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# Competencies and problems of poor and non-poor American emerging adults

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COMPETENCIES AND PROBLEMS  
OF POOR AND NON-POOR AMERICAN EMERGING ADULTS

BY

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DISSERTATION

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in

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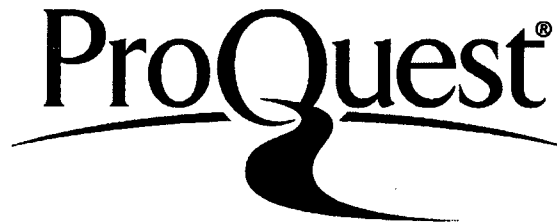
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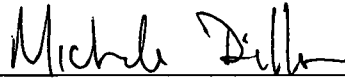
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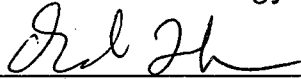


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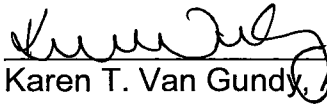
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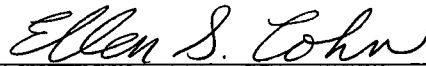
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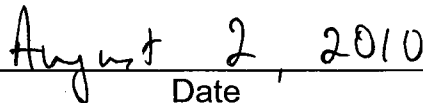
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ABSTRACT  
COMPETENCIES AND PROBLEMS  
OF POOR AND NON-POOR AMERICAN EMERGING ADULTS

by

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University of New Hampshire, September 2010

Developmental perspectives emphasize understanding the etiology of offending across the life course and in relation to other analogous behaviors (i.e. mental illness, substance use, academic failure, social problems). Two prominent DLC theories—Moffitt's (1993) Developmental Taxonomy and Sampson and Laub's (1993) Age Graded Theory (AGT) of Informal Social Control—offer differing perspectives on the etiology of offending. Moffitt (1993) contends that four types of offenders can be identified in the general population based on various individual deficits, family problems and analogous behaviors. Sampson and Laub (1993) argue offending is a consequence of opportunities to offend and the inability of society to exert proper control over individuals' hedonistic desires.

I use the National Survey of Drug Use and Health (NSDUH) to compare the efficacy of the two theories for explaining offending among contemporary American emerging adults aged 18-25 years old. Consistent with developmental perspectives, factors affecting life circumstances of emerging adults are also examined as risk (poverty) and buffers (neighborhood cohesion, economic support, religion) of offending and overall functioning. The vast majority of

emerging adults exhibit low levels of offending and analogous problems. Yet, 55% of emerging adults in the low offending group (exhibiting normal behavior) reported driving under the influence of alcohol in the past year. Thus, substance related offending appears to be a common phenomenon among emerging adults.

Being very poor is associated with more than twice the relative risk of being in a multiple problem profile that includes high levels of offending and serious concomitant problems such as mental illness, substance dependence, arrests and academic failure. The belief that religion is important—but not church attendance, economic supports, or neighborhood cohesion—protects emerging adults from offending, analogous problems, and problematic overall functioning, regardless of economic status. I found support for a number of the propositions shared by AGT and the Developmental Taxonomy. However, because of its inability to account for between individual differences in severity and types of offending there is less support for AGT than for the Developmental Taxonomy. Implications for future theoretical elaboration and advancing the study of offending among American emerging adults are discussed.

## CHAPTER I

### A TAXONOMIC PERSPECTIVE OF EMERGING ADULT CRIME AND DESISTENCE

Moffitt's (1993) findings from the Dunedin Multidisciplinary Health and Developmental study, a 32 year longitudinal study of a birth cohort of 1,000 New Zealanders, initially identified two qualitatively different categories of antisocial individuals: Adolescent Limited (AL) and Life-Course Persistent (LCP) offenders. As implied by the labels AL offenders have relatively short criminal careers largely limited to the teenage years, whereas LCP offenders begin antisocial behavior at very young ages and persist in offending beyond their 20s. Two additional groups, non-offenders or "abstainers" (persons who never commit any offenses) and a "recovery" group (persons who show early onset antisocial behavior, but refrain from later offending) were also found in the 1993 study. Subsequent analysis (Moffitt, Caspi, Harrington, and Milne 2002) revealed the recovery group is more appropriately classified as "low level chronic" offenders. The theoretical propositions of the Developmental Taxonomy (see Figure 1) are described below along with relevant empirical findings important for explaining offending during emerging adulthood.

## Moffitt's Developmental Taxonomy

The hallmark of Life Course Persistent offending is the continuity, severity, and frequency of antisocial behavior across time and situation (Aguilar, Srouge, Egeland, and Carlson 2000). Moffitt's (1993) original results indicated that children with neuropsychological deficits (such as difficult temperaments; nervous system dysfunction; problems with attention or impulsivity; or deficits in verbal, language or cognitive abilities), who are at greatest risk for persistent antisocial behavior, are disproportionately found in disadvantaged environments. Moffitt (1993) contends that this is because sources of neural maldevelopment tend to co-occur with parental deficits (including deviance) and family adversity. Moffitt (1997) reasoned that the combination of a child's vulnerability, parental deficits, and family disadvantage sets the stage for the development of LCP antisocial behavior (p. 19). Thus, transactions between an individual and his/her environment during the first two decades of development are hypothesized to construct a disordered personality distinguished by physical aggression and antisocial behavior that persists into midlife (Moffitt 2008).

There is empirical support for the intergenerational transmission of severe antisocial behavior (Bailey, Hill, Oesterle, and Hawkins 2009; Huesmann, Eron, Lefkowitz, and Walder 1984) as well as a substantial body of longitudinal research (e.g. Brennan, Hall, Bor, Najman, and Williams 2003; Caspi and Moffitt 1995; Egeland, Pianta, and Ogawa 1996; Odgers, Moffitt, Broadbent, Dickson, Hancox, Harrington, Poulton, Sears, Thomson, and Caspi 2008) that documents



the existence of a small group of males (5 to 8%), with childhood histories of individual, parental, and environmental deficits, who continuously exhibit high rates of antisocial and violent behavior into midlife. Moreover, studies indicate that the most persistent 5 or 6% of offenders are responsible for about 50% of known crimes (Farrington, Ohlin, and Wilson 1986; Moffitt, Caspi, Rutter, and Silva 2001).

Research has also consistently shown that far fewer girls than boys have the early childhood risk factors that evoke the person/environment interactions that initiate and maintain life-course persistent antisocial behavior (Fontaine et al. 2009; Keenan and Shaw 1997; Moffitt et al. 2001; Odgers et al. 2008). In a recent review of studies testing the developmental taxonomy among females, Fontaine and colleagues (2009) concluded that female LCP offenders have the same childhood risk factors as males, and as adults exhibit antisocial behaviors and maladjustment problems similar to LCP males (p, 373). Nonetheless, only about 1-2% of girls in population-based or birth cohort samples followed from childhood through adulthood have been classified as LCP offenders. To put the gender difference in another light, male to female ratios of membership in the LCP offender group have been reported to be between 10:1 and 15:1 (Kratzer and Hodgins 1999; Moffitt et al. 2001). Regardless of these gender differences, the statistical rarity and maladaptive long-term consequences of LCP antisocial behavior are the bases for it being regarded as a psychopathological syndrome (Aguilar et al. 2000).

In contrast to LCP offenders, Moffitt (1993) argues that a much larger group of AL offenders with little sign of childhood behavior problems fill out the adolescent peak of the age crime curve with short offending careers that begin in the teenage years and end in the early 20s. Crime-age statistics consistently show that offending peaks at about age 17, reflecting an increase in prevalence not incidence, and then drops sharply among early adults (Aguilar et al. 2000; Raudenbush and Chan 1992; Sampson and Laub 2003). Numerous self-report studies (Elliott, Sroufe, Huizinga, Knowles, and Canter 1983; Hirschi and Stark 1969) indicate that during adolescence it is aberrant for males to refrain from delinquency. A stable empirical finding across time and place is that very few adolescents of either sex report never committing any deviant behavior. But, prevalence estimates of female participation in adolescent delinquency can vary widely depending on the type of acts being investigated.

In particular, female participation in antisocial behavior can be substantially underestimated if measures are overly dependent on violence or physical aggression or measured via official reports (Fontaine et al. 2009). Likewise, greater gender differences are likely to be found among officially sanctioned offenders than in community or general population samples. Male to female ratios of AL offenders have been reported to be between 1.5:1 and 5:1 (Kratzer and Hodgins 1999; Moffitt et al. 2001). Another important characteristic of AL offenders, which distinguishes them from LCPs, is that they are hypothesized to commit predominantly non-violent offenses that reflect the rebelliousness and boredom of teen years.

The main factors theorized to encourage AL offending are the *maturity gap* (dissatisfaction with dependent status as a child, impatience for the privileges and rights of adulthood) and *social mimicry* of deviant peers (especially LCP offenders). Moffitt (1997) argues that “the origins of adolescence-limited delinquency lie in normal teens’ best efforts to cope with the widening gap between biological and social maturity” (p. 39). In other words, AL antisocial behavior is a normative attempt by adolescents to show their autonomy and independence by engaging in acts perceived as mature such as smoking, drinking, delinquency and sexual activity (Aguilar et al. 2000).

In addition, AL delinquency tends to reflect a group social phenomenon rather than individual level deviance as good peer relations, or attempts to mimic the perceived “mature” behavior of more deviant LCP peers, are purported to encourage AL offending. Girls and boys are hypothesized to be involved in AL offending following puberty, but the theory also specifies that the participation of girls may be more limited than boys (Moffitt et al. 2001). Girls tend to have less access to LCP antisocial models in peer social circles which restrict their opportunities to learn delinquent behaviors. Further, the physical vulnerability of many girls places them at greater personal risk (e.g., personal injury or pregnancy) when they affiliate with antisocial LCP males. As a result, girls’ perception of their risk may also reduce involvement with LCP offenders. Nonetheless, significant numbers of girls should be involved in adolescent limited delinquency.

There are two notable characteristics of AL offending. First is its sporadic nature, in other words, periods or situations in which AL offenders do not engage in any antisocial behaviors during their brief criminal careers. Second, and perhaps the most important marker of AL offending, is the discontinuity of problematic adolescent behaviors with childhood and later adult behavior. However, there is evidence that although adolescent-onset offenders do not experience the same degree of adult problems as LCP offenders, they can become entrapped by “snares” (e.g. criminal record, addiction, low educational attainment) which lead to problems (e.g. fewer employment qualifications, low socio-economic status, poor physical health) that compromise the ability to successfully transition to adulthood (Odgers et al. 2008). Because of this marked discontinuity, the statistical normality of AL offending, and the lack of empirical evidence to suggest a link to mental disorders it is not regarded as a psychological syndrome, but rather AL offending is considered developmentally normal. The brief tenure of participation in delinquent behavior, however, should not obscure the prevalence of AL offenders in the population, nor the gravity of their crimes (Moffitt 1997).

In a recent review, Moffitt (2008) identified over thirty studies using a variety of measures of antisocial behavior, statistical methods, and conceptual approaches with findings that offer support for the dual taxonomy of childhood-onset versus adolescent-onset offending and only two studies (Aguilar et al. 2000; Brame, Bushway, and Paternoster 1999) whose findings presented challenges to the theory. My dissertation builds on existing research by looking

for the existence of empirically derived categories of offenders in a nationally representative contemporary sample of emerging adults. In spite of this extensive research support, Moffitt (2008) calls attention to the unfortunate tendency of researchers to devote more attention to investigations of the etiology of LCP offenders and consequent relegation of the AL offending group as comparisons in a majority of studies testing the taxonomy. Due to their much larger share of the population, AL offenders are expected to account for an important proportion of crime in a society. For example, the follow up study (Moffitt et al. 2001) of the Dunedin cohort at age 26 indicated, as expected, that LCP men (10% of the cohort) accounted for the majority (53%) of self-reported violent crimes; notably, however, 29% of violent offenses were committed by AL men (26% of the cohort). These data demonstrate the importance of studies like this dissertation aimed at elucidating correlates of offending and desistance among this group.

There is empirical evidence supporting the existence and influence of a maturity gap as well as adolescent social mimicry of LCP offenders. Adolescents appearing to be biologically more mature than their peers have been found to have elevated self-perceptions of their autonomy, greater involvement with peers, less involvement in school, and higher rates of delinquency (Galambos, Barker, and Tilton-Weaver 2003). The maturity status of girls (as perceived by their peers) has been found to be related to reaching puberty; but, for boys being taller or heavier along with the early appearance of secondary sex characteristics also contributes to the appearance of maturity. Importantly, biological maturity is not indicative of genuine psychological maturity (Galambos et al. 2003).

Consistent with the assertion that adolescents experience psychological discomfort during the maturity gap, AL offenders have been found to have higher levels of internalizing symptoms and perceived stress (Aguilar et al 2000). Other research shows immature boys, in particular, have concern about appearing immature which increases their likelihood of engaging in delinquency (Bukowski, Sippola, and Newcombe 2000; Galambos et al. 2003).

As far as social mimicry of LCP peers is concerned, available evidence indicates that during adolescence young people begin to admire good students less and develop growing esteem for aggressive, antisocial peers (Bukowski et al. 2000). A number of studies also find a relationship between having high status in the peer group and engaging in risky behavior (for a review see Mayeux, Sandstrom, and Cillessen 2008); importantly, longitudinal studies find social popularity (Mayeux et al. 2008) and awareness of peers' delinquency (Caspi, Lynam, Moffit, and Silva 1993) antedate and predict the onset of adolescents' own later delinquency.

Another important proposition of the Developmental Taxonomy is that teens who abstain altogether from deviant behavior do not necessarily experience good adolescent adjustment (Moffitt 1997). Three explanations are offered for abstaining from delinquency during adolescence: (1) non-offenders pathological characteristics exclude them from peer social networks; (2) structural barriers (such as isolation in rural areas or single sex secondary education) prevent abstainers from learning about delinquency, or (3) abstainers

never experienced the maturity gap--either via early access to accountable, respected adult roles or because of late puberty (Moffitt 2008).

The size of the abstaining group has been found to be relatively the same size as the persistent offenders group among men. The percentage of males in longitudinal studies found to never commit any antisocial behavior from childhood through adolescence ranges between 9 and 13% (Moffitt, Caspi, Dickson, Silva, and Stanton 1996; Nagin and Tremblay 1999; Piquero, Brezina, and Turner 2005b). Females are slightly overrepresented among abstainers (about 14% of all females) (Moffitt et al. 2001; Piquero et al. 2005b). In a study following males from adolescence to adulthood, Weisner and Capaldi (2003) found an even smaller group of emerging adult males (5%) were abstainers. Theoretically, abstainers are purported to be a minority that exists outside the teenage social scene which creates opportunities for delinquency among the teen majority.

Moffitt (2008) describes the Dunedin abstainers as “unusually good students, fitting the profile of the compliant good student who during adolescence can become unpopular with peers” (p. 291). Moffitt’s (1993) characterization of abstainers as being “social isolates” or interpersonally timid, socially inept, over-controlled, fearful and not curious, active or open to experience relied primarily on the early results from the Dunedin cohort along with a similar profile of abstainers in a study of adolescents who never used drugs (Shedler and Block 1990). More recent studies (Brezina and Piquero 2007; Piquero et al. 2005b) investigating abstainers in early adulthood offer some additional support for theoretical predictions as the small group of abstainers were found to be closely

monitored by their parents, more attached to teachers, less physically mature, reported less autonomy, dated less, and were less involved with delinquent peers.

However, an unexpected new finding was that they were not completely friendless, as they reported that they had prosocial peers who “go to church regularly,” “plan to go to college,” and “participate in volunteer work” (Piquero et al. 2005b). Importantly, emerging adult abstainers possess particularly strong moral beliefs that help to sustain delinquency abstention over time, even after controlling for time spent with peers and the number of delinquent peer associations. Brezina and Piquero (2007) conclude that youth with strong moral beliefs refrain from delinquency as a direct consequence of their beliefs. Most abstainers have some level of association with delinquent peers, and nonetheless they refrain from delinquent involvement. In the age 26 follow up (Moffitt et al. 2002), the Dunedin study abstainers who had been socially awkward as adolescents were found to be successful as emerging adults. Although they still retained a self-constrained personality, they had nearly no crime or mental disorder, were likely to be college educated, held high status jobs, were likely to be married, but held off parenthood, and expressed optimism about their own futures.

