	Adj. R Square	Significance
Demographic	.174	.030	.013	.162
Offense History	.143	.021	- .003	.483
Clinical Characteristics	.183	.033	.010	.226
Family Characteristics	.251	.063	.046	.012
Ecological	.288	.083	.061	.006

This conclusion does not imply that this model is the best predictor when considering all possible constructions, or that it would prove superior to alternatives that use different measures or independent variables.

Hypothesis 6: An ecological set of variables including Age at Intake, Felony Offenses, use of a Ventilation coping strategy, and Number of Prior Placements, will better explain length of stay in the most recent placement, than will blocks that contain demographics, offense history, clinical characteristics, family characteristics, or placement history alone.

This hypothesis is intended to test the relative value of specified models as they compare to one another. They do not represent an exhaustive examination of alternative explanations for Length of Stay, but are built on specific rationales, as described below.

Age at Intake is included in the ecological model

because placement data indicate that youth are typically placed at about 15 to 16 years old, and the juvenile justice laws at the time of these placements specified an endpoint for confinement at age 19. Release of serious felony offenders is subject to rigorous review by a State Board charged with protecting public safety, and the behavior of such offenders in placement would be likely to cause sanctions and longer periods of confinement. Use of a Ventilation coping strategy would appear to be more troublesome in a structured program, as it would serve to disrupt smooth agency operation and possibly antagonize staff members. Number of Prior Placements is used as an indicator of the youth's history in placement, and allows inclusion of this history without inducing a singularity problem.

Model 6 (Table 22) tests the relative value of demographics as they explain Length of Stay. It includes Age at Intake, Single Parent Family type, and Urban Environment. The Durbin-Watson statistic, at 1.213, shows problems with autocorrelation of errors (l 1.693, u 1.774, p .05). A decision was made not to correct for this problem, because all models compared in this section of the analysis evidence similar values. This is not considered a problem for interpretation of these results because the focus is only on comparison of the models with each other, not for purposes of generalization to other samples, or to uncover the best possible model of all alternatives. The

demographic model explains about 6% of the variance (Adjusted R Square = .061), and shows significance (*p* .004). Within this model, Age at Intake is the best predictor of Length of Stay (*beta* -.274, *t*= -3.621, *p*= .000), while Single Parent Family (*beta* -.080, *t*= -1.057, *p*= .292) and Urban Environment (*beta* .094, *t*= 1.251, *p*= .213) contribute notably less.

Table 22 Demographic Regression Model for Length of Stay

R	R Square	Adjusted R Square	Std Error	Durbin-Watson
.278	.077	.061	6.2967	1.213

	Sum of Squares	df	Mean Square	F	Sig
Regression	553.210	3	184.403	4.651	.004
Residual	6621.207	167	39.648		
Total	7174.418	170			

	Unstand. Coefficients		Stand. Coefficient	t	Sig
	B	Std Err.	Beta		
Constant	41.365	7.410		5.582	.000
Age at Intake	- 1.711	.472	- .274	- 3.621	.000
Single Parent	- 1.088	1.030	- .080	- 1.057	.292
Urban Environ.	1.543	1.233	.094	1.251	.213

Model 7 (Table 23) enters variables that represent offense history, including Status Offenses, Felony Offenses, and Adjudications. Its Durbin-Watson value is 1.271 (*l* 1.693, *u* 1.744, *p*= .05). It explains about 3% of the variance (Adjusted R Square = .027), but does not achieve

significance (*p*= .056). Only Felony Offenses adds explanation within this model (*beta* = -.185, *t*= -2.442, *p*= .016), while Adjudications (*beta* = -.046, *t*= -.605, *p*=.546), and Status Offenses (*beta* = -.109, *t*=-1.429, *p*=.155) have no appreciable explanatory value.

Table 23 Offense History Regression Model for Length of Stay

R	R Square	Adjusted R Square	Std Error	Durbin-Watson
.210	.044	.027	6.4081	1.271

	Sum of Squares	df	Mean Square	F	Sig
Regression	316.676	3	105.559	2.571	.056
Residual	6857.741	167	41.064		
Total	7174.418	170			

	Unstand. Coefficients		Stand. Coefficient	t	Sig
	B	Std Err.	Beta		
Constant	17.671	1.051		16.820	.000
Status Offenses	- 1.006	.704	- .109	- 1.429	.155
Felony Offenses	- .491	.201	- .185	- 2.442	.016
Adjudications	- .134	.221	- .046	- .605	. 546

Model 8 (Table 24) examines the contribution of clinical characteristics to an understanding of Length of Stay. It includes Family Tensions, Personal Investment, Ventilation, and Family Functioning. The Durbin-Watson statistic has a value of 1.201 (*l* 1.679, *u* 1.788, *p* .05).

The model explains about 1% of the variance (Adjusted R Square = -.011), and is not significant (p= .712). None of the individual independent variables emerge as valuable predictors of Length of Stay (Family Functioning *beta* = -.052, t= -.665, p= .507; Ventilation *beta* = .001, t= .014, p= .989; Personal Investment *beta* = .076, t= .959, p= .339; and Family Tensions *beta* = -.079, t= -.983, p= .327).

Table 24 Clinical Characteristics Regression Model for Length of Stay

R	R Square	Adjusted R Square	Std Error	Durbin-Watson
.112	.013	-.011	6.5324	1.202

	Sum of Squares	df	Mean Square	F	Sig
Regression	90.786	4	22.697	.532	.712
Residual	7083.632	166	46.672		
Total	7174.418	170			

	Unstand. Coefficients		Stand. Coefficient	t	Sig
	B	Std Err.	Beta		
Constant	16.294	4.121		3.953	.000
Family Tensions	-.244	.248	-.079	-.983	.327
Personal Investm.	.591	.616	.076	.959	.339
Ventilation	.0093	.666	.001	.014	.989
Family Functioning	-.529	.797	-.052	-.665	.507

Model 9 (Table 25) utilizes family characteristics, including Single Parent Family Type, Family Tensions, and Family Functioning, as predictors of Length of Stay. The

Durbin-Watson value is 1.173 (*l* 1.693, *u* 1.774, *p* .05). Family Characteristics explain 1% of the variance in Length of Stay (Adjusted R Square = -.010, and the model is not significant (*p*= .711). In the structure of this model, neither independent variable is a good predictor of Length of Stay (Family Functioning *beta* = -.044, *t*= -.562, *p*= .575; Family Tensions *beta* = -.071, *t*= -.917, *p*= .360; and Single Parent Family *beta* = -.034, *t*= -.434, *p*= .665).

Table 25 Family Characteristics Regression Model for Length of Stay

R	R Square	Adjusted R Square	Std Error	Durbin-Watson
.090	.008	-.010	6.5276	1.173

	Sum of Squares	df	Mean Square	F	Sig
Regression	58.679	3	19.560	.459	.711
Residual	7115.738	167	42.609		
Total	7174.418	170			

	Unstand. Coefficients		Stand. Coefficient	t	Sig
	B	Std Err.	Beta		
Constant	18.200	2.859		6.365	.000
Single Parent	-.459	1.057	-.034	-.434	.665
Family Tensions	-.217	.237	-.071	-.917	.360
Family Functioning	-.441	.788	-.044	-.562	.575

Model 10 (Table 26) applies placement history as a predictor of Length of Stay. The model has a Durbin-Watson value of 1.183 (*l* 1.706, *u* 1.760, *p* .05), explains less than

one percent of the variance (Adjusted R Square = .006), and is insignificant (*p*= .221). Prior Placements (*beta* = -.109, *t*= -1.425, *p*= .156) and Intake from Home (*beta* = .080, *t*= 1.047, *p*= .297) are not good predictors as established in this model.

Table 26 Placement History Regression Model for Length of Stay

R	R Square	Adjusted R Square	Std Error	Durbin-Watson
.134	.018	.006	6.4764	1.183

	Sum of Squares	df	Mean Square	F	Sig
Regression	127.971	2	63.986	1.526	.221
Residual	7046.446	168	41.943		
Total	7174.418	170			

	Unstand. Coefficients		Stand. Coefficient	t	Sig
	B	Std Err.	Beta		
Constant	15.002	1.209		12.407	.000
Intake from Home	1.314	1.255	.080	1.047	.297
Prior Placements	- .270	.190	- .109	- 1.425	.156

Model 11 (Table 27) employs the ecological construction of variables described in the opening of this section. It uses Age at Intake, Family Functioning, Felony Offenses, and Prior Placements to explain Length of Stay. This model performs better than the other models tested against it, and lends support to Hypothesis 6. Only the demographic model

(Model 6) provides a worthwhile comparison, as the other four models performed so poorly. Results of the regression models for length of stay are summarized in Table 28. The Durbin-Watson statistic for Model 11 is 1.261 (*l* 1.679, *u* 1.788, *p* .05). It explains a little over 7% of the variance (Adjusted R Square = .074), and is significant (*p*= .002). Only Age at Intake achieves significance for its individual *beta* (-.230, *t*=-3.032, *p*= .003) within the model. Prior Placements (*beta* = -.113, *t*= -1.514, *p*= .132), Felony Offenses (*beta* = -.131, *t*= -1.715, *p*= .088), and Family Functioning (*beta* = -.050, *t*= -.660, *p*= .510) did not contribute as much explanation to this model.

Table 27 Ecological Regression Model for Length of Stay

R	R Square	Adjusted R Square	Std Error	Durbin-Watson
.309	.096	.074	6.2520	1.261

	Sum of Squares	df	Mean Square	F	Sig
Regression	685.952	4	171.488	4.387	.002
Residual	6688.465	166	39.087		
Total	7174.418	170			

	Unstand. Coefficients		Stand. Coefficient	t	Sig
	B	Std Err.	Beta		
Constant	40.902	7.669		5.334	.000
Age at Intake	- 1.436	.474	- .230	- 3.032	.003
Family Functioning	- .505	.764	- .050	- .660	.510
Felony Offenses	- .347	.202	- .131	- 1.715	.088
Prior Placements	- .281	.186	- .113	- 1.514	.132

Table 28 Summary of Regression Models for Length of Stay

Model	R	R Square	Adj. R Square	Significance
Demographic	.278	.077	.061	.004
Offense History	.210	.044	.027	.056
Clinical Characteristics	.112	.013	- .011	.712
Family Characteristics	.090	.008	- .010	.711
Placement History	.134	.018	.006	.221
Ecological	.309	.096	.074	.006

Schematic of Correlations

Research Question 3: Which sets of variables best explain out-of-home placements for African-American male delinquents?

This question was also addressed by the construction of a schematic presentation of the observed relationship among the variables studied (Figure 3). Although not intended to impart causality, this diagram is offered as a graphic representation of the overall linkages of the study variables accounting for their temporal and theoretical order. The diagram displays the linkages among the study variables based on their significant bivariate correlations, which are reported in Table 15 above. Total Out-of-Home Placements is the outcome variable. Path analysis was not attempted because the model was constructed post-hoc, which would be a violation of accepted rules for specification (Asher 1983). Here, interest is focused only on observed

relationships among the variables.

In this schematic, exogenous variables include Age at Intake, Single Parent Family type, Urban Environment, and Intake from Home. The first level of endogenous variables includes Felony Offenses, Adjudications, and Prior Placements as elements of offense and placement history. The clinical characteristics form the next level. They include Family Functioning, Family Tensions, Personal Investment, and Ventilation. Successful Program Completion, Length of Stay, and Successful Release are measured at the end of placement and are considered as program variables in the next level. Aftercare Placement Home is treated separately from Total Out-of-Home Placements for purposes of clarity, although placement in a family setting would mean that no additional out-of-home placement would be added to the prior and Boysville placements. No direct connection from Prior Placements to Total Out-of-Home Placements is shown. This linkage was omitted in the model because the computation of Total Out-of-Home Placements includes Prior Placements. The correlation is, therefore, meaningless due to lack of singularity.

The associations among pairs of variables depicted here have already been presented in the section on correlations above. An informative use of this diagram, therefore involves analysis of the linkages that involve more than two variables. This allows a preliminary identification of potential paths that may be investigated further.

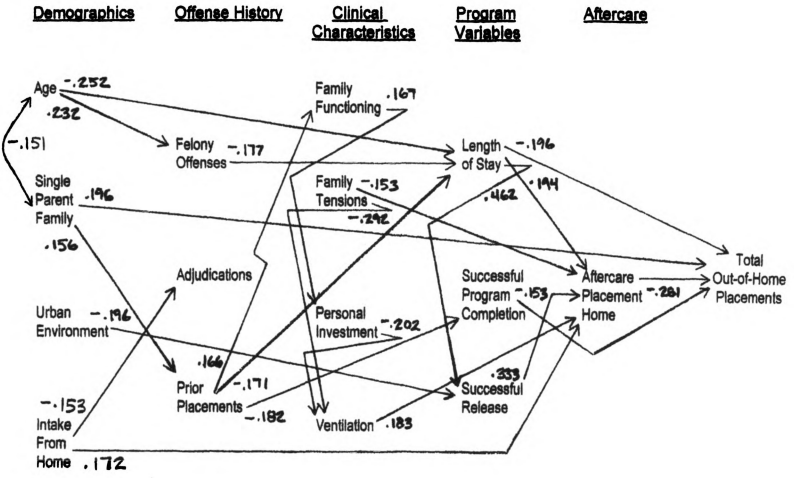

Figure 3 Schematic Showing Linkages of Correlations

In order to maintain a recursive presentation, connections among variables which are located in the same columns of the diagram required decisions about directionality of the linkages. While this is clearly incompatible with a purely correlational approach, the purpose of this diagram is to move toward a better informed causal understanding. With this goal in mind, the rationales for the linkages as shown are offered here.

Age at Intake is negatively correlated with Single Parent Family type as another exogenous variable. At the exogenous level, a two headed arrow is used to show that no direction of influence may be imparted.

The clinical characteristics also have effects among themselves. Order is assigned based on the assumptions that Family Functioning shapes the Personal Investment coping strategies available to the youth, and that the stressor Family Tensions affects the use of Ventilation coping strategies. Because Personal Investment coping strategies are linked directly with Family Functioning, Personal Investment is used as an input to Ventilation, rather than ordering the association in the opposite direction. These orderings of the associations are generally supported by theory in the form of the Resiliency Model of Family Stress, Adjustment, and Adaptation (McCubbin & McCubbin, 1991).

The program level variables also have mutual influence. At this level the decision was made to establish Length of

Stay as the input to Successful Release because there is an accumulation of time, and presumably effort during that time, that produces the award of an approved release from the program.