In the years since the Developmental Taxonomy was first proposed, another offending group, labeled “low level chronics,” has been identified in empirical studies (D'Unger, Land, McCall, and Nagin 1998; Fergusson, Horwood, and Nagin 2000; Nagin, Farrington, and Moffitt 1995a; Raine, Moffitt, Caspi,



Loeber, Stouthamer-Loeber, and Lynam 2005). Moffitt and colleagues (1996) identified a small group of males in the Dunedin cohort who exhibited serious aggression in childhood who had childhood histories including family adversity, parental psychopathology and severe neuropsychological deficits, but, were not notably delinquent during adolescence. Initially this group was labeled the “recovery” group. But, subsequent analyses were never able to identify any protective factors that explained their non-delinquency following puberty. Numerous replication studies (D’Unger et al. 1998; Fergusson et al. 2000; Nagin et al. 1995a) testing the Developmental Taxonomy consistently identified a small group of offenders who had similar histories to LCP offenders but differed in the frequency, but not continuity, of offending. Subsequently, the follow up study (Moffitt et al. 2002) of the Dunedin “recovery” group at age twenty-six indicated that the label was indeed a misnomer because over time their modal offending pattern, consistent with the findings of other studies, could more precisely be characterized as chronic low offending.

In this dissertation I will use latent class analysis to derive typologies of offenders based on the self-reported past year offending of American emerging adults. Self report data has advantages over official data (i.e. arrest records) which are known to be influenced by gender and racial bias and, in general, underestimate individual offending (Babinski, Hartsough, and Lambert 2001). Across studies, a great number of methods have been used to identify members of AL and LCP offending groups including a priori criteria or threshold criteria (for a review see Fontaine et al. 2009). As Fontaine and colleagues (2009) point out,

the use of improved statistical methods such as latent class modeling can diminish the subjectivity involved in constructing typologies.

Differences in prevalence estimates of offending groups across studies is also known to be heavily influenced by the number and types of indicators of antisocial behavior (Fontaine et al. 2009). In particular, studies of American emerging adults (D'Unger, Land, and McCall 2002; Fergusson and Horwood 2002) tend to use older samples and dated measures of offending like the Self-Report Delinquency Scale (SRED) which may no longer be appropriate for study of contemporary crime. For example, I did not locate a single study of Americans that included self-reports of driving under the influence of drugs or alcohol among included measures of offending. Therefore, I include a diverse set of indicators that are appropriate measures of male and female offending for this specific developmental stage.

In addition, my analyses are focused on early adult offending and desistence (rather than onset or continuity of offending); so, the lack of measures of childhood or adolescent characteristics or behaviors is less essential for this study as contemporaneous characteristics are purported to explain these phenomena at this stage. Consistent with recent theoretical elaboration (Moffitt 2003; Piquero, Daigle, Gibson, Piquero, and Tibbetts 2007), I will also include indicators of problem behaviors known to be analogous to offending to derive typologies that represent groups of emerging adults with differences in overall functioning. Moreover, the multi-outcome approach accounts for the diverse adjustment problems associated with antisocial behaviors. Important

considerations of the developmental taxonomy specific to emerging adulthood are discussed in the next section.

### **Theoretical Predictions for Emerging Adult Offending**

According to Moffitt (2008) Life-Course Persistent and Low Level Chronic offenders should continue their antisocial behavior through emerging adulthood, whereas AL offenders should begin desisting through this period as they begin to take on adult roles such as careers, marriage, and parenthood. At the same time, antisocial behavior of AL's should decrease as a consequence of the diminished stress associated with the maturity gap and fewer opportunities for association with LCP offenders who at this age should be experiencing more difficult employment and living circumstances than the majority of their AL offending peers.

Moreover, the overwhelming predominance of female offenders' membership in the AL rather than LCP group would predict that sex differences in crime should be larger during emerging adulthood than during early adolescence. Further, as a consequence of widespread desistence among AL offenders during early adulthood, sex differences also should be larger for crimes against victims, which are the prerogative of the LCP offenders, than for crimes which fulfill the aspirations of AL youths (drug offenses, truancy, vandalism, petty thefts) (Moffitt 1994, pp. 39-40). Due to the stability of the neuropsychological problems which are the basis of LCP offending, during emerging adulthood their offending should be correlated with mental health problems, substance

dependence, employment problems, financial problems, having more children and at earlier ages, and domestic abuse of women and children (Moffitt 2008).

A number of longitudinal studies employing trajectory analysis with repeated measures of childhood risks and antisocial behavior from childhood into adulthood, preferable for establishing causal relationships, have attempted to confirm changes in antisocial behavior of the proposed offending groups into adulthood (for a review see Moffitt 2008). Thus far, results regarding the number of offender groups and whether traits of these groups fit those proposed by the taxonomy have been mixed. Problems with study designs such as small sample sizes (Nagin, Farrington, and Moffitt 1995b; Wiesner, Capaldi, and Kim 2007), the absence of female participants (Nagin et al. 1995b; Wiesner et al. 2007), the absence of any LCP offenders (White, Bates, and Buyske 2001) and the fact that none of the samples represent the general population make synthesis of their findings about offending during early adulthood difficult to assess at this point. What is needed is a cohort that represents the general population followed from early childhood through mid-life; but this cohort does not yet exist (Moffitt 2008 p. 298). In the absence of this, other types of evidence may be used to estimate the usefulness of the taxonomy for predicting antisocial behavior.

This dissertation will build on prior work researching the Developmental Taxonomy in several important ways. First, given the cultural and social changes in recent decades related to transitioning to adulthood in America, identifying patterns and correlates of offending among contemporary young adults would be of great benefit for understanding offending during this developmental stage.

The motivation and opportunities for different types of criminal activity, which research shows are substantially related to age (Hirschi and Gottfredson 1983; Steffensmeier, Allan, and Streifel 1989), are also likely to have changed from those identified in prior studies which tend to use cohorts from earlier generations. A particular challenge in the present endeavor to identify typologies of offending (via latent class derived offender profiles) in a cross-sectional general population sample of emerging adults may be distinguishing AL offenders from Low Level Chronics, as there is no information available in the data about childhood disorder or adversity. However, the present study may provide important evidence about the normal levels of offending among various groups of emerging adults such as gender groups or among derived categories of offenders. In spite of widespread agreement in the literature that deviant and criminal behavior tends to peak in late adolescence or early adulthood (Raudenbush and Chan 1992; Sampson and Laub 2003), there is still little consensus about the types or levels of offending that could be considered *normal* at this developmental stage (hypothetically, behaviors carried out by desisting AL emerging adult offenders) (Farrington 2007; Massoglia and Uggen 2007).

Another important prediction of the theory is that LCP offending is associated in mid-life with concomitant problems like substance dependence, and poor physical or emotional health. Moffitt (2003) predicted that LCPs' "antisocial lifestyle, violence, socioeconomic stress, and hostile personality will place them at greatest risk in midlife for poor physical health, cardiovascular disease, and early mortality" (p. 65). A recent study (Piquero et al. 2007) testing

this prediction, found life course persistent offender to be more likely than adolescent limited and non-offenders to have poor physical health and experience psychological distress by ages 27 to 33. In the follow up (Moffitt et al. 2002) of the Dunedin males at age 26, LCP offenders experienced adverse outcomes in various domains; such as violence, criminality, personality disorder, substance abuse, work and family life problems, and poor physical health (Moffitt, 2003). Studies find LCP females to have low educational attainment, substance use problems, and suffer from depression during adulthood (Odgers et al. 2008; Schaeffer, Petras, Jalongo, Masyn, Hubbard, Poduska, and Kellam 2006).

The multiple outcome approach employed in my analyses will take advantage of several measures available in the NSDUH data predicted to co-occur with LCP offending: high school failure, early parenthood, substance dependence, physical health and emotional health. Theoretically, evidence of physical and mental health problems associated with LCP offending should help differentiate offending groups. As a consequence, important evidence about the prevalence and correlates of offending among emerging adults in the United States general population may be gleaned from the data used in this dissertation.

## CHAPTER II

### A SOCIAL CONTROL PERSPECTIVE OF EMERGING ADULT OFFENDING AND DESISTENCE

An alternate DLC theory that will be used in this study to assess early adult offending and desistence is Sampson and Laub's (1993; 2003; Laub and Sampson 2005) Age-Graded Theory of Informal Social Control. The key construct of the theory is that weakened bonds to society explain crime and delinquency. The theory extends Hirschi's (1969) version of social control by highlighting the importance of changing social bonds over the life course. Sampson and Laub principally aim to explain why people do not commit crime, based on the assumptions that the motivation for offending is unproblematic (presumed to be hedonistic desire), and that offending is inhibited by the strength of bonding to society (see Figure 2). Social ties are purported to account for social and psychological resources available for individuals to draw on across developmental stages.

The concept of social bonds is drawn from Toby's (1957) account of having a "stake in conformity," which posits that the greater an individual's bonds to society, the more they risk by committing delinquency or crime. The Age-Graded Theory of Informal Social Control has three main propositions (Laub, Sampson, and Sweeten 2008). First, structural context is mediated in

fundamental ways by informal family and school controls which explain delinquency in childhood and adolescence. Second, there is strong continuity in antisocial behavior from childhood through adulthood across a number of domains. Third, informal social control in adulthood explains changes in offending, irrespective of prior individual differences in criminal propensity.

### **Age-Graded Theory of Informal Social Control**

The Age-Graded Theory of Informal Social Control (AGT) is heavily influenced by Sampson and Laub's analyses of the Glueck (Glueck and Glueck 1950; Glueck and Glueck 1968) follow up studies (Laub et al. 1998; Laub and Sampson 2003; Sampson and Laub 1993; Sampson and Laub 2003). The research used a sample of 1,000 Boston delinquent (n=500) and non-delinquent (n=500) men who have been interviewed and assessed in depth from the age of 10 into their 70s. The theory combines structural variables such as poverty or residing in a single-parent home and process variables such as parental or school attachment with individual characteristics to explain the onset and desistence of antisocial behavior. The theory proposes that structural context influences aspects of social control, which in turn explain variations in delinquency.

During childhood, three primary mechanisms of informal social control in the family--consistent discipline, parental monitoring, and parental attachment--are hypothesized to inhibit delinquency. These mechanisms can reduce antisocial behavior via emotional bonds, or alternately through direct control



(monitoring and punishment). Schools are also theorized to be important socializing institutions and accordingly attachment to school and school performance are also posited to reduce delinquency. In addition, social structural factors (e.g. family disruption, residential mobility, parental unemployment, and socioeconomic status) are predicted to indirectly effect delinquency through social bonds. For example, poverty may theoretically produce delinquency if it produces adverse effects on parents that, in turn, disrupt good parenting. Thus, age-graded theory predicts that social bonding will mediate the effects of structural background factors on delinquency (Laub et al. 2008).

AGT suggests that adolescent delinquency continues into adulthood in part as a result of its negative consequences on factors influencing future life chances (Sampson and Laub 1993). The theory predicts that circumstances like school failure, arrest, conviction, incarceration and other negative consequences of adolescent delinquency lead to decreased early adult opportunities.

Delinquent activities also cut off informal social bonds to family, friends, and school in ways that jeopardize the development of adult social bonds. Childhood and adolescent delinquency is thus predicted to have an indirect effect on adult criminality through the weakening of social bonds. Therefore, the theory predicts continuity between adolescent delinquency and adult crime.

Sampson and Laub (2005) agree that groups of offenders may have similar offending trajectories over the course of time. However, they argue that turning points in the life course, like getting married, having a stable job, or joining the military can alter life trajectories and encourage desistance. Adult

transitions are hypothesized to strengthen social ties and provide social capital so that adult attachment to key institutions of social control would predict conformity, independent of past criminal involvement. In other words, in spite of a great deal of evidence showing early childhood to midlife continuity in offending among a small group of male offenders, Sampson and Laub (2005) argue that adult social ties can modify offending trajectories and point to the fact that most antisocial adolescents do not become serious adult offenders to support their contention of the possibilities for change. They suggest that other DLC theories fail to appreciate the importance of human agency and choice as is indicated in prior studies showing great heterogeneity in offender outcomes (Sampson and Laub 2005). Accordingly, their “theoretical framework proposes a dynamic process whereby transitions [short term events] within trajectories [long term pathways of development] may generate turning points [changes in trajectory] across the life course” (Laub et al. 2008 p. 317).

Consequently, I will examine whether the current circumstances of modern day American emerging adults are related to various profiles of offending and analogous problems. Consistent with AGT propositions, mechanism of social control should be associated with less offending regardless of offender type. Conversely, risk factors (individual or cumulative risk) should be associated with offending. Specific details of theoretical predictions for offending during the early years of adult life, as well as the importance of the particular risk and protective factors used in my analyses, are described in the subsequent sections of this chapter.

## Theoretical Predictions for Emerging Adult Offending

Sampson and Laub reject notions of different “types” of offenders (Farrington 2011); instead, they argue that family relationships “powerfully influence” the onset of delinquency. Adverse family conditions, lack of parental supervision and monitoring, inconsistent discipline, and lack of parental attachment predict antisocial behavior in childhood; absence of peer and school ties predict delinquency in adolescence; and childhood and adolescent offending initiate developmental trajectories that increase odds of early adult involvement in crime. However, AGT contends that everyone is not part of a specific or unambiguous developmental trajectory (Piquero, Brame, Mazerolle, and Haapanen 2002). As indicated by Sampson and Laub (1993), ties to conventional institutions are vital to transitions in offending behavior in emerging adulthood—namely, desistance (p. 139). During early adulthood, many existing social institutions provide individuals with opportunities to transition out of offending. Some people get married, become parents, hold a steady job, or choose to refrain from criminal behavior while others do not. Neighborhood conditions and changes are also theorized to be a source for changes in offending (Farrington 2011); while, on the other hand, official labeling (specifically, a criminal record) may foster offending especially during early adulthood because of its effects on job instability and unemployment.

In the Glueck data, the “cumulative disadvantage” associated with serious delinquency and its correlates such as incarceration were found to be a

mechanism that undermined later forms of social control like employability that, in turn, increased chances of continued offending (Sampson and Laub 2005). Job stability and marital attachment, in particular, were significantly related to transitioning out of crime; among both childhood delinquents and non-delinquent controls. Those with strong adult ties to work and family committed less crime or deviance. These results were consistent for a number of crime outcome measures, irrespective of childhood antisocial behavior, control variables (i.e. ethnicity, age, IQ, neighborhood), or analytical methods. In addition, because of the opportunities it presents to redirect commitment to conformity, residential change also was found to reduce offending across the life course.

Replication studies (see Thompson and Petrovic 2009) have failed to consistently support marriage as a factor related to desistence for both males and females. Relationship quality seems to be a better predictor of female desistence while simply being married is an adequate predictor of male desistence. The finding regarding the importance of marriage as a factor promoting desistence demonstrates two fundamental limitations of AGT for explaining offending among contemporary emerging adults. First, Sampson and Laub's life-course theory is relatively silent with regard to gender, because it was developed using data from an entirely male sample. As Moffitt (2006) points out, studies using single sex samples, like the Glueck analyses, often caution that findings may not apply to the opposite sex. But, warnings like these tend to lead to the implication of sex differences where they may not exist. Single-sex studies simply cannot address the sex-specificity of their findings. This can only be

accomplished in studies like this dissertation that include sufficient numbers of both males and females appropriate for statistical testing (Moffitt 2006 p. 165).

Second, given the considerable differences in life circumstances of present day American emerging adults compared to Glueck men, who experienced young adulthood in the late 1940s, different social structures that bestow social control are likely to exist. Based on their findings of “enormous” variability in peak ages of offending and desistance for the Glueck men (Laub and Sampson 2003, chap. 5) AGT emphasizes assessing desistance based on group trajectories is less useful than identifying the life events and mechanisms that bond individuals to society across the life course. One important purpose of my analyses is to determine if, in fact, social control mechanisms are related to less offending across empirically derived categories of offenders. Types and levels of offending should differ between identified offender groups as a result of differing etiologies. Yet, it is still possible that sources of social control are equally effective across groups.

Sampson and Laub (2005) identify characteristics associated with turning points that create the mechanisms for desistance as: “(1) “knifing off” of the past to the present; (2) opportunities for investment in new relationships that offer social support, growth, and new social networks; (3) forms of direct and indirect supervision and monitoring of behavior; (4) structured routines that center more on family life and less on unstructured time with peers; and (5) situations that provide an opportunity for identity transformation and that allow for the emergence of a new self or script” (p. 34). Marriage, parenthood, employment

and residential change have been widely investigated as life events that provide requisite mechanisms for change during emerging adulthood (Sampson 2008); and thus are used as control variables in my analysis.