While extensive quantitative analysis of path models is possible, the interest of this study requires only that the linkage effects are interpreted. The interested reader will be able to compute the path coefficients for direct and indirect effects, relative values of compound paths, and the effect of residuals, from the correlation matrix shown in Table 15, using formulae suggested by authors such as Asher (1983). Compound linkages involving Total Out-of-Home Placements are considered below. All interpretations of linkages are based on the direction of connection as shown in the diagram.

One compound connection traces the linkage from Age at Intake through Felony Offenses, Length of Stay, Successful Release, and Aftercare Placement Home to Total Out-of-Home Placements. Age at Intake also has a negative direct negative effect on Length of Stay, which exerts a direct effect on Total Out-of-Home Placements. According to these connections, Age at Intake increases the likelihood of Felony Offenses, but these offenses positively influence Aftercare Placement Home through Length of Stay and Successful Release, which, in turn, decreases Total Out-of-Home Placements. This set of linkages shows that although being older at intake is associated with a higher number of

recorded criminal offenses, the duration of confinement is not extended by such a criminal history. The inverse effect of age may simply be due to legal limits on confinement for youth who have reached age 19. Longer stays in placement, however, are more likely to be rewarded with an approved release and an attendant return to a home setting, rather than an additional out-of-home placement. Longer stays also serve to limit the accumulation of further out-of-home placements directly. Simply put, the youth cannot be placed into a different setting when he is maintained in the current one.

A second important set of linkages goes from Single Parent Family type through Prior Placements, Family Functioning, Personal Investment, Ventilation, and Aftercare Placement Home, to Total Out-of-Home Placements. This connection shows that coming from a single parent family increases the likelihood of out-of-home placement for sample youth. Entry into placement increases levels of family functioning in the areas of cohesion and control, as well as the adolescent's application of personal investment coping strategies. Although personal investment and ventilation coping strategies are incompatible, ventilation increases the chances of placement at home and thereby decreases the addition of another out-of-home placement.

Another notable linkage connects Family Tensions through Ventilation and Aftercare Placement Home to Total Out-of-Home Placements. Family Tensions also exerts a

direct effect on Aftercare Placement Home. Although not conceptualized as an exogenous variable, Family Tensions represents a powerful stressor for the sample that has no significant identified inputs. This linkage highlights the importance of stress and coping factors in placement decisions, even though they are not directly linked to criminal or legal involvements.

Two other sets of connections have fewer linkages, but are also relevant to understanding out-of-home placement. Coming from an urban environment directly decreases the likelihood of earning a successful release from the program, the granting of which would increase the potential for a home placement, instead of an out-of-home placement after release. Coming into placement from a home setting, however, directly increases the potential for a home placement at the end of the program, thereby preventing an additional out-of-home placement. These two connections illuminate the impact of the youth's home environment on placement decisions, and the value of maintaining them in home settings as a means of limiting the cycle of confinement.

Chapter 6

Discussion of Results

This chapter highlights some of the significant findings of the study. The findings are integrated with each other and with prior knowledge using a topical approach, explanations and implications of the findings are presented, and additional suggestions for further research are offered. A final section considers the limitations and delimitations of the study.

Measurement Issues

This study supports the value of assessing the psychometrics of published measures for application to under-researched populations. Structured investigation of social phenomena involves fundamental decision making about the relative value of normative and exploratory research (Keppel & Zedeck, 1989). Research that is focused on comparing samples with each other or to established standards must utilize the same measures with each of those samples. The utility of exploratory studies, however, may benefit from the application of particular measures that are specifically intended to elicit in-depth information about the sample under investigation (Jayaratne & Levy, 1979).

In this study, the instruments used by the agency were carefully selected as measures of the variables that were

addressed in the treatment program (Grasso and Epstein, 1987), and alternative minority norms were constructed for scoring the scales (Grasso, 1985). The purpose of these instruments was to assess therapeutic needs within a specified program, and to determine program outcomes. Their use in normative research and program evaluation is, therefore, appropriate.

As reflected in the results of the confirmatory factor analysis, however, this study found that a homogeneous population of African-American male delinquents lives with different constructions of stress, coping, and family functioning than do other samples. Accurate measurement of these dimensions of life may require different constructs or scales than those used for the types of samples that are usually involved in instrument construction. Conclusions about the behavior and systemic interaction of a sample of human beings may be misinformed if the scales used to draw those conclusions are based on the patterns of a significantly different population. The inclusion of events in a stressor inventory, for example, such as beginning school or starting a new business, may not accurately measure contact with stressors if the sample in question lacks the economic resources to engage in such endeavors. In such a case, scales that cluster events related to poverty or limited opportunity may be more reflective of the actual experience of the participants. This study highlights the crucial value of construct validity in such

investigations.

Psychometric assessment of existing scales provides the researcher with an opportunity to improve the construct validity of the measures, especially for the intended application. Such a step is worthwhile in building a base of empirical findings. This assertion finds concurrence in the work of other researchers (Singleton, Straits, Straits, & McAllister 1988).

Intake Characteristics of the Sample

Demographic characteristics of the sample provided support for prior knowledge about delinquent samples. The average age of sample youth was close to that of national male delinquent samples generated by prior research (Sickmund 1998). The predominance of single parent families in the research sample fit earlier characterizations of delinquent samples (Whittaker, Tripodi, & Grasso, 1993). The finding that most of the sample youth came from urban environments is similarly without surprise (McCubbin, Kapp, & Thompson, 1993).

Offense, adjudication, and placement history data, however, raise important points for consideration. It is striking that 80% of these youth came into the most recent placement directly from their family homes. These youth may have been under some form of supervision, but were clearly not placed out of the home immediately prior to intake,

despite a history of multiple serious offenses and prior placements. Their average of almost three felony offenses, with less than one status offense, would indicate that they should be considered to be high-risk candidates for recidivism. The fact that they averaged almost three adjudications and over two prior placements would also seem to indicate that previous attempts at control had not been effective. These findings raise questions about the criteria and process involved in placement decisions, and highlight an experience of repetitive placements that may only serve to perpetuate itself. Ashford and LeCroy (1993) offered a decision-making tree for placement decisions. Their protocol and similar guides would be useful targets for empirical testing as predictors of successful placement. If placement decisions are improved, it may be possible to break the cycle of multiple placements for African-American male delinquents.

Results regarding the experience of stressors and use of coping strategies provide information not previously available from other sources. These results indicate that sample youth are about evenly split in their preferences for prosocial coping behaviors as found in the personal investment factor, and the acting-out behaviors contained in the ventilation factor. Such results are, perhaps, counterintuitive when one thinks about the stereotypic juvenile delinquent, so additional investigation is warranted. It is possible that preferences for either

coping strategy are the result of factors such as temperament, behavioral modeling, or exposure to particular life experiences. These variables are either unmeasured in the current study, or are only partially represented by the scales that were derived from the items of the published instruments. These findings cannot be readily compared to those for a similar sample, in part because of the decision modify the published scales, but primarily due to the dearth of quantitative research on stress and coping of African-American delinquents.

Family functioning of these youth was midrange on average, with little dispersion. As noted in Chapter 3, the vast body of research on delinquency indicates a significant incidence of low cohesion and low control in the families of delinquent youth (Sheilds & Clarke, 1995; Towberman, 1994; Vazroni & Flannery, 1997). Although there is no definitive reason to expect that characteristics common to families of delinquents are also common to families of youth placed out-of-the-home, these results should be approached with caution.