AGT also posits that structural conditions may exist that decrease possibilities for change. In the U.S., the early years (18 to 25) of adulthood are characterized by a great deal of between-individual variability in life circumstances. Some emerging adults may be in high school (due to school failure or a later start), others may be attending a training school or college, while many others are working full time (with or without having completed college), and increasing numbers are working and attending school at the same time. In spite of this variability there are structural commonalities that would theoretically restrict opportunities for change in life circumstances, most notably poverty, as well as circumstances that provide opportunity for change.

In this dissertation I will investigate variation in offending by examining whether four mechanisms of social control (neighborhood collective efficacy, religiousness, church attendance, and economic support) are protective factors inhibiting offending when individuals are poor or very poor. The following sections of this chapter (1) review the literature on poverty as a structural barrier to desistance in early adulthood and (2) review four protective factors in relation to their ability to provide the mechanisms hypothesized to reduce crime. Thus, my analyses will build on AGT by examining structural and process variables particular to emerging adulthood that illuminate important transitional life

circumstances which may potentially lead to changes in individual trajectories of antisocial behavior.

### **Risk Associated with Emerging Adult Poverty**

Stress resulting from financial difficulties during early adulthood can present a substantial obstacle to the successful transitioning to the responsibilities of adult roles. Poverty can be a constant source of demoralization and frustration that creates conditions under which additional stressors are more likely to take place (Wadsworth, Raviv, Compas, and Conner-Smith 2005). The adversities associated with growing up in poverty have been well documented across childhood and adolescence (Duncan, Brooks-Gunn, Yeung, and Smith 1998).

Growing up in poverty is related to a number of consequential childhood problems including impaired cognitive development, fewer opportunities for learning, and low academic achievement (Duncan et al. 1998; Seccombe 2002); exposure to environmental hazards and substandard physical living conditions (Blau 1999; Smith, Brooks-Gunn, and Klebanov 1997); poor diet, physical health and more chronic health problems (Luthar 1999); and lack of access to health care (Seccombe 2002). The quality of parenting that takes place in families experiencing poverty related stress is also problematic. Studies consistently link poverty to parental and family conflict, as well as other serious stressors like marital separation, and parental depression (Compas, Conner-Smith, Saltzman, Thomsen, and Wadsworth 2001; Conger, Conger, Elder, Lorenz, Simons, and

Whitbeck 1992; Conger, Ge, Elder, Lorenz, and Simons 1994; Mistry, Vandewater, Huston, and McLoyd 2002).

Parental stress has been linked to less warm maternal child interactions (Dolz, Cerezo, and Milner 1997) and harsher maternal parenting (Conger and Conger 1993; Conger et al. 1994). Further, harsh, punitive parenting and conflict found in families experiencing economic stress has been found to be related to the behavioral and emotional problems of adolescents (Wadsworth and Compas 2002). Harsher maternal parenting, in particular, is associated with adolescent problems as it undermines adolescents' self-confidence and reduces academic achievement. Not surprisingly, poor adolescents are overrepresented in statistics on crime, physical and mental health problems, school drop outs, adolescent pregnancy, family violence and homelessness (Knitzer 2007; Orthner, Jones-Sanpei, and Williamson 2004).

Studies also tend to show differences in offending and concomitant problems during emerging adulthood are attributable to low incomes or socio-economic status. A greater propensity for mental health problems and anti-social behavior in early adulthood is associated with lower SES (Kendler, Gallagher, Abelson, and Kessler 1996; Kessler, McGonagle, Zhao, Nelson, Hughes, Eshleman, Wittchen, and Kendler 1994). Some research indicates that childhood poverty, more specifically, is related to problematic young adult mental health (McLaughlin, Green, Gruber, Sampson, Zaslavsky, and Kessler 2010; Poulton, Caspi, Milne, Thomson, Taylor, Sears, and Moffitt 2002) and substance



abuse (Daniel, Hickman, Macleod, Wiles, Lingford-Hughes, Farrell, Araya, Skapinakis, Haynes, and Lewis 2009; Keyes and Hasin 2008).

However, two recent studies on depression (Adkins, Wang, Dupre, Van den Oord, and Eider Jr 2009; Galambos, Barker, and Krahn 2006) indicate considerable changes in mental health functioning can happen during the transition to adulthood. In particular, depression associated with low SES was found to peak in adolescence and then substantially decline during early adulthood indicating that effects of SES on depression may lessen over time. These findings are consistent with other studies that show declines in depression and generalized psychological distress take place during early adulthood (Schieman, Van Gundy, and Taylor 2001).

Further, many studies show that gender is an important intervening factor in the relationships between stress and multiple outcomes including mental health and behavior problems (e.g. Meadows, Brown, and Elder 2006; Van Gundy 2002). But, there is little available information about gender differences in relation to poverty stress during this developmental stage. Studies show that racial minorities (Mollenkopf, Waters, Holdaway, and Kasinitz 2005) and single mothers (McLanahan 2009; McLaughlin et al. 2010) are more likely to be poor in the early years of adult life; but there are no existing studies that have examined the relationship between gender and poverty related stress among emerging adults. My analyses do not specifically address this issue, but they do examine associations between emerging adults' family poverty status and their levels of offending and other problematic circumstances (educational attainment,

substance use, and mental health problems) which are known to differ by gender.

A classic study, The Kauai Longitudinal Study, (Werner 1994; Werner 1995; Werner and Smith 1989; Werner and Smith 1992; Werner and Smith 2001) followed 698 children born in 1955 on the island of Kauai for forty years in order to examine the long term consequences of growing up in a high risk environments. Individual assessments of these children occurred during the prenatal period and at ages 1, 2, 10, 18, 32 and 40. Fifty-four percent of the children in the study were poor, one third of the sample were considered “high-risk” because along with chronic poverty they also experienced other individual, parental, or household risk factors such as having a serious health problem, familial violence, alcoholism, mental illness or parental divorce. Two-thirds of the high risk children, those who had experienced four or more risks factors by the age of 2, developed behavioral or learning problems by the age of 10, or had delinquency records, mental health problems, or were pregnant by the age of 18 (Werner 1995). By age 18, two-thirds of the high-risk children had serious problems including psychological problems and antisocial behavior. Of the one-third of high risk children doing well at age 18, all but two were still doing well at age 40.

As adults, many children from high risk families were out-performing the adults in the sample from low risk families (Werner and Smith 2001). A key finding from the follow-ups at age 30 and 40 was that transitions could be developed across the life course in spite of childhood poverty, as half of the

children who did have problems at age 18 did not exhibit them at age 30. They had satisfying jobs, stable marriages, and otherwise exhibited competence as adults. This finding highlights the importance identifying protective factors that may reduce the adverse effects of poverty on individuals' outcomes at various developmental stages.

Another important study (Turner, Taylor, and Van Gundy 2004) indicates that an individual's contemporary personal coping resources (i.e. mastery, self-esteem, the assertion of autonomy) can buffer the effects of stress on psychological well-being. These findings are especially salient for the current investigation because they indicate that in spite of the psychological stress and other adversities that may result from childhood or adolescent poverty, individual qualities are important determinates of mental health outcomes. During emerging adulthood, individuals transition from their parents' households and establish their own careers and families. Poverty related stress is likely to make it difficult to adapt to new social settings and to achieve instrumental and social competencies. Yet, findings from the Werner (2001) and Turner et al (2004) studies indicate that the contemporary social and personal assets of early adults may be able to reduce the likelihood of negative outcomes. In this dissertation, I will build on the prior knowledge about the risks associated with poverty in the early years of adulthood by using a multi-outcome approach which will highlight the diversity of the effect of being poor or very poor during this important transitional stage. As a consequence of this type of approach, the factors I investigate as buffers of poverty (described in the following sections) must serve

to reduce problems in overall functioning rather than for a particular type of dysfunction.

### **Protective Factors**

Traditionally, a great deal of criminological research has been concerned with identifying risk factors: variables associated with increased chances of offending. But, DLC theories central aim is to discover both risk and protective factors at different life stages that influence both negative and positive development. In a recent review, Farrington (2011) describes the three ways that DLC studies typically investigate protective factors and identified how these disparate methods have led to confusing results. First, some studies have employed protective factors that are “merely the opposite end of the scale (or other the other side of the coin) to a risk factor” (Farrington 2011 p. 171). For example, if low income is a risk factor high income may be a protective factor; if indeed there is a linear relationship between the variable and offending. Yet, little is gained by essentially creating two variables out of one; so, it is preferable to regard these factors as risk variables.

A second definition of protective factors exists when a variable has a non-linear relationship to offending. For example, if a high level of religiosity is associated with low levels of offending, but medium or low levels are associated with average levels of offending, then religiosity would be considered a protective factor but not a risk factor (because low levels of religiosity are not associated with offending). A third use of the term protective factor exists when a variable

interacts with a risk factor to minimize or buffer the effects of the risk. These factors may or may not be associated themselves with the dependent variable (i.e. offending). For example, the effect of poverty on offending can be studied in the presence of religiosity. To avoid confusion, Loeber et al. (Loeber, Farrington, Stouthamer-Loeber, and White 2008) suggest that the term “promotive factor” be used to describe factors that predict low rates of offending and the term protective factor used only to describe variables that interact with a risk factor to buffer its effects.

In the proposed study there are four factors that will be investigated for their main effects and as variables that may have intervening effects on poverty to inhibit offending, related problems, and a measure of overall functioning: neighborhood collective efficacy, religious attendance, religiousness, and economic support. The following sections describe the relevant literature regarding each of these factors in the context of AGT. In some cases, little research is available for emerging adults, so I also rely on studies of adolescents in the review.

### Neighborhood Collective Efficacy

A primary component of neighborhoods, collective efficacy, or the sense that neighbors will participate and respond to problems, is created through participation of residents in formal and informal social networks. Local friendships along with voluntary participation in community organizations are theorized to foster cohesion among residents by providing them with opportunities to come together and collectively realize common goals such as to maintain a safe and

orderly environment in which to live (Sampson, Raudenbush, and Earls 1997). Informal friendship ties among neighbors benefit communities in several ways.

Friendships among neighbors allow for a greater willingness to look out for each other and to aid in the supervision of each other's children. Residents are also better able to engage in informal surveillance, to question neighbors and strangers about unusual activity, admonish children for unruly behavior, and to develop movement-governing rules like avoiding high risk places in their neighborhoods (Bellair 1997). Camaraderie among neighbors in addition to the realization of common values results in an overall greater sense of community. As Sampson (2008) points out, one reason social cohesion and support provided in neighborhood contexts are important is that "they are fundamentally about *repeated* interactions and thereby expectations about the future" (p. 152). Theoretically, this would indicate that collective efficacy would deter offending through the supervision and monitoring of early adult behavior.

Studies have consistently shown that communities with broad-based network structures that increase the degree of interconnectedness among residents, have lower incidents of crime and disorder (Bellair 1997; Sampson and Groves 1989; Taylor, Gottfredson, and Brower 1984); conversely, supervision and guardianship is weak in communities where residents are not broadly linked (Freudenburg 1986). Further, previous research has established that crime rates in communities are inversely related to residents' sense of collective efficacy (Sampson, Morenoff, and Earls 1999; Sampson and Raudenbush 1999; Sampson et al. 1997). Studies that investigate the association between social

capital and crime, tend to treat social capital as a homogenous concept, measured in a variety of ways that are always hypothesized to reduce crime (Beyerlain and Hipp 2005).

Recent studies also indicate that variations in the levels and types of disadvantages that exist in disorganized neighborhoods may explain variation in rates of crime or delinquency (Kingston, Huizinga, and Elliott 2009). For example, differences in the rates of single parent households or amount of racial diversity in areas with high poverty rates can result in differences in the social processes that produce deviance or crime. This suggests that the quality of neighborhood life may not be solely determined by its level of structural disadvantage (Elliott, Menard, Rankin, Elliott, Wilson, and Huizinga 2006). Results from a recent study (Duncan, Duncan, Okut, Strycker, and Hix-Small 2003) showed no relationship between neighborhood demographic characteristics (residential mobility, percent non-White, and percent below poverty) and perceived collective efficacy.

In effect, therefore, collective efficacy signifies the exercise of social control and reflects the shared agency of neighborhood residents via collective action despite their economic circumstances. Moffitt (2008) proposes that neighborhood disadvantage is among the risk factors related to early onset offending. My dissertation will extend research in this area by investigating whether emerging adults' perception of collective efficacy predicts offending or overall functioning. In addition, I explore whether the associations between

collective efficacy and multiple outcomes are different among poor and non-poor young adults.

### Economic Support

Much of the research on risk and protective factors related to poverty has investigated individual, family, educational and even neighborhood factors that may create additional risk or alleviate poverty related stress among poor children and adolescents. Far less attention has been focused on identifying how the utilization of national or state funded income and food support programs may improve individuals' life circumstances, especially for emerging adults. There is some evidence that suggests current levels of economic and food assistance may not be sufficient enough nor provided for an adequate time period to make a real difference in the lives of poor families (Cheng 2007; Lombe, Yu, and Nebbitt 2009). Some studies indicate that being unemployed or vulnerable to unsteady employment is associated with depression and other psychological problems (Coiro 2001; Dooley and Prause 2002), and the receipt of economic support (TANF) has not been found to alleviate adverse outcomes (Cheng 2007). Similarly, studies have failed to show that Food Stamp receipt lessens the psychological distress associated with hunger and food insecurity (Lombe et al. 2009). Further, other studies show that hunger and food insecurities are linked to other adverse outcomes such as behavioral problems and poor academic performance among school-aged children (Oberholser and Tuttle 2004; Vozoris and Tarasuk 2003).



An important purpose of this study is to investigate the use of food and income assistance by emerging adults. It is also important to discover whether the use of programs providing economic support is related to young adult offending and co-occurring problems. A central and important theoretical proposition of AGT is that acquisition of a criminal record in the early years of adulthood can have consequential long term effects. Criminal histories serve to “ensnare” individuals into scrutiny by the justice system thereby limiting future opportunities (schooling, employment, housing) that could lead to desistance from offending. In fact, criminal convictions in early adult years have been found to be more predictive of the risk of future offending than juvenile convictions (Ezell 2007), which in most cases are not available to the public. Thus, given the potential exponential consequences of even relatively minor offending during the early years of adult life, in addition to a much greater propensity for property offending in general (at times likely motivated by real economic need), discovering if the provision of public sources of economic support reduce offending is an important endeavor.

There is some evidence that access and the ability to take advantage of national and state funded social programs may lead to better outcomes. A qualitative study of ethnically diverse young adults in New York City seems to indicate that one of the reasons why Chinese young adults have higher rates of attending four-year colleges compared to other ethnic groups, in spite of their similarly situated poor family economic resources and low levels of parental education, is that their parents actively seek out and participate in better public

school and publicly funded educational programs (Mollenkopf et al. 2005). The data used for the present study provides measures of both family and individual use of the following types of economic support programs: social security income, welfare (TANF), child care, and food stamps. This allows me to examine the extent of the use of public assistance programs by contemporary emerging adults, both those residing with their parents as well as those who live on their own.

It seems likely that during early adulthood income supports would be an especially important source of social support. Emerging adults may have more control of the income they receive from government sources and thus might receive greater benefits from these types of income supports than has been found in previous studies of adolescents or younger children. In addition, it is also possible that contact with agency workers may provide ties to social networks that are important sources of information about other community resource. In effect, participation in these programs may provide opportunities for investment in new relationships that offer other types of social support and growth. Moreover, recent attempts to monitor behavior of individuals on federal and state income assistance via rules that mandate loss of assistance for criminal convictions might also indicate the presence of direct and indirect monitoring of emerging adults' behavior are associated with economic support. According to AGT, the ties to social networks and monitoring of behavior associated with income assistance would be hypothesized to reduce offending. In this study I will investigate whether economic supports are related to emerging

adult problem behaviors and offending and I will examine whether they buffer the effects of poverty on offending and analogous problems.