This study calls attention to the need to apply improved measures of family functioning variables to research with minority samples. The family functioning scale was constructed in the interest of improved psychometric properties. As described in Chapter 5, this was accomplished for this sample, but further improvement in validity may be necessary. This may occur through the

application of scales that consist of different items. Measurement of family cohesion and parental control with increased sensitivity would probably yield more interpretable results.

In a study not bound by existing data, the selection of measures could consider instruments such as the McMaster Family Assessment Device (Epstein, Baldwin, & Bishop, 1983), or the Family Environment Scale (Moos & Moos, 1981). Both of these instruments contain specific subscales that measure cohesion and behavioral control. A worthwhile endeavor may be to factor-analyze the cohesion and control items from both of these instruments in order to specify a new combination for further testing with African-American samples. Regardless, instrument selection may be eased by consulting psychometric assessments of existing instruments, such as that conducted by Tutty (1995), who evaluated the relative strengths and weaknesses of several common family measures.

Delinquent Behavior and Out-of-Home Placement

Intuition implies that there is a linkage between delinquent behavior and subsequent out-of-home placements. The casual observer may even equate the two. Although such an assumption may appear logical on the surface, the results of this study emphasize a distinction between offenses and placements. Correlations of status or felony offenses with

out-of-home placements were not found. In fact, an inverse correlation of felony offenses with length of stay was found.

These results suggest that a range of decision making intervenes between delinquent activity and subsequent placement. The lack of observed correlations between adjudication and either form of offense, as well as the placement variables, would also indicate that other factors influence the youth's formal entry into the juvenile justice system. Prior research has shown that about 67% of juvenile arrests find their way into juvenile court, and that only another 7% are referred directly to adult criminal court, while 25% of the cases end with police contact (Snyder, 1998). While these figures outline the proportion of disposition of cases, they do not elucidate the operative factors. Research targeted specifically at decision making within the juvenile justice system would help clarify these mechanisms.

Rather than concluding that delinquent behavior plays little to no role in impacting out-of-home placements, however, it is necessary to remember that the placement variables were constructed as accumulations, and that an additional range of mid-level misdemeanor offenses remains unmeasured in this study. Alternative measures of these variables may enhance understanding of the specific connections between offending behavior and confinement.

The observed inverse association of felony offenses

with longer stays in placement raises additional empirical questions. One would expect that multiple felony offenders would be regarded by decision makers as more serious criminals than those with fewer offenses, and, thereby, incarcerated for relatively longer periods. The fact that this was not found in this study points to other alternatives. Repeat felony offenders may be more sophisticated in manipulation, or possess greater motivation to gain release. It is also plausible that confinement could limit the opportunity to commit reported crimes, which could show itself as an inverse relationship between record of felonies and length of stay over more than one placement. Another possibility is that the African-American youth comprising this sample were subjected to more restrictive treatment than their European-American counterparts, in the form of detention and longer confinements, for less serious offenses as noted in other research (Poe-Yamagata, 1997; Sickmund, Snyder & Poe-Yamagata, 1995).

Expected Associations with Out-of-Home Placement

None of the variables that were expected to be associated with accumulation of out-of-home placements performed as expected. They include Age at Intake, Status Offenses, Felony Offenses, Adjudications, Family Tensions, and Ventilation.

These variables were selected for inclusion in the

correlational hypothesis on the bases of prior research showing correlates of delinquency in general delinquent samples, and consistency with the clinical expectations of family oriented practitioners (Kelley, Loeber, Keenan, & DeLamatre, 1996; Krohn, Stern, Thornberry, & Jang, 1992; Nelson, 1990; Rankin & Wells, 1990, Sheilds & Clarke, 1995; Towberman, 1994). In addition, the Strain Theory and the Social Control Theory of delinquency contributed key variables to this analysis. Investigations of Strain Theory have shown that blockage from favored resources or interference with attempts to avoid unpleasant circumstances contribute to the formation of delinquent behavior (Elliot & Voss, 1974; Greenberg, 1977; Agnew, 1985). Tests of Social Control Theory have also substantiated its focus on effective structure and accountability in the context of emotional connections as mediators of delinquency (Bahr, 1979; Wells & Rankin, 1988). These theories contributed an emphasis on family, community, stress, and coping variables. The emphasis of Sub-Cultural Deviance Theory on negative peer associations (Briar & Piliavin, 1965; Short & Strodbeck, 1963) did not have available measures in these data. Similarly, there was no way to include the emphasis of Rational Choice Theory on economic forms of decision-making by the youth (Cornish & Clarke, 1986). Together, the included variables were intended to represent the social system characteristics of youth who were most likely to engage in delinquent acts, and who would be most in need of

intervention. By focusing this analysis on placement, rather than delinquency, however, it has become apparent that established correlates and theories of delinquency may have limited utility in explaining out-of-home placement.

When focusing attention on the total accumulation of out-of-home placements, it is possible to consider the impact of program variables. It should be noted that completion of treatment goals is not correlated with the award of an approved release type. Of these two variables, only successful program completion is negatively associated with out-of-home placements. Therefore, practitioners may take heart in the fact that treatment goals may be more influential in limiting further out-of-home placements than are administrative decisions about categorization of release types. The type of release granted does, however, show a meaningful association with a return to a home environment upon termination of the program placement. No studies of similar variables are available with which to compare these findings. Thus, this may open up a new avenue of inquiry and practice regarding planful release/termination from the program and placement options.

Additional Associations with Out-of-Home Placement

The significant relationship of single parent family type with out-of-home placements was not specified in a

research hypothesis, but was uncovered through correlational analysis. This finding is consistent with early research on delinquent families and more recent studies (Minuchin, Montalvo, Guerney, Rosman, & Schumer, 1967; McCubbin, Kapp, & Thompson 1993). Benson and Roehlkepartain (1993) also found that being part of a single parent family was associated with increased risks for out-of-home placement under certain unidentified conditions. Identifying these conditions is another challenge for future research.

Single parent family type may also exert indirect influence on the total accumulation of out-of-home placements as shown in Figure 3. It is represented as part of a link that connects prior placements, family functioning, and coping to aftercare placement at home. Other available research has not specifically validated this indirect influence, so replication of this study would be beneficial to build further understanding about such connections. On the basis of this study and prior research, however, it appears that being part of a single parent family is associated with being placed out of the home for African-American male delinquents.

Contrary to expectations, family functioning was not negatively correlated with accumulation of placements. Family functioning was, instead, positively related to prior placements. In addition to being a descriptor of families of delinquents, low family cohesion and low parental control have also been found to be correlates of delinquency. The

previous discussion about descriptors also applies to correlates in the sense that a relationship to delinquent behavior should not be equated with a relationship to placement.

A possible temporal relationship of prior placements and family functioning was depicted in Figure 3. The diagram shows the direction of influence flowing from prior placements to family functioning. Logic for this direction includes a recognition of the accumulation of placements over time as described in Chapter 5. If one accepts the direction shown, there is an attendant possibility that temporary removal of the youth from the family home may help restore or induce some structural order to family functioning. This possibility should not be construed as support for the necessity of long-term restrictive placements, however, as short-term respite arrangements or milder forms of external control such as diversion programs may be just as effective in this regard. Prior research that compares diversion and alternative control measures to traditional placement provides support for these approaches as effective interventions for reduction of delinquent behavior (Davidson, Redner, Blakely, Mitchell, & Emshoff, 1987; Northey, Primer, & Christensen, 1997).

Residence in an urban environment is not directly associated with out-of-home placement in the present study, but it may contribute to a chain of administrative decision making which affects release from placement, and return to a

family home, thereby continuing the cycle of out-of-home placements. These linkages are depicted in Figure 3. It is likely that staff who make release decisions are less inclined to send a youth back to his home community if they believe that the community presents undue risks for recidivism. Indeed, the author has worked in settings where staff members made explicit statements about the futility of working with a young man for several months and then returning him to the same troubled neighborhood. Roscoe and Morton (1994) found that the community in which the juvenile lives has a stronger effect on the likelihood of involvement in delinquency than do racial characteristics. It appears, however, that this conclusion was drawn without full consideration of the role of race in limiting housing decisions and other social resources that impact the location of residence. It should also be noted that their research focuses on delinquent behavior (beyond felony offenses), rather than out-of-home placement. Taken together, however, these findings suggest that being an African-American may influence the location of residence, and that coming from an urban environment may contribute to delinquent behavior and the extension of out-of-home placements.

Other Notable Associations

The direct relationship of ventilation to aftercare placement home may be puzzling at first blush. One might

expect that swearing and threatening people would be counterproductive in an effort to have residential staff members approve a return to home. A plausible explanation, however, takes into account the fact that the ventilation data refer to the time of program intake. Perhaps the youth who demonstrates problems early in the program makes more observable progress in treatment than his more reserved peer, and thereby earns a release to his home environment. The results of this study, thus, provide information about the coping preferences of sample youth, and imply a connection between exposure of behavioral problems and eventual return home. The lack of specific results about coping factors in connection to out-of-home placement, however, should be regarded as inconclusive until work is conducted with other samples.

Explanation of Multiple Placements

A regression approach was used to explain the total accumulation of out-of-home placements. Models containing blocks of variables that represent demographics, offense history, clinical characteristics, and family characteristics, were compared with an ecological model that contained selected variables from each other block, or subsystem of the youth's social ecology. These models were constructed a priori, on the basis of research and practice knowledge, and were not influenced by the correlations which

were obtained later. The emergence of the ecological model as the only one with significance, as well as the highest explanatory value, indicates its relative value over the other models. Due to the standard regression method used in this study, it is inappropriate to compare the relative explanatory value of individual variables outside the context of their own block. These characteristics of the individual variables represent the unique contribution that they make within that set of variables and should not be confused with the beta values that would result from stepwise regression methods. With the capacity of this analysis to isolate unique contributions to variance, it is possible to uncover the value of variables that do not show significant or large correlations with the dependent variable (Tabachnick & Fidell, 1996). This is demonstrated in the ecological model, where single parent family type and family functioning share about equal value as the best individual predictors. The significance of the model that includes family characteristics is also notable. These results call additional attention to the potential value of developing the measure of family functioning as a predictor of out-of-home placement.

The performance of the ecological model in explaining multiple out-of-home placements may be further improved with the addition of decision-making variables. These could include the factors that are considered by delinquency services workers and agency intake workers when they decide

to place a youth, such as assessment of community risk, open beds in residential placement, and assessment of the youth's family or neighborhood. Such a model would probably require a larger sample size, in order to gain statistical power.

Explanation of Duration of Placement

A second set of regression models was used to explain duration of the most recent out-of-home placement. These models included variables in blocks to represent demographics, offense history, clinical characteristics, family characteristics, and placement history. They were compared with an ecological model that employed variables from each of these blocks to represent multiple levels of the youth's social ecology.

The ecological model outperforms the demographic one which is the only other significant model. The emergence of the demographic model as a good predictor is noteworthy in that these characteristics are beyond the control either of the youth or the staff. Age at intake provides the greatest unique contribution in the model, and it is the least likely candidate for manipulation. The performance of the ecological model in explaining duration of placements, however, provides support for ecological theory. The greatest individual predictor in the ecological model is also age at intake. The similar performance of the age variable in both models would indicate that it might be

usefully considered in an initiative to reduce disproportionate minority confinement that focuses on agency level placement decisions.

Delimitations and Limitations of the Study

This study focused exclusively on a homogeneous sample of African-American male delinquents. An integral part of the study was the decision to forego interesting comparisons by race, in order to obtain more in-depth information about a group of youth that existing knowledge showed to be confined at comparatively higher rates than another group. For related reasons, a correlational design was chosen, and an existing dataset was employed. Each of these decisions established boundaries around the investigation. Much like an old wooden fence, this boundary serves to both protect the integrity of the findings about the sample, and to exclude opportunities for comparison.

Clearly, the limits of a naturalistic correlational design preclude generalization of these findings beyond the sample studied. Evidence also suggests that there may be some significant differences between the sample and the overall agency population in felony offense and adjudication history. Nonetheless, it is instructive to note that most of the youth placed at Boysville during the period of these intakes came through an intake and assessment committee comprised of staff members from several similar agencies.

To qualify for inclusion in this pool, all youth had to be felony offenders, with similar high scores on a community risk assessment tool. Assignment to a particular agency was then made primarily on the basis of program openings, so it may be that the sample youth have notable similarities to other agency populations. Replication of this study, using multiple measures and comparison groups could address the research questions with greater rigor, thereby increasing the possibilities for generalization.

In addition to demonstrating the value of an ecological approach to understanding disproportionate minority confinement, this study has outlined additional work for the field. Valuable next steps in research should include better specification of clinical measures for African-American families, use of qualitative methods to obtain deeper understanding of the meanings of personal and family processes, application of an ecological approach with comparison groups, and extension of the ecological framework used here to include juvenile justice system factors that may be crucial elements of the problem. Specifically, information about formal and informal decision-making that impacts placement decisions would be very valuable. Interviews and ethnographic studies of decision making by staff who work in restrictive placements may also be useful in this regard.

Implications for Further Research Using Systems Dynamics

In addition to the specific suggestions for further substantive investigation offered in the sections above, an alternative analytic method should be considered. Clarity regarding relationships among ecological variables could be greatly enhanced by applying a non-recursive framework. Such an approach would allow a means of representing feedback in the natural systems of the participants.

Instead of having to specify a unidirectional influence from correlational data, it is, perhaps, more meaningful to indicate reciprocal influence among the variables that represent levels of the youth's social ecology. A practical means of specifying and simulating the operation of such a non-recursive system is found in a computer-based orientation known as Systems Dynamics (Forrester, 1969). Appendix B describes this approach in more detail, but it is important to note that Systems Dynamics does a particularly good job of specifying the complex mutual goal-seeking action of subsystems over time (Levine, Van Sell, & Rubin, 1992).

Systems Dynamics has identified several common modes of operation for systems, which are referred to as basic flow processes (Cover, 1996) and are joined together as archetypes (Brierova, 1996). These archetypes describe the structure of the system and, based on the structure they specify, determine the behavioral output of the model.

Because archetypes can streamline the construction of a running systems dynamics model, cautions have been raised about the risks of model misspecification that are inherent in misapplying an archetype for the sake of simplicity (Brierova, 1996).

Systems dynamicists often use diagrams to depict the movement of information or energy through a system (Cover, 1996). Initial pictures of the system use loop diagrams and more advanced versions use flow diagrams that are run on a computer (Levine, Van Sell, & Rubin, 1992). Models are best conceptualized on the basis of existing theory and practical knowledge of the system, and the resulting models may be quantified with empirical data or estimates of the values of the parameters (Levine, 1992).