### Church Attendance and Religiousness.

Sociological research on the effect of religion on crime has produced inconsistent results (Baier and Wright 2001). In 1969, the results of Hirschi and Stark's "Hellfire and Delinquency" study overturned the existing scholarly consensus that supported a deterrent effect for religion on deviance. In a large random sample of high school students they found no association between belief in supernatural sanctions and self-reported criminal behavior. Religious respondents in their sample were found to be just as likely to engage in delinquent acts as were non-religious respondents. Subsequent studies, however, have failed to answer with any certainty the question about the influence of religion on deviant behavior. Some studies have found that individual religiosity deters delinquent behavior (Benda 1994; Burkett 1993; Burkett and White 1974; Peek, Curry, and Chalfant 1985), while others seem to indicate that individual religiosity has no effect on most delinquent behaviors (Burkett and White 1974; Evans, Cullen, Burton, Dunaway, Payne, and Kethineni 1996; Ross 1994).

Stark and Bainbridge (1998) contend that the findings of these studies can be directly linked to the differing levels of attachment to religion that exists across regions of the United States. They point out that the majority of the studies that failed to find an association between religion and delinquency were conducted in Pacific states where church attendance is much lower than other regions. They

also claim that the geographical variation in findings supports Stark's (1987) "moral community" hypothesis; that is, that individual religiosity influences behaviors only when reinforced by a cohesive religious community. Other studies have found that the moral community effect, as measured by participation in organized church activities, is more influential in deterring deviance than the effects of individual religiosity (Evans, Cullen, Dunaway, and Burton 1995; Welch, Tittle, and Petee 1991).

The deterrent effects of individual religiosity seem, however, to be dependent on specific types of deviant behavior. Studies consistently show individual-level religiosity to be a reliable predictor of alcohol and illicit drug use (Burkett and White 1974; Cochran and Akers 1989; Evans et al. 1996; Kendler, Gardner, and Prescott 1997) and of attitudes toward drug use (Francis 1997). Cochran and Akers (1989) suggest an "anti-ascetic hypothesis" to explain the results of these studies; the premise being that for some religiosity deters behavior that violates ascetic values, but is not consistently disapproved in secular circles. Even in the case of illicit drug and alcohol use, however, the relationship between individual religiosity and behavior are not entirely clear. Studies that use measures of both the importance of individual religious belief and religious attendance have found attendance to be a much stronger predictor of drug or alcohol use (Bachman, Johnston, and O'Malley 1990; Welch et al. 1991). Yet, similar levels of religious beliefs are found in general population samples as in samples of heavy injection drug and crack cocaine users (McBride, McCoy, Chitwood, Inciardi, Hernandez, and Mutch 1994).

A recent meta-analysis (Baier and Wright 2001) used 60 studies to estimate the direction and magnitude of the effect of religion on crime, and to explore factors that might contribute to the divergent results across existing studies. Among factors considered were the year studies were conducted, sample size, and whether the study used a probability versus non-probability (convenience) sample. Sample selection and characteristics were also considered such as whether samples which were selected from known church members ("religious selectivity") or from education institutions ("educational selectivity") produced disparate results. Differences based U.S. regions, gender and racial compositions of samples were also investigated. But, the analysis did not distinguish between measures of religious behavior and religious attitudes.

Overall, the results of the meta-analysis (Baier and Wright 2001) showed that "religious behavior and beliefs exert a significant, moderate deterrent effect on individuals' criminal behavior" (p. 14). The authors concluded that three factors may be most responsible for producing inconsistent results: (1) studies of religiously based samples tend to produce stronger estimates of the deterrent effect of religion; (2) the deterrent effect also tends to be stronger in studies examining non-violent crime types; and (3) stronger in studies using small samples sizes and more racially diverse samples.

Baier and Wright (2001) further suggest that null findings are perhaps more likely to be believed and published when they are found in large rather than small samples, thus contributing to the differences in effect sizes found based on sample size. The authors also contend that the finding that studies with more

diverse sample show a greater deterrent effect for religion may be related to the differential function of religious organizations and activities in African American communities.

Researchers have also investigated the effect of religion on other aspects of psychopathology besides delinquency and crime. One such study that examined denominational effects (based on an analysis that ranked denominations according to their degree of conservatism) and personal devotion on psychopathology did not find that either aspect of religiosity was strongly associated with lifetime functioning or current symptoms (Kendler et al. 1997). There was some evidence that low levels of depressive symptoms were related to higher levels of personal devotion; and indications that personal devotion, but not denominational affiliation, buffered the depressive effects of stressful life events. These findings are consistent with other works that tend to show a small but robust association between religion and depression (Kendler et al. 1997; Kendler, Liu, Gardner, McCullough, Larson, and Prescott 2003; McCullough and Smith 2003).

Salient findings of this recent research seem to show that rather than having a direct effect on depression and other aspects of functioning, the most powerful influence of religion is evident through its interaction with stress (Wink, Dillon, and Larsen 2005). I will investigate whether individual religiosity or church attendance have a direct effect or indirect effect through their interactions with poverty on multiple emerging adult outcomes including offending. Further, as Wink et al (2005) point out, the evidence suggests that religion buffers against

some stressors especially uncontrollable sources of stress (such as physical health problems), while at the same time it may increase problems when religious beliefs are in conflict with personal experiences (for example, increasing depression as a result of marital conflict). The association between religion and positive psychosocial functioning has also been demonstrated in the literature, although this relation has received much less attention than risky behaviors and psychopathology.

Religious attendance, in particular, has been found to improve aspects of secondary control coping such as “feelings of hope, love, and purpose” and self-esteem (Markstrom 1999; Schafer and King 1990). Other studies demonstrate that church attendance has a positive impact on academic achievement for adolescents living in neighborhoods characterized by poverty, but not those in more affluent neighborhoods (Regnerus and Elder 2003). Another study conducted by Good and Willoughby (2005), provides some further evidence about the underlying mechanisms that influence the relationship between religion and functioning.

First, church attendance was found to be associated with positive outcomes (beneficial coping strategies; positive friendships and parental attachments; and academic engagement and success) and fewer symptoms of psychopathology among adolescents, regardless of whether the adolescent indicated that they were a believer or non-believer in God. A further analysis compared adolescents who participated in other types of clubs or organized activities but did not attend church to those that did attend church; they found no

difference between the two groups across most indicators of competence. This suggests two possible underlying mechanisms of religion as a moderator might be the informal social supports that are (1) derived by being a part of a cohesive community, or alternatively (2) by reducing dysfunctional coping, rather than the psychological influence of holding a personal belief in God. These are the very types of mechanisms hypothesized in AGT to reduce offending behaviors during emerging adulthood.

The results of Good and Willoughby's (2005) study also showed church attendance may have a unique influence on risky behavior (alcohol and marijuana use, and sexual behavior) over and above what may be associated with participation in other types of clubs or activities. The authors suggest that this finding may be related to the fact that church attending adolescents reported the highest rates of parental monitoring. On the other hand, the authors also suggests that it may be that the adolescents who attend church tend to be more compliant with their parents' wishes and avoid risks in order to live up to parental standards; or they may just simply be better adjusted individuals who strive to do their best and avoid taking risks. In any case, the results indicate that more attention deserves to be paid to the role of religious participation across developmental stages.

Among Americans, studies find that at all ages women are more likely than men to agree that religion is important in their daily lives (Smith, Faris, Denton, and Regnerus 2003) and that females pray, attend church services and youth groups more often males (Smith, Denton, Faris, and Regnerus 2002).



Moreover, church attendance rates are lowest during young adulthood. This is a stage at which 'religious doubt' may tend to take place; young adults typically become free from parental pressure to attend church; and they typically have other time pressures such as attending college and establishing careers (for a review see Wink 2009). Smith and Snell (2009) find that the transition from adolescence to young adulthood involved both a decline in church participation as well as general declines in levels of religiousness for a substantial proportion of Americans.

Furthermore, Smith and Snell (2009) examined life outcomes for young adults based on their membership in four groups denoting their level of religiousness: (1) the *devoted* (5%), who attend services at least weekly, believe faith is extremely important in everyday life, feel very close to God, pray at least a few times a week, and read scripture at least one a month; (2) the *regular* (14.3%), attend services two to three times a week or more, their faith ranges from very to not very important, their closeness to God, prayer, and scripture reading are variable but less religious overall than the devoted; (3) the *sporadic* (17.9%), attend services a few times a year to monthly, faith ranges from somewhat to not very important, closeness to God, prayer, and scripture reading are variable; (4) and the *disengaged* (25.5%), who almost never attend services, believe that faith is somewhat, not very or not important, feel somewhat close to God or less, pray or read the scripture twice a month or less often. The religious behavior and attitudes of the other 37% of young adults did not fit neatly into these categories (and was not consistent enough to comprise a fifth category) so

they were excluded from analyses investigating links between religiousness and life outcomes.

Results of the study (Smith and Snell 2009) indicated that the devoted young adults (ages 18 to 23), but not the regulars or the sporadic, tend to have better relationships with their parents during young adulthood than did the disengaged. This may be explained in part because the devoted also were less likely than the other groups to have parents who had been divorced. In addition, prosocial behaviors were found to be more prevalent among the religious. Young adults in all of the religious groups were more likely than the disengaged to volunteer time for community service. Greater religiousness also predicted donating money and informally helping people in need; also more common among the most religious was having friends who also engaged in these types of behaviors. All groups of religious young adults were also more to participate in organized activities, both religious and non-religious, to have completed some college and to be employed than were the disengaged. Greater religious commitment and practice was also related to better physical health, being happy with one's body, more thoughtful about the meaning of life, rarely feeling sad or depressed, rarely feeling life is meaningless, and more likely to report feeling loved and accepted.

Religiousness was also associated with less involvement in risky behaviors. Higher religiousness decreases the likelihood of drinking alcohol, binge drinking, smoking marijuana, or being in a fight, or engaging in a range of sexual activities, having an abortion or becoming pregnant (females) or

impregnating someone else (males) when not married. Although the magnitude of the differences was only modest for some outcomes, the number of positive outcomes associated with religiousness seems to indicate that religion still matters in ways that make a difference in emerging adult relationships, attitudes, experiences, and behaviors especially among the most highly religious (Smith and Snell 2009).

Still, there is much left to be learned about the mechanism and processes that explain the link between religiousness and emerging adult antisocial behavior. For example, Dillon and Wink (2007) find the personality characteristics of *agreeableness* (warm, giving, sympathetic, likeable, protective of others, and being one who others turn to for help) and *conscientiousness* (being dependable, productive, ethically consistent, perfectionist, and prone to over control personal needs and impulses) during adolescence predict early adulthood religious involvement. Further, these personality characteristics predict "smart" life choices, such as completing high school, delaying parenthood and refraining from deviant behavior, independent of religion.

These findings seem to fit with Sampson's (2008) assertion that human agency is an important but often forgotten consideration when assessing offending. Individuals who choose not to offend may be making other smart choices like deciding to participate in religious activities instead of engaging in delinquent activities with offending peers. It is also possible that religion is a particularly important social institution that offers the opportunity across the life span for individuals to make identity transformations and emerge with of a new

self or script, a process hypothesized by AGT to be related to desistence during emerging adulthood. In order to determine the relative influence of religious beliefs and attending church on the antisocial behavior of early adults the present study examines each as buffers of the effects of poverty on offending and analogous problems. This analysis may provide some additional clues about the sociological factors that are important correlates for the buffering effect of religion.

The four protective factors examined in this study are potential sources of social support and/or social control hypothesized in AGT to inhibit offending. Previous research has also indicates that religiousness is associated with membership in the non-offending group identified by the Developmental Taxonomy. Important differences in offending and concomitant problems during emerging adulthood vary by gender and age; it is also likely that gender and age related differences exists for protective factors such as economic support neighborhood conditions and religiousness during this developmental stage.

### **Competing or Complementary Explanations?**

Moffitt (1993; 1997; 2003) theorizes that four categories of offenders are present in the general population and can be identified according to individual's developmental and family characteristics, and behaviors analogous to offending. Sampson and Laub (Laub and Sampson 2003; Sampson and Laub 1993), in contrast, argue that in spite of similarities in lifetime offending trajectories, there is also great heterogeneity in individual offending across the life course and in

the mechanisms leading to transitions out of criminal involvement (*desistence*). Moffitt's view of individuals as members of disparate offender or non-offender groups with different stage-related causes for (non)offending and distinct stage related consequences contradicts Sampson and Laub's view that great variability in motivations and opportunities to offend argues against the existence of distinct offender groups. This fundamental disagreement relegates the two theories as competing explanations for offending in spite of their many other similarities in theoretical concepts and propositions.

The underlying cause for offending according to AGT is the inability of society to exert sufficient control on individuals to deter the "natural motivation to offend" (Hirshi, 1969). In other words, people commit crime because they have weak ties to conventional members of society required to provide motivational and supervisory mechanisms to deter offending. During childhood families, peers, and schools are hypothesized to be important institutions of informal social control; in adulthood, jobs, marriages, and parenthood exert control. Beyond an individual's bond to society, Sampson and Laub (2005) also emphasize the importance of structured routine activities and human agency especially in adult transitions out of involvement in crime. Moreover, they suggest that other theorist discount the importance of individual choice.

This proposition, that individuals commit crime because they choose to, is an untestable precept, as anyone who commits any offense may be presumed to have made a choice to do so. Sampson and Laub tend to emphasize factors that inhibit offending during the early years of adulthood and pay much less

attention to factors promoting offending (“making poor choices”). For example, they suggest the peak in seriousness and frequency of offending during teenage years is explained simply by variations in social control/bonding and, moreover, their theory offers no propositions to explain between individual differences or within individual changes in the versatility of offending (Farrington 2008).

In contrast, theories like Moffitt’s do attempt to accomplish the very task that Sampson and Laub suggest that they ignore: explaining *why* it is that individuals make poor choices. Moffitt (1993) argues that there are three primary motivations for offending by people in post-industrial societies. For the majority of offenders, a normal consequence of the lag between available adult roles and responsibilities and biological maturity leads to offending in teenage and early adult years. Also, during adolescence the antisocial behavior of LCP offenders is admired and mimicked by a number of AL offending adolescents. For a small minority of mostly males, early onset and persistent offending into midlife is a consequence of the transactions between serious childhood neuropsychological deficits and disadvantaged environments.

Even though the two theories offer divergent explanations for offending, like other DLC theories, there is a great deal of agreement about the factors that promote or inhibit offending. Further, they both predict that for the most part desistance should occur in early adulthood as a consequence of adult, not childhood, events. Consequently, both theories would predict that I should find patterns of offending that decline with age in my analyses of NSDUH sample of 18 to 25 year olds. Both theories would also support poverty as a risk factor

which should be associated with greater offending and the four factors I investigate (neighborhood cohesion, economic support, church attendance and religiousness) as protective factors that should be associated with low levels or non-offending. Because I use cross-sectional data, however, I can not establish whether within-individual changes in these risk and protective factors lead to within-individual changes in offending.

Sampson and Laub argue that emerging adult life events, like getting married, getting a steady job, or joining the military promote desistance because of their effects on social bonds, routine activities, and situated choice. In contrast, Moffitt contends that these life events help AL offenders to desist in the early years of adulthood, but have little effect on LCP offenders (partly because they tend to select antisocial partners and jobs). Moffitt also suggests that neighborhood factors would influence access to delinquent peers for adolescent limited offenders. The efficacy of the protective factors I investigate has not been tested for contemporary young adults. Based on my review of the literature neighborhood factors, religion, and economic support would be predicted to be factors that exert social control and influence the risk that poverty exerts on decisions to engage in crime.

As mentioned above, Sampson and Laub make no predictions about the versatility in offending, which suggest that it should be constant at different ages, to the extent that opportunities to offend are also constant (Farrington 2008). Moffitt proposes that violent offending should be greater among LCP than for AL offenders across the life course. Thus, important aims of my analyses are to: 1.)

examine what types and levels of offending can be regarded as normal in the early years of adulthood, 2.) examine whether types of offenders can be identified in the general population based on participation in past year offenses and analogous problems, and 3.) investigate the influence of the aforementioned stage appropriate risk and protective factors on offending.



## CHAPTER III

### METHODS

Several aspects of emerging adult offending and desistance will be investigated in relation to their support of the propositions of Moffitt's (1993; 1997; 2003) Developmental Taxonomy or Sampson and Laub's (1993; Laub and Sampson 2003) Age-Graded Theory of Social Control as follows. First, to elucidate the normality of offending and *desistence* (aging out of crime) of contemporary Americans I will examine the patterns of offending according to crime type, age and gender. I expect to find that males offend more than females, regardless of crime type; and that offending declines with age for all types of crime and for both males and females.