In order to advance understanding of disproportionate minority confinement, conceptual work on the feedback involved in the social ecology of African-American youth has been completed and is offered here. Although the following description requires further specification in order to be used in an operating dynamic systems model, it serves as a foundation for such an effort.

The problem of disproportionate minority confinement is approached, for purposes of this example, from the perspective of the Social Control Theory of delinquency. As noted in the foregoing discussion, this theory is compatible with the analyses conducted in this study. It is also widely supported in the delinquency literature (Agnew,

1992). Social Control Theory emphasizes the importance of Family Cohesion and Parental Control, which were combined for analysis in this study as Family Functioning. The theory holds that combinations of low Family Cohesion and low Parental Control lead to delinquency (Agnew, 1985). For the current effort, low levels of these characteristics will be termed Family Fragility. Family Fragility may be considered to be the inverse of Family Functioning as defined in the quantitative analyses of this study.

While exercising the cautions about selection of an archetype referred to above, it was determined that the "fixes that fail" archetype reasonably captures the observed dynamics of disproportionate minority confinement (Hannon & Mattias, 1994). As a result, this structure was used in a loop diagram, to depict the cycle of out-of-home placement for African-American males in the juvenile justice system. It is shown in Figure 4.

The "fixes that fail" archetype recognizes that once a problem comes to light, a rapid solution to that problem may be implemented (High Performance Systems, 1989). In this context, the solution brings about the immediate desired impact on the problem, which reduces its frequency or severity. From a systemic perspective, this relationship of action to problem is conceptualized as a balancing loop or negative feedback (Levine, Van Sell, Rubin, 1992). Over time, however, an unintended consequence of the solution may be encountered that actually exacerbates the original

problem state (High Performance Systems, 1989). Systems analysts think of such an operation as a reinforcing loop or positive feedback (Levine, Van Sell, Rubin, 1992).

Applying this archetype to the problem of disproportionate minority confinement, it is possible to locate theoretical and practical systems variables within these loops. As may be seen in Figure 4, Delinquency is defined as the problem; Placement is seen as the fix; and Family Fragility is the unintended consequence. Moving along the arrow that connects Delinquency to Placement, one may identify the beginning of the balancing loop or negative feedback that is intended to reduce the delinquent behavior of adolescents. The immediate impact of containment is a reduction in opportunities for delinquent behaviors or a re-labeling of delinquent behaviors as problems for treatment. Regardless, Delinquency is reduced by Placement, as indicated by the arrow from Placement to Delinquency. Such an attempt at solving the problem, however, may feed the need for continued or repeated placement as the use of that solution becomes compelling and necessary to contain the delinquency.

The other loop in the diagram connects Placement with Family Fragility and then Delinquency. It represents the reinforcing or amplifying action of Placement on Delinquency through the unintended consequence of Family Fragility. The loop also incorporates a delay between Placement and Family Fragility to indicate that the impact takes time. It may

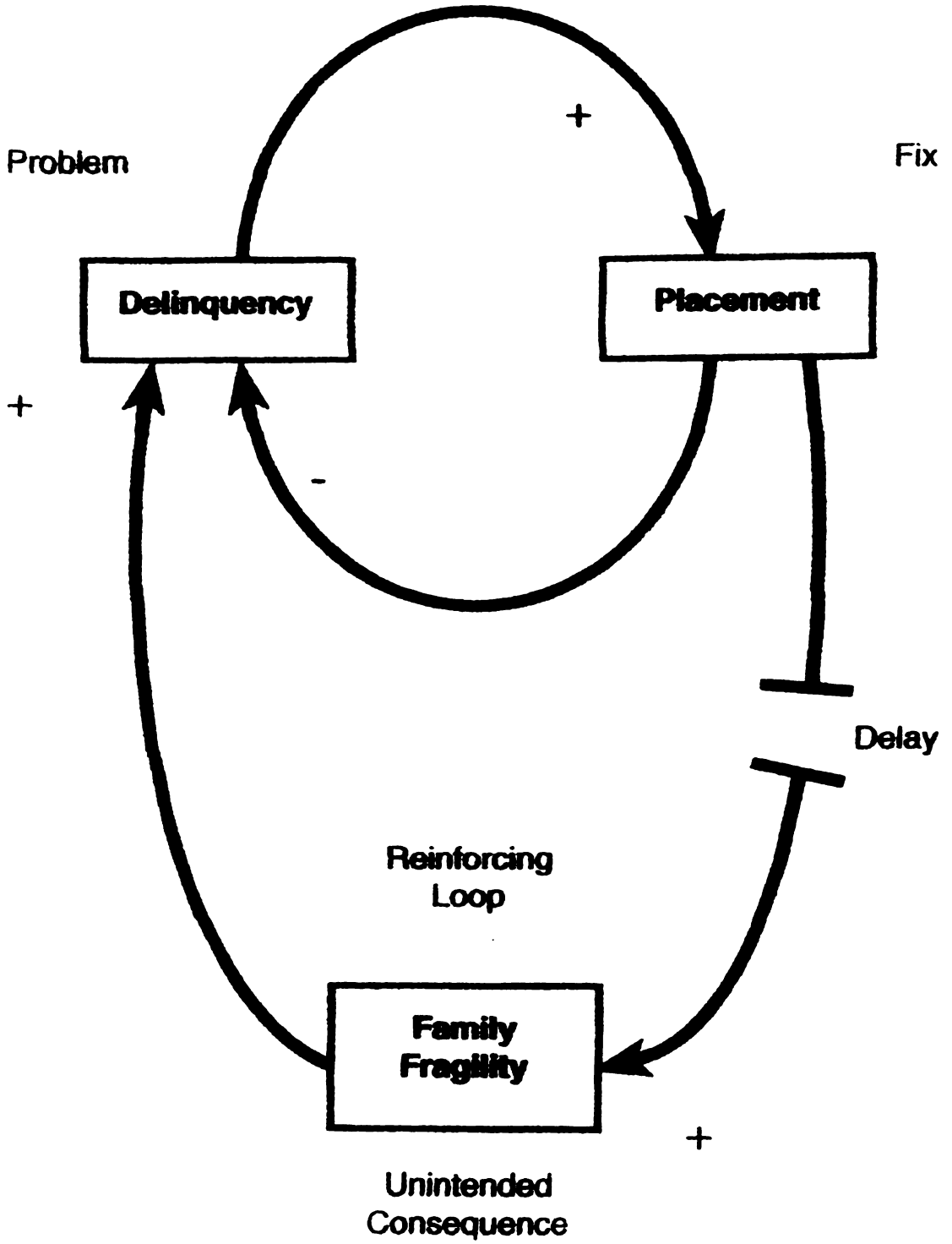

Figure 4 Loop Diagram Showing Unintended Consequence of Placement

happen over the duration of a single stay in placement or be multiplied over the course of repeated cycles as indicated by the return arrow that connects Delinquency to Placement.

By embellishing this simple diagram, it is possible to add additional feedback structure. For example, one might identify additional consequences of placement, or other inputs to delinquency, such as undesirable peer relationships that echo throughout the system. This simple diagram may become very complex with such additions, so it is important for the analyst to start simply, add only required structure, and build a foundation for the model that is understandable but realistic (Levine, Van Sell, & Rubin, 1992).