Next, to discover whether groups of offenders consistent with Moffitt's (1993) taxonomy are present in the general population of American emerging adults I will use latent class analysis to derive typologies of young adult offenders based on self-reports of offending. Because my analyses are based on past year reports and not lifetime offending used in most prior studies, I may not be able to detect a low level chronic offending group. However, I should find the following three groups (1) Non-offenders (2) AL offenders and (3) LCP offenders. I expect to find evidence of AL limited offenders who should have declining patterns of offending by age, and LCP offenders whose offending should be more stable

across age groups and include greater involvement in violent offending. LCP offenders should be less prevalent than AL offenders. Measures of past year behaviors may not be adequate to classify individuals into abstainer and AL offending group that are exactly consistent with Moffitt's definitions derived from lifetime behaviors. Instead, the cluster analysis should identify groups who have normal and higher than normal levels of offending based on this duration of time. Therefore, the subsequent analysis to construct overall functioning profiles will be derived from a dichotomous non-offender (persons with no or normal levels of offenses) versus offender (persons with higher than normal levels of offenses) classification along with indicators of concomitant developmental problems. These overall functioning profiles should differentiate normal levels of problem behaviors for this developmental stage from rarer offender clusters, and could further identify groups that may be consistent with those described in the Developmental Taxonomy.

In order to contextualize differences in life circumstances attributable to family income levels in emerging adulthood I will describe differences in demographic characteristics, protective factors, self-reported offending measures, developmental problems, and latent class derived offender and overall functioning profiles according to poverty status. Next, I will explore the efficacy of four protective factors as buffers of poverty for specific types of antisocial and behavior problems; logistic and multinomial logistic analyses will be used to evaluate their effects after controlling for other relevant factors. The study hypothesis; description of the sample; dependent, independent,

intervening, and control variables; and the analytical plan for accomplishing these goals are outlined below.

### **Hypotheses**

Based on the preceding literature review, several important issues have been identified that will be the subject of this investigation. The following hypotheses will guide my research:

H<sub>1</sub>: Consistent with prior research, I expect to find that offending among contemporary Americans declines with age during emerging adulthood.

H<sub>2</sub>: Gender differences in offending, as predicted by Moffitt (1993), will be found among American emerging adults.

H<sub>3</sub>: Two or more groups of mostly male high rate offenders who differ in types and severity of offending consistent with AL and LCP offender types described in Moffitt's (2008) Developmental Taxonomy will be found in the general population of American emerging adults.

H<sub>4</sub>: As predicted by both AGT and the Developmental Taxonomy, poverty will be associated with higher offending and concomitant problems during emerging adulthood.

H<sub>5</sub>: Protective factors that provide mechanisms of social control consistent with the theoretical propositions of AGT—having a greater sense of community cohesion, economic support, attending church more often, or the belief religion is important—will protect emerging adults from offending and concomitant problems.

## Sample

The 2003 NSDUH employed a state-based sampling plan and a multi-stage cluster technique to obtain a random sample of households in the United States. Sampling strata consisted of 900 equal sized Field Interview (FI) regions; 48 regions were identified in each of the 8 largest states and 12 regions identified in each of the 42 remaining states and in the District of Columbia. Stratification of the sample also took place based on the Metropolitan Statistical Area (MSA) size (e.g. urban/rural), SES and racial make-up of the regions. Each region was divided into *segments*, consisting of small groups of adjacent census blocks, which were the primary sampling units (PSUs). Dwelling units in segments were listed in a standardized order and were selected by systematic sampling. Initial screening was conducted to identify any additional dwelling units within segments and roster all eligible persons residing at selected addresses. The rosters were then used to select persons into the sample. A final sample of 81,631 civilians living in households and non-institutionalized group quarters (including college dormitories and homeless shelters) was identified.

The primary focus of this national survey is on illicit drug use, so adolescents (aged 12 to 17 years) and young adults (aged 18 to 25 years) were oversampled. The study was designed to obtain three approximately equal groups of individuals ages 12 to 17, 18 to 25, and 26 and older. Size measures used in selecting the area segments were coordinated with the dwelling unit and person selection process so that a nearly self-weighting sample could be

achieved in each of five age groups (12-17, 18-25, 26-34, 35-49, and 50 and older). The achieved sample for the 2003 NSDUH was 67,784 persons. The public use file contains 55,230 records due to a sub-sampling step used in the disclosure protection procedures. Minimum item response requirements were defined for cases to be retained for weighting and further analysis (i.e., "usable" cases). The study yielded a weighted screening response rate of 91 percent and a weighted interview response rate for the Computer Assisted Interview (CAI) of 77 percent (of the original state sample). The large sample size eliminated the need to oversample racial/ethnic groups (further details of the sampling technique are available at [www.oas.samhsa.gov/NHSDA/2k3NSDUH/appA.htm](http://www.oas.samhsa.gov/NHSDA/2k3NSDUH/appA.htm)).

NSDUH uses computer assisted and personal interviewing (CAPI) conducted by a field interviewer as well as audio computer-assisted self-interviewing (ACASI). Respondents were assured their identities would be confidential and responses would be anonymous. Answers to sensitive questions were gathered using ACASI. During the ACASI portions of the interview, respondents listened to prerecorded questions through headphones and entered their responses directly into a computer without the interviewer knowing how they were answering. Questions about individuals' sense of community were asked of a representative proportion of emerging adult respondents, the analyses presented here use this sub-sample who do not differ from the original sample on measure of age, gender, race/ethnicity, poverty or urbanicity. The final sample for this study contains 16,108 emerging adults living

in households, non-institutionalized group quarters (college dormitories, rooming/boarding houses, shelters, migratory workers camps, halfway houses), or civilians on military bases.

## **Measures**

### **Dependent Variables**

All dependent variables are constructed from responses to questions that ask about past year behaviors or symptoms. All dichotomous dependent variables are coded as no=0 and yes=1, where yes indicates the presence of problematic behavior or characteristics.

Physical and Emotional Health. The data included a single self-reported measure of respondent's physical health. Respondents indicated if they were in excellent, very good, good, fair, or poor health. I recoded this into a dichotomous variable, so that respondents reporting fair or poor health (=1) are considered to have health problems.

The data also provides a single variable related to respondents' psychological and emotional functioning indicating the presence of a serious mental illness. Serious mental illness is defined as having at some time during the past year symptoms that would constitute a diagnosable mental, behavioral, or emotional disorder that met the criteria in the Diagnostic and Statistical Manual of Mental Disorders, 4th edition (American Psychological Association 2000). This variable is a composite measure created from a series of questions (the K6 scale) asked of respondents that would establish the presence of a mental

disorder based on DSM-IV diagnostic criteria. The development of this scale was based on a methodological study designed to evaluate several screening scales for measuring SMI in the NSDUH. The data also include 12 variables indicating whether respondents are clinically dependent on alcohol, marijuana, illegal drugs (heroin, cocaine, crack, hallucinogens, inhalants, pain relievers, tranquilizers, stimulants, or sedatives), or psychotherapeutic medications. I recoded these into a single substance dependence variable with the following 4 categories (based in part on the latent class model of overall functioning): none (=0), alcohol or marijuana only (=1), drug only (=2), and multiple types (=3) of dependence.

Social Problems. The construction of measures indicating good social functioning often involves making value judgments. However, as Sandefur and colleagues (2005) suggest, one “pattern of events during the early twenties [that] clearly has negative consequences: having a child out-of-wedlock and attaining little or no post-secondary education” (p. 294). According to Moffitt’s (1993) taxonomy, these are the types of problems that should be analogous to LCP offending. In the context of AGT such problems would be facets of “cumulative disadvantage” which should be associated with offending. I use measures of marital status, parenthood (including pregnancy) and educational status to measure social problems. Early adults who (1) are not currently enrolled in school and have not completed high school or (2) are under the age of 20 and are unmarried with children or pregnant face significant problems that are likely to adversely affect their lives. I created a 4 category social problems variable

that indicates the presence of none (=0), one (no HS degree=1; unmarried parent < 20=2), or both (=3) of these social problems.

Arrests. The data allows for 3 dichotomous measures of past year arrests (property, drug, and violent). Respondents were asked a series of questions to assess whether they had been arrested in the past year for any one of multiple offenses. Property arrest is coded yes if respondents said they were arrested for a motor vehicle theft, theft, larceny, burglary, breaking and entering, robbery, fraud, counterfeiting, or arson. Drug arrests include DUI, public drunkenness, possession, or an "other drug related offense" (i.e. transporting, distribution). Violent arrest is coded yes if respondents said that they had been arrested for an aggravated assault, assault, sexual assault, rape, robbery, intimidation, weapons offenses or homicide. I used the dichotomous measures to create a 5 category arrest variable (0=none, 1=property, 2=drug, 3=violent, 4=multiple types).

Self-Reported Offenses. In addition to measures of officially sanctioned illegal behavior, there are five measures of self-reported crime that signify whether respondents agreed that they (1) stole something worth more than \$50, (2) attacked someone with the intent to harm them, (3) sold illegal drugs, or (4) drove while under the influence of alcohol or (5) drugs. Responses to the first three questions were coded as never (=0), one to nine times (=1), or ten or more times (=3). Response categories available in the data for the two questions about driving under the influence of alcohol or drugs were either yes or no.

In order to more fully examine the offending patterns of emerging adults and assess the types of offending that are particularly problematic at this stage, I



use latent class analysis to develop young adult typologies of offending.

Previous studies of early adult and adolescent offending attempt to take into account the reality that some extent of deviant behavior is normal during these developmental stages. Latent class analysis offers an improvement to this type of analysis by providing a probabilistic method for determining what extent of deviance may be considered normal as well as deriving profiles of offending that typify young adult offenders.

Preliminary chi-square analyses of self-reported offending and arrest by gender were conducted in order to determine which variables should be included in the construction the offending profile variable. Results indicate significant gender (see Table 1) and age (Table 2) differences for all measures of offending and arrest. Visual representations of the chi-square analysis for gender are shown in Figure 3. Figure 4 shows the distribution of offenses and arrests across gender and age categories (chi-square statistics were not computed for gender and age categories due to sparse distribution in some cells). These figures clearly show that emerging adult self reports of offending behaviors are much more prevalent (*normal behavior*) than are self-reported arrests. Consequently, I use the five measures of self-reported offenses in the latent class analysis to construct offending profiles that distinguish normal from abnormal levels of offending behavior for emerging adults.

Latent-class analysis can be considered a probabilistic extension of K-means cluster analysis. Unlike K-means cluster analysis, latent class analysis is model-based and provides the advantage of using statistical criteria for deciding

among different cluster solutions (Magidson and Vermunt 2001; Magidson and Vermunt 2002). The method is related to mixture models and involves minimizing within-cluster co-variances between indicators and maximizing variance between different clusters.

Several measures of fit are available with the latent class modeling approach (see Tables 3 and 4). The analyst is able to choose a model from solutions with different numbers of clusters by way of the Bayesian Information Criterion (BIC) which is calculated from the log-likelihood of the fitted model along with penalties associated with the number of parameters estimated and the number of cases included in the analysis (Magidson and Vermunt 2002). The model with the smallest BIC is generally preferred because it indicates a good balance of model fit and parsimony: that is, relatively fewer parameters. In arriving at an optimal solution it is preferable to investigate several variants of model structure, which sequentially relax assumptions regarding the covariance structure of the indicators (Magidson and Vermunt 2002). The most restrictive model is one in which indicators are assumed to be independent within clusters and error variances are assumed to be independent of class. The next set of models relaxes the latter assumption and allows for cluster dependent differences in error variance.

Further, the derived latent classes describe different subgroups of participants based on the response patterns of included variables; and the analysis produces a categorical latent variable that represents the profiles of individuals. Latent class analysis assumes a simple parametric model and uses

the observed data to estimate parameter values for the model. This model based approach is preferable to more subjective grouping techniques such as cluster analysis (Magidson and Vermunt 2002). Model parameters are estimated using the maximum likelihood (ML) criterion. A second determinant is the “entropy” statistic which ranges from 0 to 1 with values closer to 1 indicating clear placement of individuals into classes (Vermunt and Magidson 2003). The agreement between predicted and actual classification can also be discerned by examining the overage overlap of the two in each of the hypothesized latent classes. For each participant the probability of being in each profile is calculated; classification into one of the profiles is determined by the individual’s highest class probability. The latent class analysis for the present study was conducted using Latent Gold 4.5 (Vermunt and Magidson 2005).

The five self-reported offense variables were used in the latent class analysis to create a taxonomic variable to reflect offending. The analysis revealed that a 4-class solution had a better fit to the data than did a 1, 2, or 3 class solution, as evidenced by lower BIC values and classification errors and (see Table 3). Offending profiles of emerging adults are shown Figure 5 and Tables 5 and 6; the profile plot shows the percentage of individuals in each cluster who were engaged in each problematic levels of the included variables (the proportion who respond no or never for each variable are not depicted in the plot; response pattern distribution and the modal classifications are shown in Appendix A).

The offending patterns of a majority (85%) of early adults are included in profile 1, as can be seen in the plot individuals in this cluster can best be described as being “low” level offenders. In fact, 64.7% of the sample reported no offending in the past year. For most offenses only 1% or less of emerging adults in the low offending cluster reported committing the offense. However, 17% said they had driven under the influence of alcohol and almost 4% said they had attacked someone with the intention of causing them harm between 1 to 9 times in the past year. As indicated in Table 6, 89% of young adult women and 81% of men belong to this cluster.

A relatively small proportion of young adults (0.6%) belong to cluster 4, which may best be described as a “Violent” offending cluster. A majority of individuals in this cluster reported attacking someone with the intent to harm (75%) or stealing an item worth \$50 or more (70%), and 47% reported selling drugs. However, fewer emerging adults in cluster 4 reported driving under the influence of alcohol (10%) or drugs (2%) compared to the other high offending clusters. Cluster 3 also appears to be a high offending profile that contains a relatively small proportion of emerging adults, slightly more than 2% of the sample. This cluster can be distinguished from the other high offending clusters by the relatively higher proportion who report driving under the influence of drugs (58%) and selling drugs (41%). Many who belong to this cluster also report driving under the influence of alcohol (25%), having attacked someone with the intent to harm (24%) or stealing (10%). I will refer to cluster 3 as the “Drug Sales” profile.

The largest offender cluster contains 12% of all emerging adults. This cluster can best be described as the “Substance Involved” cluster. The vast majority of emerging adults in this cluster report driving under the influence of alcohol (92%) or drugs (99.7%) and almost a third report selling drugs. Individuals in this cluster are somewhat less likely to be involved in violence and/or stealing than members of the other two high offending profiles. Based on their level of offending, individuals in “Low” offender profile are considered to have normal levels of offending for this developmental stage. Profiles for clusters 2, 3, and 4 show patterns that indicate individuals in these clusters exhibit significant levels of antisocial behavior. Individuals in these clusters are coded as offenders (versus non-offenders) on the dichotomous measure of antisocial behavior.

Overall Functioning. Researchers typically use multiple indicators of social, emotional or behavior problems and consider individuals to be functioning well based on meeting criteria demonstrating competence on a majority of those measures (for example, DuMont, Widom, and Czaja 2007). I conducted latent class analysis using five measures of well-being (overall health, serious mental illness, drug dependence, arrest, and social problems) in addition to the dichotomized measure of antisocial behavior (“Behavior Problems”) described above to construct profiles of overall functioning. The behavior problems variable indicates if individuals are in the normal offending profile (coded as 0) or one of the offending profiles that indicate higher than normal levels of offending (coded as 1). The latent class analysis used analogous problems to determine if one or

more categories of offenders can be identified in the general population based on higher than normal levels of offending and analogous behaviors. The analysis indicated that the variable physical health was not a significant contributor in the model structure of the latent variable; as a result, it was dropped from the analysis. Analysis of the remaining variables revealed that a 3-class solution had a better fit to the data than did a 1 or 2 class solution, as indicated by a lower BIC values and classification errors (see Table 4: the cluster distribution of response patterns frequencies is available in Appendix B). Profiles of emerging adult overall functioning are shown Figure 6. The profile plot shows the percentage of individuals in each cluster who exhibited problems at every level of the included variables.

Table 7 shows the distribution of indicators and covariates within the functioning clusters, and Table 8 shows their distribution across clusters. Profile 1 contains the majority of emerging adults in this sample (87%), as can be seen in the profile plot individuals in this cluster can best be described as having “low” problems. As indicated in Table 7, about 14% of individuals in this cluster meet the criteria for serious mental illness, 13% have not graduated from high school, 7% self-report a high level of offending, 4% are dependent on either alcohol or marijuana, 1.5% are unmarried parents under the age of 20 years, and 1% reported a past year arrest for a drug or alcohol offense.

Ten percent of emerging adults belong to cluster 2, which may best be characterized as a “high behavior problem” cluster. About one-fifth of individuals in this cluster have symptoms indicative of serious mental illnesses, 60% are

dependent on one or multiple substances, 85% self-report high levels of offending behaviors, 22% were arrested at least once in the past year, and 14% did not graduate from high school. Individuals in the third cluster may be distinguished from the other clusters by their level of arrests (74% had at least one arrest), even though fewer (35%) self-report behaviors that would classify them into the high offending cluster. Many persons in this cluster also have academic failure (63% are not high school grads). About 3% of all emerging adults belong to this cluster. Compared to the high behavior problem cluster, more emerging adults in this cluster have symptoms of serious mental illness (24%).

#### Independent Variables.

The independent variables in this analysis of primary interest are gender, age and poverty status. Gender is a dichotomous variable (male=0; female=1). The age of the respondents range from 18 to 25; the available data includes 18, 19, 20, 21, 22 & 23, and 24 & 25 year old groups. Age is not used in the final regression analysis because it is too highly correlated with educational status. Educational status is likely a more important indicator of overall functioning than age in years.

The data contains a variable indicating whether the respondent is not-poor (=0: has an income greater than 200% of the 2003 Federal Poverty Standard (FPS) given the size of his household); is poor (=1: has an income 101% to 200% of FPS; or is very poor (=2: has an income at or below the official FPS). In the regression analysis dummy variable for poor and very poor emerging adults

are used in comparison to the non-poor reference category. In most cases in the NSDUH emerging adult respondents self report the number and income of family members who reside in their household. In some cases (about 3% overall), a proxy (typically a parent) provided this information to interviewers. As might be expected, this information was provided by proxies more often for 18 and 19 year olds (30% and 14%, respectively) than for older participants (1% or less at all other ages).

#### Intervening Variables.

Five variables that influence the relationship between poverty and competent functioning are investigated as protective factors: neighborhood collective efficacy, economic support, religious attendance, and religious values. (All dummy variables are coded as no=0 and yes=1). The data provide measures of both individual level and family level social and economic supports. The individual level government economic support variable indicates that the emerging adult receives the benefit due to his or her own economic and family status. For example, those who receive these kinds of support may qualify based on a death or separation from their parents, or as a result of their own status as parents. Individual level supports include social security or railroad retirement payments, Supplemental Security Income (SSI-*disability*) payments, public assistance, welfare or job placement or child care, and child support payments. Family level income supports are afforded based on the combination of the economic status and family size of the young adult's family of origin. Family supports can also include food stamps in addition to the items mentioned



above. In the logistic regression analyses a dummy variable indicating the receipt of *any* of these types of individual or family economic support is used to determine if income support buffers the effects of poverty.

Respondents were asked a series of questions intended to measure the extent to which they feel a sense of neighborhood cohesion. The responses available are: (1) Strongly Disagree, (2) Disagree, (3) Agree, and (4) Strongly Agree. I used parallel analysis (PA) and principal component analysis (PCA) to create a composite scale. Table 9 shows the individual items included in the scale and their factor loadings ( $\alpha=.77$ ). Principal component analysis standardizes each item in the scale to zero mean and unit variance, and then weighs the items according to their factor coefficient (Hamilton, 2003, p. 270). Items in the neighborhood collective efficacy scale all loaded on a single factor; the unrotated principal component solution which explains as much of the variance in the original variables as possible is retained as rotation did not appreciably improve interpretability of results. Standardized scores ranged from -2.28 to 1.05 ( $\mu=0.004$ ,  $s.d.=0.009$ ) with higher scores indicating higher levels of neighborhood cohesion.

The data also allow for the use of two measures of religiosity. The first is a single item indicator of church attendance. Respondents are asked how often they attended church in the past year, available responses are: never, 1 to 2 times, 3 to 5 times, 6 to 24 times, 25 to 52 times, or more than 52 times. The church attendance variable was recoded as: never=1 (0 times), rarely=1 (1 to 24 times), or often=2 (25 or more times).

The religious values indicator (“religiousness”) is a composite measure of respondents’ indications about the level of importance of religion in their daily life in respect to the following three statements: (1) my religious values are very important, (2) my religious beliefs influence my decisions, and (3) it is important that my friends share my religious values. The responses available are: (1) Strongly Disagree, (2) Disagree, (3) Agree, and (4) Strongly Agree. The results of the principal component analysis for this scale ( $\alpha=.81$ ) are also shown in Table 9. Parallel analysis confirmed the existence of one factor; thus, the unrotated solution was used for scale construction. The scale score weighs each item according to its importance to the concept of religiousness; standardized scores ranged from -1.66 to 1.42, ( $\mu=.023$ ,  $s.d.=0.009$ ) with higher scores indicating greater religiousness.

### Control Variables

To adequately examine the relationships between poverty and adverse outcomes for young adults I control for some of the variables that may influence these relationships—race, educational, employment, marital, and parental status. (Dummy variables are coded as no=0 and yes=1). Respondents self-identified their race/ethnicity as White, non-Hispanic, African American, Hispanic, Asian or Other; dummy coding was used for regression analysis with Whites being used as the reference category.

The level of education is controlled with dummy variables indicating some college or college graduate, with the reference category being high school education or less. Another dummy variable is used to indicate whether

individuals are still attending school (either high school or college) or not. The data also includes a variable that indicates whether respondents are employed (=1) full-time or part-time, or unemployed ((=0), currently seeking work, not working or not looking for work). The marital status variable indicates whether the respondent has never been married (=0), is currently married (=1), or not married (=2: widowed, separated, or divorced). The parental status dummy variable indicates whether or not the respondent is a parent.

I also control for the residential status and mobility of the respondent along with the population density of the community in which they reside. The residential mobility variable indicated whether the respondent never moved, moved once, or twice or more in the past year. This variable was recoded into dummy variables to indicate if the respondent never moved or moved one time (=0), or moved twice or more (=2). The population density variable indicates whether or not the census block in which the respondent resides is in a rural area (as defined by the 2003 Census Bureau definition).

### **Analytic Plan**

The statistical analysis will include using chi-square analysis to describe differences among American emerging adults in demographic characteristics, protective factors and measures of offending and analogous behavior according to their poverty status. In addition, chi-square analysis is used to examine differences in the prevalence of protective factors and dependent variables according to gender and age. Binary and multinomial logistic regressions are

used to evaluate the efficacy of the four posited variables as protective factors and to in the final analyses to report predicted probabilities of belonging to the overall functioning profiles in the presence of the protective factors and controlling for other relevant variables for emerging adults according to their economic status.

Descriptive tables present the results of weighted analysis using cases with available data. The sample weight variable represents the total number of the target population each person in the sample represents. Two additional sample design weighting variables are used in order to estimate the variances and standard errors. Descriptive tables showing the results of latent class analysis are based on the unweighted frequency distribution of responses to included variables in non-missing cases as is required for classification. The vast majority of cases have no missing values on demographic variables; only 24 have missing values for parental or education status, or social mobility, only 3 of these have missing values on all three. Twelve percent of cases (n=1,991) have missing values on one or more of the neighborhood scale items; but, less than .05% had missing values for more than 5 of the 10 items. One percent of cases (n=119) had missing values on one or more of the religiosity scale items, 41 had missing values on all three items. Less than one percent of cases (n=96) are missing on the church attendance question; but there are no cases missing both the church attendance and all three religious values items. There were no missing values on the economic support variables.

Multiple imputation of missing values on predictor variables (neighborhood scale items, religious attendance, and religious values items) were computed using STATA 10. Missing data was replaced using the statistical software package ICE (for imputation by chained equations), which is essentially the Stata implementation of the R library MICE (for Multiple-Imputation by Chained Equations). The non-missing neighborhood scale items, poverty status, race, age and gender were used to impute missing values for the neighborhood scale items. Non-missing church attendance and religious values items, gender, race, and age are used to impute missing church attendance and religious values scale items. Values for the 6 cases missing social mobility information were not imputed because values on the dependent variables for these cases were also missing.

Missing values were not imputed for any of the dependent variables (physical health, serious mental illness, substance dependence, behavior, arrests, and social problems) or for any of the self-reported offending variables from which the offending cluster variable was derived. In all, 4 cases have missing values on social problems variables and 240 cases (1.5%) have missing values on offending; as a result, 244 cases have missing values for the overall functioning variable. Consequently, 1% of all cases of non-poor ( $n=113$ ) or poor ( $n=55$ ) emerging adults and 2% of cases of those in poverty ( $n=76$ ) have missing values on overall functioning. The results presented in logistic regression tables show weighted estimates based on cases with non-missing values for the dependent variables.

## CHAPTER IV

### FINDINGS: DIFFERENCES BETWEEN POVERTY GROUPS, AND BY GENDER AND AGE

#### **Demographic Characteristics by Poverty Status**

##### **Gender, Race, and Age**

There are important gender, racial, and age differences among very poor, poor, and non-poor American emerging adults. The results of weighted chi-square analysis (shown in Table 10) are representative of all emerging adults living in the United States in 2003. Half of all American emerging adults are poor (25%) or very poor (25%). Only slightly more emerging adult men than women have incomes relative to their family size that can be characterized as poor (51% compared to 49%). However, among American emerging adults who are very poor substantially more are women (57%), and correspondingly fewer of the non-poor are women (45%).

The poverty status of emerging adults also varies according to race. Minorities are overrepresented among the poor and very poor. Blacks and Hispanics, in particular, are under-represented among the non-poor; together they constitute 31% of the population of American emerging adults but only 21% of those who are not poor. Notably, Black emerging adults are over represented

among the very poor (21%) in comparison to their proportion of the emerging adult population (13%). Asians and individuals who characterize their race as “other” are proportionally represented among each economic group. In contrast, Whites who constitute 63% the emerging adult population are considerably underrepresented among the poor (55%) and very poor (50%), and over-represented among the non-poor (73%). However, the vast majority of emerging adults who are poor or very poor are White.

The differences in poverty status related to the age of emerging adults are less obvious than those of gender and race. It is likely that the family incomes of older emerging adults are more likely to represent their own earning and those of their partners, while the incomes of those who are at younger ages are more likely to include the income of a parent(s). As indicated in Table 10, among very poor emerging adults, 95% live in families whose income is less than \$20,000 per year. Conversely, among the non-poor only 1% live in families with very low incomes; these are most likely emerging adults who live alone.

### Education and Employment

In addition to family income, the income of emerging adults is also likely to be highly dependent upon their education and work status. There are noticeable differences in employment across the economic groups of emerging adults. More very poor early adults are not working or looking for work (“Other”), and of those that are employed more are working part time (29%) than full time (25%). A larger percent of very poor emerging adults (12%) are unemployed (or seeking employment), than the poor (8%) and those who are not poor (7%). Among poor

emerging adults, half are employed full time and about a quarter are working part time, this differs only slightly from non-poor emerging adults among whom 55% work full time and 25% work part time. One-fifth of poor emerging adults are not in the labor force compared to only 13% of those who are not poor.

As might be expected, a greater proportion of those who are poor (19%) and very poor (22%) have not graduated from high school and are not currently enrolled in school. Although fewer of non-poor emerging adults (10%) are similarly situated, this still constitutes a considerable number of American emerging adults whose future life opportunities could be potentially limited by their low level of educational attainment. In all, the proportion of emerging adults whose highest level of education is high school or below and who are also not currently enrolled in school is comparatively high (39%): 35% of the non-poor, 48% of the poor, and 40% of the very poor. Among emerging adults who are of traditional college age (younger than age 23) about one quarter are not attending either high school or college.

Among very poor emerging adults who are not in the labor force (Other, employment status), 39% are full-time or part-time college students (73% of those 23 or younger); these figures seem to indicate that for many emerging adults their poverty status is related to being a college student. So, it is not surprising that among emerging adults who have graduated from college and are not currently enrolled in post-graduate education (7% of all emerging adults), the vast majority (77%) are not poor.



## Marriage and Children

There are seemingly consequential differences in childbearing and marriage patterns according to the poverty status of emerging adults. As shown in Table 10, 14% of non poor emerging adults are married, but far fewer of the non-poor have children (12%) than do the poor (28%) or very poor (25%). In fact, a much greater proportion of very poor (19%) and poor (17%) emerging adults who have children have never been married than have the non-poor (6%). Further, perhaps equally as consequential, are greater proportions of the very poor (12%) and the poor (10%) who have two or more children. Slightly more emerging adults who are poor have children than the very poor (28% compared to 25%) but more poor than very poor parents are married (21% versus 11%).

## Residential Mobility and Urbanicity.

Residential mobility can be a cause or consequence of poverty, so it is not surprising that emerging adults who have moved a number of times in the past year are overrepresented among the poor and very poor. In addition, non-rural residence is slightly higher among non-poor emerging adults (82%) compared to the poor (77%), or very poor (76%).

## **Poverty Status and Protective Factors**

### Economic Support

As shown in Table 11, 25% of emerging adults receive economic support or child support (from a public or private source): 37% of the very poor, 31% of the poor, and 18% of those who are not poor receive at least one source of

economic support. As might be expected, fewer emerging adults who are not very poor receive assistance. But, one surprising finding is how few poor and very poor emerging adults receive child support, given the number who have children and are not married.

Among the very poor, the most typical social supports are food stamps, followed by public assistance, welfare/job placement/ or child care. Among poor emerging adults, the most typical types of assistance include food stamps, child support payments, and social security or retirement income; these are also most typical for the non-poor. In addition, a greater proportion of the very poor (9%) have family members who rely on SSI (disability insurance) payments as a source of income compared the poor (6%) or not poor (3%). About 8% of all emerging adults have at least one household member who receives social security. Food Stamps, the most typical type of economic support; are used by one in four very poor and more than one in ten of the poor emerging adults.

#### Religious Attendance and Religiousness

The data show no significant differences in religious attendance for emerging adults by poverty status. Slightly over a third of emerging adults never attend religious services; most (42%) say they attend between 1 and 25 times a year and about one-fifth attend church often.

In spite of the similarity in church attendance, non-poor emerging adults were less likely to indicate that religion was important in their daily lives as compared to the poor and very poor. The majority of emerging adults (69%) agree that their religious beliefs were important and that they influenced their

decisions; but, there was an inverse relationship between poverty status and the importance of religious beliefs. Less than one-third of emerging adults agreed that it was important that their friends share their religious beliefs. Again, significantly fewer of the non-poor (26%) agreed than did the poor (30%) or very poor (32%). The mean religiousness scale scores reported in Table 11 show that among emerging adults greater poverty status is associated with a greater attachment to religion.

#### Neighborhood Cohesion Scale Score

In general, there is a negative relationship between poverty status and agreement with the positive aspects of neighborhood cohesion (see Table 11). Although about the same proportion of each group indicate that they live in close-knit neighborhood, the differences are significant for the other eight indicators of neighborhood cohesion. Slightly fewer very poor emerging adults indicate that they live in cohesive neighborhoods than do those that are poor (the differences across items range between 2 and 5%); and the non-poor are also more likely than the very poor to agree to positive neighborhood conditions (between 6 and 9%). However, the mean difference in the neighborhood cohesion scale scores is not significantly different across economic groups.

### **Poverty Status and Offending and Analogous Behavior**

#### Health and Emotional Well-being

As shown in Table 12 the differences in overall health by poverty status is significant; more very poor emerging adults indicated that they had fair or poor

overall health than did poor or non-poor (8%, 5, and 4% respectively). However, the data show little difference according to the poverty status of American emerging adults in regard to having a serious mental illness or being alcohol or drug dependent. This is true across almost all categories of illicit and legal drugs; the only exceptions are in the use of pain relievers and cocaine. Although the differences are significant in these two categories ( $p < .010$ ), there are only small differences in the proportion of emerging adults dependent on these two drugs across the groups. In all, 11% of all emerging adults are drug (8%) or alcohol (7%) dependent; with an obvious overlap between these two groups. Further, 14% of all emerging adults exhibit symptoms consistent with a serious mental health problem.

### Behavioral Functioning

Table 12 also presents poverty group differences in official sanctions for criminal behavior, this includes the following categories: (1) property arrest(s), (2) drug or alcohol related arrest(s), (3) violent arrest(s), (4) or arrests for more than one of the preceding types, "multiple types".