Another means of representing this complexity is the flow diagram, a simple example of which is found in Figure 5. The flow diagram represents variables that accumulate as stocks, and places them in boxes (Cover, 1996). Actions that add to or drain the accumulations are depicted as attendant flows (the objects with the spigots that are attached to the stocks). These flows are one way of depicting the time it takes for stock variables to accumulate or dissipate. Circles are used to represent several other necessary aspects of the system, including algebraic and dimensional convertors. They may also be used to represent other accumulating variables that are not

currently of primary interest. Arrows are used to connect the stocks to flows to indicate the impact of variables on each other.

Figure 5 is a very simple flow diagram that is analogous to the loop diagram in Figure 4. It focuses on the delinquency sector of what could become a full model of disproportionate minority confinement. Delinquency is represented as a stock, with Increase and Decrease in Delinquency shown as flows. Both Placement and Family Fragility are shown as convertors for purposes of this simplistic presentation, but would be included as stocks with their own flows in a fully developed model.

In this diagram, the balancing loop is shown in the connection from Delinquency to Placement, and from Placement to Decrease in Delinquency. Because Decrease is the outflow of Delinquency, it is shown as the channel for reducing the frequency or severity of the problem. The closed feedback loop indicates that this process is repetitive. This is the same process that is represented in the balancing loop of Figure 4.

In addition, Delinquency is thought to be driving its own production, as indicated by the feedback arrow to the inflow Increase. As delinquent thinking and acting accumulates, it is likely to continue to grow unless some intervention occurs. Another input to Increase is provided by Family Fragility. Family Fragility is, in turn,

heightened over time by Placement. This is depicted by the arrow with the hash marks to indicate a delay. The arrows that connect Placement to Family Fragility to Increase, and the feedback of Delinquency to its own Increase represent the reinforcing loop also shown in Figure 4.

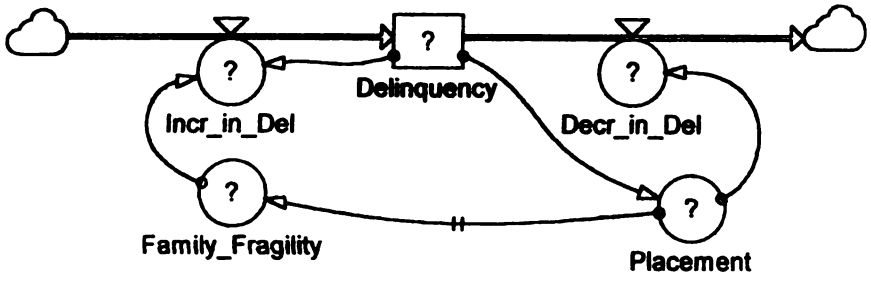

Figure 5 Simple Flow Diagram of Delinquency, Placement, and Family Fragility

Although these two figures are alternate methods of representing the same structure, the flow diagram may be used as a graphic interface for computer simulation of the system. The question marks inside the symbols of Figure 5 indicate that this model has not yet been quantified with data or estimates. In fact, it is far from ready for such quantification in its current state, as the structure must be verified and more detail must be introduced.

This brief description of the possibilities for application of dynamic systems modeling is meant to illuminate the value of conceptualizing and investigating

disproportionate minority confinement as a problem that involves feedback in the social ecology of the African-American adolescent male.

Implications for Juvenile Justice Policy

The present bifurcation in application of resources for incarceration and diversion has polarized the juvenile justice community as described in Chapter 1. While control of criminal behavior is necessary to protect public safety, it is clear that the present form of confinement, which has been built on two-hundred years of practice, is not sufficient for either habilitating offenders or protecting society in the long term. The cycle of repeated removal from community and return home for participants in this study and nationally, indicates that a more integrative approach might be more effective.

It would be possible to integrate control with change cooperatively rather than competitively through expansion of intensive community supervision programs that also provide developmental experiences for young men. In conjunction with electronic or human supervision, educational and experiential programs that develop interpersonal and economic connections are likely to improve the chances that a young man will remain productive in his community.

The finding regarding the association of single parent families with an accumulation of out-of-home placements

indicates that there is still a need for improved family policy initiatives. Resources for families should not just be economic, but interpersonal as well, because it is at the relational level that factors such as cohesion and internalized control are fostered. Specifically, increased opportunities to exchange social support in informal or formal networks should be exploited.

This study also calls attention to the decision-making processes used to determine who goes into placement and how long they stay. The overall discrepancy between proportions of African-American and European-American youth in placement is a compelling reason to examine the bases for decisions to confine youth. Such a reason is compounded, however, when one realizes that coming into a placement from home rather than another placement is more likely to lead to a return home than is the successful completion of a year long treatment program. In the same regard, age plays a greater role in determining length of stay than does residence in an urban environment, or personal experience of stress and use of coping strategies. Indeed, a record of felony offenses matters less in accumulating out-of-home placements than does membership in a single parent family. Guidelines for placement decisions that equalize the risks and opportunities for African-American and European-American youth are greatly needed. At a minimum, these guidelines should include level of offense, clinical assessment of needs, and the risk factors associated with recidivism.

Implications for Juvenile Justice Practice Intervention

This study raises the value of prevention programs aimed at youth well below the age of 15, at which point the likelihood of placement reaches its peak. Older youth also accumulate a record of multiple offenses, even when they have been involved in more than one out-of-home placement. For these reasons, effective intervention programs might be developed to meet the needs of younger children, thereby providing alternatives to the experiences that produce delinquent behavior.

Findings that establish an inverse association between higher numbers of prior placements and longer lengths of stay call attention to the possibility that youth learn behaviors in placements that help them get out of the next one sooner. While this is not troubling by itself, it also appears that these same youth do not necessarily complete treatment goals, or earn favorable releases. Under these circumstances, it may be important to develop counterbalances to a practice effect by utilizing innovative treatment approaches or varied treatment settings.

The higher explanatory values of the ecological models for number of placements and length of stay, indicate that intervention should be directed toward multiple levels of the youth's social ecology in order to decrease the incidence of minority placement. The current efforts of many agencies to include the family of the youth in

intervention efforts could be expanded. Such expansion might focus on aspects of the youth's community, especially if that is an urban environment. A systemic approach would allow integration of efforts to improve functioning at multiple levels of the youth's social ecology.

Conclusion

This study applied an ecological framework to enhance understanding of the problem of disproportionate minority confinement. Particular analyses described the characteristics of a unique group of young men, examined the relationship of several factors at multiple levels of their social systems, and tested explanations for different forms of confinement. Results of the analyses further suggest that a systemic approach holds promise for explaining observed phenomena, identifying new areas for investigation, and developing innovative analytic tools for directed study, so that we might further our understanding of and correct the occurrence of disproportionate minority confinement.

APPENDICES

APPENDIX A

Appendix A

Correlation Matrix Showing Correction for Attenuation

This appendix contains Table 29, which presents the corrrelations among study variables as corrected for attenuation. This procedure applies a formula wherein the observed correlation is divided by the product of the square roots of the reliabilities of the correlated variables.

It represents a method of showing what the correlations would be without the effect of measurement error. A comparison of Table 15 (observed correlations) with Table 29 (correlations corrected for attenuation) allows the reader to discern the effect of measurement error on the associations. The only correlations that display changes from Table 15 to Table 29 are those that involve variables drawn from the clinical measures. These variables were derived from scales obtained by questionnaires and have computed reliabilities. All other variables were reported directly as counts, and are, therefore, assumed to have perfect reliabilities.