About three times as many emerging adults reported being arrested for drug crimes compared to violent or property crimes (3% compared to 1% or less) across all poverty groups. Even though there are significant differences ( $p < .010$ ) in arrests according to poverty status, the differences in the proportion of each group who have been officially sanctioned for criminal conduct are small. However, since the survey only samples emerging adults currently living in households or college dorms, it is important to keep in mind that the most serious

offenders (those who reside in detention center, jails, and prisons) are not accounted for in the data. Overall, 6% of emerging adults reported that they had been arrested in the previous 12 months.

Chi-square analysis also indicates significant differences between poverty groups of emerging adults in their self-reported illegal behavior. In all, 16% of emerging adults belong to high offending clusters; 14% of the very poor and poor, and 17% of non-poor emerging adults. In particular, a higher proportion of non-poor emerging adults belong to the substance involved cluster.

### Social Problems

There are significant differences in the distribution of social problems indicators among the economic groups of emerging adults. About 15% of all emerging adults have not completed high school and are not currently enrolled in school; but, far more emerging adults who were poor or very poor (19 and 22%) than non-poor emerging adults (10%) were in this situation. Similarly, more emerging adults under the age of 20 who were very poor were unmarried with children (3%) than were the poor (2%) or non-poor (1%). Less than one half of 1% of emerging adults under the age of 20 are both not high school grads and parents.

### Overall Functioning and Poverty

Significant differences were also found in the overall functioning of emerging adults according to poverty status (see Table 12). However, the vast majority of all emerging adults (91%) are in the low problem profile. Even though 9% of emerging adults in each poverty category exhibit high problem profiles,

more non-poor emerging adults are in the behavior problems profile (8%); while more of the very poor and poor are in the high multiple problems cluster (3% and 2%) compared to the non-poor (1%).

### **Gender and Age Differences in Protective Factors**

Preliminary analysis shows no relationship between religious attendance and any indicator of individual problems or overall functioning, as a result, I will not investigate it as a protective factor. Table 13 shows the distribution of economic support, religiosity, and neighborhood cohesion according to the gender and age of emerging adults. About 14% of all emerging adults reported receipt of at least one type of assistance in their household; in general, the receipt of economic support was less prevalent at older ages. More women than men reported receiving assistance at ages 18 and 19; but, at ages 20 and above there are only small differences in the receipt of social support according to the gender of emerging adults.

There are also important differences in the average religiosity scale score among age and gender groups of emerging adults. Women at all ages tend to score higher than men on the religiosity scale, but there is no apparent trend by age. As might be expected, the relationship between scores on the neighborhood scale and gender by age categories of emerging adults was not statistically significant. This would indicate no important differences in levels of neighborhood cohesion among gender/age groups of emerging adults.

## **Gender and Age Differences in Offending and Analogous Behavior**

As expected, I found significant gender and age differences for all measures of self-reported offending and arrests (depicted in Tables 2 and 3). In order to further explore emerging adult desistence, I also examined differences in the offending profiles and dependent variables according to gender and age.

### **Self-Reported Offending Profiles**

Figure 7 and Table 14 show gender and age group differences for offending profiles constructed by latent class analysis of self-reported offenses. Figure 6 shows a clear pattern of gender and age differences. The proportion of women in the largest problem cluster, the high substance involved profile, decreases as the age of women increase. Among men, however, their proportions increase from ages 18 to 21 and decline at later ages. Therefore, at age 18 the proportion of men and women who exhibit this behavior is about the same, by 21 and thereafter twice as many men as women are in this offending cluster. The “Drug Sales” and “Violent” offending profiles (also shown in Figure 6) are predominantly made up of males. Indeed, very few women are included in these clusters, less than 1% of all women at any age. There is a general pattern that indicates less male involvement in these profiles at later ages.

### **Measures of Overall Functioning**

Table 15 shows the proportions of gender and age subgroups in the problem categories of the five outcome variables and overall functioning profile (no or none categories are not shown). The gender and age patterns for the

individual indicators of functioning are clearly show in Figures 8 through 10.

Consistent with previous studies, more women than men in this sample have a serious mental illness (18% vs. 11%); and more men than women are substance dependent (14% vs. 9%), have serious behavior problems (20% vs. 11%) or social problems (19% vs. 14%), or report a past year arrest (9% vs. 3%).

In all, 23% of emerging adult women and 21% of men have a serious mental health problem or are substance dependent. As shown in Figure 7, some types of problems are more stable than others across age groups; in particular, the proportion of emerging adults with drug only dependence is relatively stable across age categories, and there is only a slight decline in the prevalence of serious mental illness at older ages. In contrast, the patterns of alcohol or marijuana only, drug only, or multiple substance dependence are somewhat similar to that of self-reported offending behavior. In general, the proportion of men who are dependent increases from age 18 to 21, and then declines at later ages. Women's involvement in substances, in general, is relatively lower and more stable at younger ages than men's but also tends to decline with age.

Figure 9 shows the distribution of problem behavior indicators according to gender and age. Clearly noticeable is the difference between the proportion of emerging adults in the sample that are in the high self-reported offending profiles (15%) and the proportions that have been arrested (6%). During emerging adulthood, arrests for drug crimes are most prevalent and overall about 5 times as many males as females report a past year drug arrest (5% compared to 1%). About 1% of all emerging adults report a past year violent arrest(s) or property



arrest(s) or being arrested for more than one crime type; about twice as many males as females report a past year arrest for a violent or property crime. Males also predominate among emerging adults arrested for multiple crime types (overall, 1.5% vs. .5%). The patterns shown in Figure 8 demonstrate declines in offending during emerging adulthood; however, the decline seems to begin at younger ages for women than it does for men.

Figure 10 shows the distribution of social problem indicators across gender and age groups. Clearly, more emerging adults have not graduated from high school (14.5%) than are unmarried parents at young (<20 yrs) ages (1.5%). Clearly, there are higher proportions of older emerging adults who have not graduated from high school; this may indicate that graduation rates are rising. However, it simply may be an indication that before age 21 many students with academic troubles who may never graduate are still enrolled in school. An extremely small proportion of American emerging adults have both not graduated from high school and are parents under the age of 20 (less than 1% across groups; not shown in Figure 10, see Table 15).

Figure 11 shows the proportions of each gendered age group in the sample that belongs to the problem functioning categories of the overall problem profiles variable. In general, about 3 times as many emerging adults are in the substance involved cluster compared to the cluster characterized by high education problems and arrests. Approximately twice as many men as women are in the substance involved profile; and roughly three times as many men are in the arrest/education profile. Consistent with patterns observed among most

indicators of problems and functioning, the gender and age pattern for this variable also demonstrate general desistence of problem behavior during emerging adulthood. And again, we can see that women's desistence begins at an earlier age than does men's.

## CHAPTER V

### FINDINGS: PREDICTING INDIVIDUAL PROBLEMS AND OVERALL FUNCTIONING

#### **The Influence of Church Attendance, Neighborhood Cohesion, and Economic Support**

In order for the church attendance and neighborhood scale variables to be investigated as moderators of poverty on offending and co-occurring problems of emerging adults, it is necessary to establish that they are not correlated with poverty or the outcome variables (Baron and Kenny 1986). Logistic regression analyses show no significant relationships between religious attendance or neighborhood scale scores and poverty; neither variable predicts poverty status and neither is predicted by poverty status. Further, binary and multiple logistic regressions also indicate no associations between attending church or neighborhood cohesion and any category of the variables measuring early adult functioning, with two exceptions.

First, the relative risk of being an unmarried parent under the age of 20 was about 60% lower for emerging adults who attend church often (relative risk ratio (rrr)=.41, SE=.08915, p=.000). Second, the chances of the being a young unmarried parent were higher for emerging adults living in disorganized neighborhoods (rrr=.65, SE=.0531, p=.000). The predicted probability of

being a young unmarried parent is less than 1% for emerging adults who score at the mean or above on the neighborhood cohesion scale: the predicted probability is 4% for individuals whose scores are at the lowest level of the scale (this relationship is depicted in Figure 12). Even though both variables meet the criteria for moderation, subsequent logistic regressions did not reveal any significant relationships for interaction terms when they were entered into the analyses.

The provision of economic support is primarily based on the financial status of recipients; consequently, poverty is a causal antecedent to the receipt of support and therefore should be investigated as a mediator (Baron and Kenny 1986). To test for mediation economic support was regressed on poverty, using non-poor as the reference category, the odds of receiving economic support are increased by 59% for emerging adults who are poor (SE=0.1126, p=.000) and the odds are increased by 44% (SE=0.1062, p=.000) for emerging adults in poverty. Next, poverty was regressed on the variables measuring functioning (see Table 16) and then separate logistic regressions using poverty and economic support as predictors were run for each measure of functioning. The risks of property, violent, and multiple type arrest as well as not graduating from high school are significantly associated with receiving economic support; but these relationships are not in the predicted direction.

The relative risk of not graduating from high school is 68% higher (SE=.1246, p=.000); the risk of arrest for property crime is 91% higher (SE=.4253, p=.004); the risk of multiple types of arrests is 92% higher

(SE=.5627,  $p=.026$ ); and emerging adults have a 2.2 times greater risk of an arrest for violent crime (SE=.4690,  $p=.000$ ) if they receive economic support, after controlling for differences in poverty status. Further, receipt of economic support was predictive of being in the high arrest and education problem overall functioning profile: emerging adults receiving economic support have 2.2 times greater risk (SE=.3634,  $p=.000$ ) to be in this cluster rather than in the few problems cluster, after controlling for poverty status.

### **The Influence of Poverty and Religiousness**

The relationships between poverty and early adult outcomes have already been discussed in Chapter 4 and presented in Table 12 in terms of chi-square log-likelihood statistics. Table 16 shows the results of binary and multinomial logistic regressions showing the odds ratios or relative risks of adverse outcomes for the categories of the variables measuring functioning. At the bivariate level being poor or very poor is associated with 30 and 45% lower risks of being drug dependent, and about 20% lower odds of being in a high behavior problem cluster. There are also 75% and 94% greater risks of a property arrest, and 2.2 and 2.6 times greater likelihood not to graduate from high school and 2.8 and 3.2 times greater likelihood to both not graduate and be a young parent.

Additionally, for very poor emerging adults, but not for the poor, there is 65% greater risk of violent arrest and 96% greater risk of multiple types of arrests.

In order for religiousness and poverty to provide a clearly interpretable interaction term it is desirable for there to be no correlation between the two

(Baron and Kenny 1986). As reported earlier, there are significant differences among poverty groups in mean religiosity scale scores. It is possible for a moderator and a predictor variable to each have direct effects on outcome variables in addition to significant interaction terms. But, as is evident in the third set of logistic regression analyses presented in Table 16 the interaction between poverty status and religious scale scores suggests that religiousness does not fit the criteria for a moderator (protective factor); instead it appears to have direct effects across all groups of emerging adults regardless of poverty status. Consequently, the second set of logistic regression analyses presented in Table 16 (the middle rows) give the most salient information in regard to the effect of religion and poverty on emerging adult functioning. Figures 13 through 15 graphically display these relationships in terms of the predicted probability of each outcome based on poverty status and scores on the religiosity scale.

### Health Outcomes

As is evident in Figure 13, the chance of serious mental illness is lower for emerging adults who have greater attachment to religious values. The predicted probability of having a serious mental illness is about 18% for those who score at the lowest level of the religiousness scale; about 15% for those at the mean; and about 12% for those who have high religious values. The probability of serious mental illness is reduced by about 1% for the poor and about 2% for the non-poor (compared to those who are at poverty level) across all levels of religiousness scale scores.

In spite of the fact that the overall probability for drug or multiple substance dependence for emerging adults is comparatively very small, figure 13 shows that religious values have more influence on emerging adult substance use than does their poverty status. At the lowest levels of the religious values scale the chances are only slightly greater for non-poor emerging adults than the poor or very poor for drug only dependence (1.8%, 1.3%, and 1%, respectively), or dependence on multiple substances (3.2%, 3.0%, & 2.8%). At the mean value (0) of the religious scale and below there is 1% or lower probability of drug dependence and 2% or lower probability of dependence on multiple substances, across economic groups.

Religious values also seem to have a greater influence than poverty status for dependence on alcohol or marijuana. Emerging adults who scores are at the lowest levels of the religious values scale have about a 13% chance of dependence on alcohol or marijuana, while those who have the highest levels of religiousness only have a 6% chance. At the same time, these probabilities are only increased by 1% or less for the very poor and poor compared to the not poor. As indicated in the logistic regressions, the graphical depictions make clear that religiousness and poverty status have independent effects on serious mental illness and substance dependence.

#### Problem Behavior and Arrests.

The predicted probabilities of self-reported offending and the various types of arrest are shown in Figure 14. In general, the chance of being in problem behavior clusters are greater for emerging adults who are not poor (16%), than

for the poor (15%) or very poor (13%). But, as the graphs in Figure 14 clearly show, religion has an important influence on emerging adult problem behavior. For emerging adults with the lowest possible religious scale scores, the predicted probability of being in a problem behavior cluster is 29% for non-poor, 27% for the poor; and 24% for the very poor. For emerging adults at the mean value on the religious scale, the chances of being in a behavior problem profile are 16% for the non-poor, 15% for the poor, and 13% for the very poor. However, at the highest levels of religious values the probabilities are 9, 8, and 7% respectively. In fact, results shown on Table 16 indicate that after controlling for religiousness being poor or very poor is associated with 16 and 19% lower odds of being in a problem behavior cluster.

In spite of the fact that non-poor emerging adults self-report offending behaviors are associated with greater odds of being in a problem behavior profiles, they have lower risks of arrest for most types of offenses. Very poor emerging adults have twice the risk of arrests than the non-poor for multiple types of offenses, 1.8 times greater risk for a property crime, and 1.7 times greater risk for a violent crime. There was only one difference between non-poor and poor emerging adults' risks of arrest, the poor had about twice the risk of property arrest.

As indicated in Table 16 there are no significant differences between poverty groups in terms of their relative risks of drug arrest. Further, regardless of poverty status, twice as many emerging adults report drug arrest than property, violent, or multiple type arrests (see Table 12). Religious values are also



associated with emerging adult arrests; in particular, higher scores on the religious values scale are associated with lower probabilities of drug and multiple types of arrest. At the low end emerging adults have about a predicted probability of 4% of an arrest for a drug crime, but this is reduced to less than a 2% for the most religious. Similarly, emerging adults with the lowest score on the religious values scale have about a 2% predicted probability of multiple types of arrest, while those with the highest scores have less than one-half of one percent probability.

### Social Problems and Arrests

The likelihood of being a parent under the age of 20 is far less than the likelihood of not completing a high school education for American emerging adults; both religion and poverty have a significant influence on these social problems. Overall, the poor and very poor emerging adults have greater risks of school failure (2.7 and 2.2, respectively) than do the non-poor. Religious values are also significantly associated with high school graduation. For very poor emerging adults, those with the lowest values on the religiosity scale have a predicted probability of 26% of not graduating; this is reduced to 20% for the most religious. Among the poor, those with the lowest scores have an 18% chance of not graduating compared to a 14% probability for the most religious; and for the non-poor the least religious have a 12% probability of not graduating compared to a 9% for those with the highest religious values scores.

Less than one half of one percent of all emerging adults had not completed high school and been a young unmarried parent. Very poor and poor

emerging adults have greater risk (2.8 and 3.2 times greater) than non-poor emerging adults to have both problems.

### **Overall Functioning of Emerging Adults**

A multinomial logistic regression was used to predict membership in the problematic overall functioning profiles. Religiousness, poverty status and gender are the independent variables of primary interest in this study; the influence of race, education statuses, employment, parental and marital status, rural/urban residential status, and residential mobility are also controlled for in the analysis. Table 17 shows the results of the multinomial logistic regression predicting the problematic overall functioning outcomes. Figure 16 shows the predicted probability of being in the high behavior problem profile, and Figure 17 shows the predicted probability of being in the education problem and high arrest problem profile, in relation to poverty status and religious values after controlling for other influential variables.

The logistic regression results indicate that gender is related to being in both high problem profiles, even after controlling for other important variables. Emerging adult males have about 1.7 times greater risk than females of being in the high behavior problem profile and 3.2 times greater risk of being in the multiple problem profile. Emerging adults' current poverty status has a limited influence on overall functioning, Being very poor during emerging adulthood was associated with a 2.4 times greater risk than not being poor of having multiple problems, after controlling for other relevant variables. But, being poor

posed no greater risk of multiple problems in overall functioning than not being poor. Further, neither being poor nor very poor as compared to being not poor during emerging adulthood was associated with increased risks of behavior problems.