Table 29 Correlation Matrix Showing Correction for Attenuation

	Age	Single Parent	Urban	Home Intake	Status Offenses	Felony Offenses	Adjudication	Prior Plcmnts	Family Tensions
Age	-								
Single Parent	-.151*	-							
Urban	.107	.081	-						
Home Intake	.053	-.043	.061	-					
Status Offenses	-.102	.099	-.072	.139	-				
Felony Offenses	.232**	.078	.002	.081	-.086	-			
Adjudication	-.018	-.055	.040	-.153*	-.092	.006	-		
Prior Plcmnts	-.059	.156*	-.025	.005	-.024	-.022	.046	-	
Family Tensions	.065	.024	.092	-.027	-.004	.048	.049	-.031	-

Table 29 (cont'd).

	Age	Single Parent	Urban	Home Intake	Status Offenses	Felony Offenses	Adjudication	Prior Plcmnts	Family Tensions
Personal Investment	.039	- .105	.025	.146	- .047	- .037	- .037	.030	.158
Ventilation	.094	- .003	.051	.055	- .035	- .058	.041	.013	- .382**
Family Functioning	- .050	- .114	- .003	- .037	- .033	- .121	- .009	.178*	.067
Length of Stay	- .252**	- .031	.058	.077	- .087	- .177*	- .024	- .171*	- .088
Successful Program	.030	.081	- .013	- .044	- .020	.063	- .044	- .182*	.012
Successful Release	- .073	- .054	- .196*	- .045	- .149	- .096	.053	- .036	- .113
Aftercare Home	.093	- .121	.141	.172*	- .124	- .062	- .055	- .014	- .181*
Number of Plcmnts	- .059	.156*	- .025	.005	- .024	- .022	.046	x	.094
Total Plcmnts	- .081	.196*	- .055	- .062	- .016	.002	.064	x	.129

Table 29 (cont'd).

	Personal Investment	Ventilation	Family Functioning	Length of Stay	Success Program	Success Release	Aftercare Home	Number Plcmnts	Total Plcmnts
Personal Investment	-								
Ventilation	-.263**	-							
Family Functioning	.217*	-.136	-						
Length of Stay	.070	.017	-.047	-					
Successful Program	-.150	.088	-.033	-.015	-				
Successful Release	-.059	.115	-.119	.462**	-.036	-			
Aftercare Home	.053	.202*	.091	.194*	-.020	.333**	-		
Number Plcmnts	.029	.013	.178*	-.171*	-.182*	-.036	-.014	-	
Total Plcmnts	.039	-.043	.149	-.196*	-.153*	-.106	-.281**	x	-

APPENDIX B

Appendix B

Systems Dynamics

Systems dynamics grew out of general systems theory and cybernetics. It was invented in the late 1950's by Jay Forrester at MIT (Forrester, 1969; Cover, 1996). He was among the first to develop a method of representing complex human systems in mathematical and computer-based terms. The original tenets of systems dynamics have survived a translation into more accessible applications that may be run on personal computers. Systems dynamics stands as a causal approach to utilizing time-series data. It is a means of representing networks of dynamic feedback structures that may be applied with an heuristic or empirical approach (Levine, Van Sell, & Rubin, 1992). These feedback structures are based on positive feedback loops which amplify behaviors, and negative feedback loops which reduce or restore levels of behaviors. Combinations of positive and negative feedback loops in the same system serve to produce variations in behavior over time.

Although it requires careful attention to model building, the systems dynamics approach allows considerable advantage over correlational techniques through its ability to handle mutual causality among variables. In this way, it is superior to path analysis, and provides an effective means of modeling non-recursive causal structures. There is a considerable body of knowledge regarding generic structures and patterns of system behavior to inform the

construction of models (Hannon & Mathias, 1994; Breierova, 1996).

Dynamic system models are represented by flow diagrams that depict the relationships among variables. These diagrams include Stocks (variables that accumulate or dissipate over time such as "inventory"), Flows (action variables that lead to the accumulation or dissipation of the stocks such as "production" or "shipments"), Auxiliaries (variables that are used to algebraically combine other components of the system such as "desired inventory"), Constants (the parts of the system that do not change over the course of the analysis such as "workforce"), and Arrows (the connections among variables that indicate the direction of influences on each other). Once a diagram is produced, the variables are quantified, either with empirical data or estimated values, and the system is "run" on the computer to determine its behavior. This output appears graphically, over a selected time period, and is compared to the known behavior of the system to assess the accuracy of the structure represented in the diagram. It is possible to test the behavior of the system by using extreme values for the parameters of the system. After the model's behavior adequately matches what is known about the observed system, then it is possible to proceed with simulations of various intervention approaches to uncover their impacts on the system at various points in time and inform decision making.

The systems dynamics approach is particularly

well-suited to understanding many cyclical problems due to its ability to deal with several interacting variables over time and allow simulation of changes in the system. Systems dynamics seeks the explicit or implicit goals of the system in an attempt to identify conflicting sets of structure and other difficulties associated with a particular problem. It also characteristically incorporates cybernetic feedback among variables in order to follow the flow of information and energy through the system and realistically reflect causal structures. Lags in perception and delays in decision-making can be represented as a means of incorporating the time involved in systemic processes and understanding the differential effects of the same type of action at alternative points in time. Non-linear, as well as linear relationships among variables are recognized, to more accurately reflect impacts on each other. In short, systems dynamics views the action of systems in process rather than event terms, and recalls the analogy of the movie in comparison to the snapshot.

Even in investigations where full time-series data are not available for all relevant variables, a heuristic model may be constructed and quantified with a combination of observed and estimated values, to capture the qualitative behavior of the system (Levine, 1992). The model may then be used to test various interventions in subsequent simulations.

APPENDIX C

MICHIGAN STATE
UNIVERSITY

April 28, 2000

TO: Rena HAROLD
254 Baker Hall

RE: **IRB# 00-226** CATEGORY:1-E

APPROVAL DATE: April 28, 2000

TITLE: MULTIPLE PLACMENTS AND THE SOCIAL ECOLOGY OF AFRICAN-AMERICAN MALE DELINQUENTS

The University Committee on Research Involving Human Subjects' (UCRIHS) review of this project is complete and I am pleased to advise that the rights and welfare of the human subjects appear to be adequately protected and methods to obtain informed consent are appropriate. Therefore, the **UCRIHS approved this project.**

RENEWALS: UCRIHS approval is valid for one calendar year, beginning with the approval date shown above. Projects continuing beyond one year must be renewed with the green renewal form. A maximum of four such expedited renewals possible. Investigators wishing to continue a project beyond that time need to submit it again for a complete review.
REVISIONS: UCRIHS must review any changes in procedures involving human subjects, prior to initiation of the change. If this is done at the time of renewal, please use the green renewal form. To revise an approved protocol at any other time during the year, send your written request to the UCRIHS Chair, requesting revised approval and referencing the project's IRB# and title. Include in your request a description of the change and any revised instruments, consent forms or advertisements that are applicable.
PROBLEMS/CHANGES: Should either of the following arise during the course of the work, notify UCRIHS promptly: 1) problems (unexpected side effects, complaints, etc.) involving human subjects or 2) changes in the research environment or new information indicating greater risk to the human subjects than existed when the protocol was previously reviewed and approved.

If we can be of further assistance, please contact us at 517 355-2180 or via email: UCRIHS@pilot.msu.edu. Please note that all UCRIHS forms are located on the web: http://www.msu.edu/unit/vprgs/UCRIHS/

Sincerely,

David E. Wright, Ph.D.

DEW: bd

cc: John Mooradian
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Plymouth, MI 48170

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