The influence of religious values on problematic overall functioning is clearly shown in Figure 17. The predicted probability of being in the behavior problem profile is about 9% across economic groups of emerging adults with the lowest levels of religiousness, after controlling for other relevant variables. The predicted probability of being in the behavior problems profile are about 4% across economic groups for those with the highest levels of religiousness.. In addition, as the predicted probabilities indicate, religiousness also has an influence on being in the multiple problems profile. The predicted probabilities of having multiple problems are extremely small (less than 0.3%), but, about double for emerging adults with the lowest levels of religiousness in contrast to those with the highest levels across all economic groups, even after controlling for other influential variables.

### **Limitations**

Studies of crime based on self-reported behaviors have limitations, especially questions concerning the degree to which respondents in surveys are willing to disclose such behavior. The interview techniques used in this study, in particular the use of headphones and hand held computers so that participants could directly enter their survey responses, were designed to enhance

participants' sense of anonymity and thereby their willingness to disclose sensitive behavior. A recent study of young adults (Babinski et al. 2001), indicates that they are more likely to self-report public disorder crimes than crimes against persons. Frequent offenders were found to more accurately report criminal behavior than occasional offenders. Importantly, self-report data also have certain advantages. In research on gender differences in crime, the data are not confounded with the differential response of the police or courts to crime by men and women. In this study, the small number of self-reported behaviors used to indicate violent and property crimes means many offenses are omitted unless an arrest occurred. In spite of this, the prevalence of some types of offenses, particularly at specific ages, was very high.

Other measures used in this study also have limitations that should be considered. First, the indicators of driving under the influence of drugs or alcohol were based on self-perceptions of being "under the influence". As a result, this measure relies on young adults to estimate whether they had surpassed the legal limit of alcohol or drug consumption before driving. This measure is perhaps better than that used in some studies (Schell, Chan, and Morral 2006) which simply ask if emerging adults have driven "after drinking" alcohol. Another recent study (Jewell, Hupp, and Segrist 2008) asked young adults about the number of drinks consumed within a given time frame (an hour) before driving. This may provide a more accurate indication of the pattern of drinking, but is still fraught with uncertainty since legal limits vary across states, and legal criteria for intoxication depend not only on the number of drinks one consumes but also the

weight and tolerance level of individuals. The measures of DUI used in this study may not be a valid indicator of DUI in a legal context; however, they indicate young adults' beliefs regarding the appropriateness of their behavior.

Two principal types of poverty measures are commonly used in social science research to estimate levels of economic well-being. Absolute income measures, like the official U.S. poverty threshold used in this study, attempt to reflect a true basic standard that remains somewhat constant over time (updated only to account for inflation); this is the standard typically used in studies of Americans (Iceland 2005). Relative measures of poverty, common in cross-national and European studies, classify poverty as a condition of comparative disadvantage assessed against an evolving standard of living. Relative poverty in most studies is arrived at by setting a threshold at a percentage of the national median household income. Both types of poverty measures have advantages and disadvantages. The main criticism of absolute poverty measures is that what people judge to be real poverty varies across time and place. Relative poverty measures address this shortcoming in part, but also have weaknesses associated with their use. In particular, relative thresholds can behave in deceptive ways. For example, they tend to drop in times of economic decline when median incomes fall; this leads to declines in measured poverty rates even though low-income people may be faring worse.

A recent study (Mossakowski 2008) found that young adult wealth and childhood family poverty have independent effects on young adult mental health. In this analysis I am able to measure only the current poverty status of emerging

adults. Measures of childhood poverty experiences, and individual and family wealth would have been more preferable indicators of emerging adults SES. Readers should be cautioned not to interpret the poverty measure used in this study as a measure of SES. In addition to income and family size, measures of SES typically include information about an adult's educational status, or parents' educational status for children. The NSDUH data does not include measures of parents' educational status; however, the final regression model does control for the educational status of emerging adults.

In 2003, the official United States poverty threshold was \$14,680 for a family of three (Iceland 2003). Many researchers consider the official standard to be too low, primarily because of increasing costs of housing relative to overall income in the decades since the threshold was created. For this reason, I use a three category variable to examine the effect of family income among emerging adults who are very poor, poor and non-poor. I control for two other factors that likely influence the real economic needs of emerging adults. The first is a variable that indicates whether the respondent lives with a parent and the other indicates if he/she is attending school.

A serious limitation of this and other studies of poverty during emerging adulthood is the inadequacy of poverty measures for assessing economic or socio-economic status during this particular developmental stage. Between the ages of 18 to 25 the majority of Americans transition from being wholly or largely economically dependent on their natal families to establishing their own economic independence. But as recent research (Schoeni and Ross 2005)

demonstrates there is substantial variation in the amount of monetary assistance that emerging adults receive, some get tens of thousands of dollars and others very little or no support at all. Measures of household income, and to some extent even educational status, fail to fully account for the full range of wealth transfers that take place between American parents and their emerging adult children.

The data available to measure serious mental illnesses is also not an optimal measure because symptoms indicating externalizing and internalizing disorders are aggregated into a single variable. Given the known relationships between gender, behavior problems and specific types of disorder more nuanced measures of mental illness would have provided more salient results.

As pointed out previously, the data to provide the best test of developmental theories should be longitudinal. Nonetheless, data from a nationally representative general population study of American young adults can provide relevant information. In this case, information about the prevalence of deviant behaviors and adverse functioning along with associated risk and protective factors. But, the data must be interpreted cautiously because time order could not be established. In addition, although some control variables are included to rule out spuriousness, there may be other influences that make the relationship spurious. Furthermore, the data are for the general population, collected from in person surveys, it is also likely that the most serious early adult offenders (those who are incarcerated in prisons or jails; or homeless) are not included in this study. As a result, the findings of this study likely omit a segment

of the population most likely to include a significant proportion of emerging adults who have serious deficits in functioning.





## CHAPTER VI

### DISCUSSION

The central purpose of this dissertation was to evaluate the efficacy of two competing DLC theories, Moffitt's (1993; 2003) Developmental Taxonomy and Sampson and Laub's (1993; 1997) Age Graded Theory of Informal Social Control, for explaining offending among contemporary Americans in the recently identified developmental stage of emerging adulthood. Both of the theories acknowledge the important influences of risk and protective factors on offending; I found that poverty was a risk factor and religiousness a promotive factor for offending among emerging adults. Yet, only the Developmental Taxonomy offers a sufficient explanation for the variation in severity and types of offending among groups of emerging adult offenders found in my analyses.

The latent class analysis based on self-reports identified a relatively large group of offenders who were involved in substance related crimes; and, further analysis of offenders (versus non-offenders) found the existence of two groups of offenders with varying levels of analogous problems as would be predicted by the Developmental Taxonomy. I also found support for theoretical propositions shared by AGT and the Developmental Taxonomy such as a general pattern of desistance across emerging adult ages and that employment, higher education,

marriage and parenthood are associated with less offending and analogous problems. Importantly, however, the failure of AGT to account for groups of offenders that differ in types and severity of offending and analogous problems and to more generally explain gender differences in offending, explained in more detail in the ensuing sections of this discussion, indicates that Moffitt's Developmental Taxonomy provides a better explanation of offending among contemporary American emerging adults.

### **Patterns of Offending among American Emerging Adults**

Discovering the nature of offending among contemporary emerging adults and exploring their patterns of offending by crime type, gender, and age are two central aims of this dissertation. On the whole, the evidence from this study is consistent with earlier research that shows: (1) the vast majority of American emerging adults engage in no or low levels of offending (Piquero, Brame, and Moffitt 2005a), (2) a general decline in crime takes place during the early years of adulthood (D'Unger et al., 2002), (3) the peak age of offending depends on the type of crime (Steffensmeier et al., 1989), and (4) males commit more crime than females (regardless of type) (Piquero et al. 2005a; Steffensmeier, Schwartz, Zhong, and Ackerman 2005). Unlike earlier studies, however, I found that there were slight gender differences in the pattern of desistance for some crime types. In particular, stealing and driving under the influence of drugs begin to decline at earlier ages among women than among men. Further, the patterns of offending

found in this study provide support for the contention that the motivation and opportunity to commit crimes are related to age.

In spite of the shortcoming of the limited number of available indicators to measure crime in this data, another important finding from my work adds to the study of desistance from offending. Results of the descriptive statistics makes clear that relying on arrest or conviction data to operationally define offending, as is typical in studies on desistance (see Kazemian 2007), may result in validity problems. The underestimation of drug offending that would result from using only official records is especially relevant for the study of desistance among Americans emerging adults. For example, only 6% of emerging adult men and 1.5% of emerging adult women reported being arrested for an alcohol or drug related offense. However, almost one third of men and one-fifth of women reported driving under the influence of alcohol, and one in five men and one in ten women reported driving under the influence of drugs. Clearly, the disparity between self-reported incidence and self-reported arrest for this offense is substantial.

I expected to find differences patterns of offending and in latent class derived offending and overall functioning profiles based on gender and age. In general, rates of emerging adult offending were most similar for males and females at age 18; this was the peak age of offending for women but not men. Likewise, arrests for drug crimes, the most typical self-reported arrest by emerging adults, followed a similar pattern. An extremely small number of emerging adults self-report arrests for property or violent crime; so the patterns

detected in this data may not be conclusive. Yet, consistent with previous studies (Steffensmeier and Allan 1996), I found more similarity in rates of male and female property arrests than in rates of violent or drug arrests.

In addition to deviant behavior, young adult males also tend to predominate in substance dependence and school failure. Moreover, similar to the patterns I found for substance related deviance, substance dependence also peaked at later ages for males than it did for females. Among 23 and 24 year olds, about twice as many men as women were dependent on alcohol, marijuana, or multiple types of illicit drugs. In all, about 85% of young adults complete high school; but, about 5% more men than women fail to do so. The prevalence of serious mental illness was more stable across age groups than were the other measures of functioning; however, almost twice as many females as males were found to have symptoms that would be consistent with a serious mental illness. My findings that emerging adult men predominate in behavior problems and more women have symptoms of mental illness, are similar to numerous studies across multiple disciplines that tend to show males exhibit more externalizing problems and females tend to have more internalizing problems (Keenan and Shaw 1997; Kessler et al. 1994; Van Gundy 2002).

### **Support for Moffitt's Developmental Taxonomy**

I also set out to ascertain if there was evidence of offender typologies among contemporary American emerging adults consistent with the most recent elaborations of Moffitt's Developmental Taxonomy. The findings of my analyses

offer some support for several of Moffitt's (1993) propositions which explains the age-crime curve as a result of involvement in disparate types of deviant behavior across distinct offender groups. Readers should keep in mind, however, that results discussed in this section are based on past year measures of offending and analogous problems, rather than lifetime indicators of behavior commonly used in longitudinal studies testing this theory.

In 2003, about two-thirds of American emerging adults self-report no past year offenses and another 20% of the general population reported involvement in offending at levels low enough so that they were classified with non-offenders in latent class derived profiles of offending. In other words, the level of offending among this 20% could be considered normal behavior for this developmental stage. Moreover, age patterns found for violent and property offending show declines across emerging adult ages consistent with Moffitt's prediction of desistance with greater availability of adult responsibilities and roles.

About 12% of emerging adults exhibited levels of offending that placed them in a separate class ("Substance Involved"); almost all individuals in this group reported driving under the influence of alcohol and drugs. Levels of violence and drug sales among this group were somewhat higher than the "Low" offenders, but lower than the other two offender groups. Their property offending was also higher than the "Low" group, but similar to the "Drug Sales" group. The high rates of driving under the influence of alcohol or drugs that I found across groups, and the fact that these offenses peak during early adulthood, seems to suggest the existence of situational or contextual factors specific to this

developmental stage that contribute to the frequent occurrence of substance related crime among contemporary American emerging adults. Further evidence of the widespread nature of these offenses is shown in the results of the latent class analysis which indicate that 55% of those who drove under the influence of alcohol are in the low offending profile, which signifies that driving under the influence of alcohol often does not co-occur with multiple other types of offending.

In addition, I found that at ages 18 and 19 about 17% of emerging adults would be classified as moderate or high offenders (that is, not in the low offender profile), but this drops to 12% at ages 24 and 25. This pattern suggests that substantial drops in offending that take place across the early years of adulthood. The "Substance Involved" offender profile consists of about 16% of emerging adult men and 9% of women who engage in a cluster of offending behaviors similar to those that other studies (Moffitt 1993) have shown to take place during adolescence. In contrast to the other two high offending groups, the peak age of membership in this class actually occurs during emerging adulthood for men. At age 19, about 14% of young men and women self-reported behaviors that place them in this group. The proportion of women who exhibit these behaviors declines steadily across age, but for men over one-fifth of 21 year olds and about 15% of 24 and 25 year olds report these types of behaviors. The finding that a substantial group of emerging adults have relatively high levels of offending (including high drug offenses) may suggest a prolonged or 'delayed' transition period for some adolescents, especially emerging adult men.

Another uniform finding across previous studies is that between 5 and 8% of offenders can be considered life-course-persistent offenders (Piquero et al, 2007). The frequency and distribution of offenses among respondents in NSDUH indicated that about 3% of American emerging adults in the general population belong to two highest offending clusters. Fewer individuals in these two groups report driving under the influence of either drugs or alcohol, compared to the "Substance Involved" group. The "Drug Sales" group, who constitute about 2% of emerging adults, can be distinguished from other groups by somewhat higher rates of drug sales and driving under the influence of drugs. They also have somewhat higher levels of assault. The other high offending group (1%--labeled the "Violent" group) self-reported very high levels of assault, theft, and drug sales, but low levels of driving under the influence of drugs and alcohol. My results also show that offending groups consist of almost twice as many males as females which is consistent with Moffitt's theoretical propositions.

The distinction between the two high offending groups may to some extent be an artifact resulting from the use of the two DUI measures in the data; as some high rate offenders may not be involved in DUI offenses because they do not drive or own a car. Additionally, my finding that only 3% of American emerging adults are high offenders is likely the result of the sampling methods which excludes a large proportion of the chronic offending subpopulation at this developmental stage, namely those who are incarcerated or homeless. This may also explain to some extent why the age pattern of offending among the two high offender groups appears to show desistence, at least for males. Overall, the

higher than normal levels of offending reported among those in the “Drug Sales” and “Violent” groups are consistent with Moffitt’s description of persistent offenders.

Another important contribution of this study for existing knowledge in this area comes from the overall functioning latent class analysis which provides information about analogous behaviors that co-occur with offending during emerging adulthood. This analysis was intended to determine if membership in offending profiles is associated with other concomitant developmental problems. There have been recent research efforts (Moffitt, 2006; Piquero et al., 2007) to identify the non-offending outcomes of life-course and adolescent limited offenders. Moffitt (2003) predicted that adverse mental and physical health outcomes would likely be associated with persistent but not AL offending. Because offending profiles were based on past year behavior alone, the potential for misclassification is higher than if lifetime measures had been used. Therefore, I categorized individuals as non-offenders (individuals in the “Low” offending profile) or offenders (those in the three offender profiles) to investigate the presence of co-occurring problems. Over 60% of individuals in the three offending profiles also exhibit multiple other analogous problems in functioning including serious mental illness, substance dependence, arrest, and not graduating from high school. In contrast, only 4% of low or non-offenders have significant problems in overall functioning. Patterns of offending and analogous problems resulted in two problematic overall functioning profiles (“Behavior



Problems” and “Multiple Problems”) which show some differences in the types of problems associated with greater offending.

I did not find that poor physical health was related to offending between the ages of 18 and 25. This may be because the types of problems, like substance use, related to offending which are predicted to cause poorer health may not have an effect until somewhat older ages. However, my findings are consistent with previous studies that show persistent offenders have substantial problems in other domains of functioning and psychological distress (Piquero et al., 2007; Moffitt, 2003). Interestingly, members of the “Behavior Problems” group (10% of emerging adults) self-report more offending than did the much smaller “Multiple Problems” group (3% of the population). But, those in the “Multiple Problems” group report higher rates of arrests. The “Multiple Problems” members also have high rates of serious mental illness and much higher rates of academic failure, which would be consistent with Moffitt’s depictions of LCP offenders, compared to the “Normal” or “Behavior Problems” groups. However, these findings should be regarded with some caution as the profiles include no information about onset of offending or versatility of offending across the life span. The “Behavior Problems” group is distinguished by higher rates of substance dependence and self-reported offending in comparison to the other two groups.

The size of the two problem groups is about twice the size of LCP groups found in other studies. Given the cross-sectional nature of the data and the patterns of offending and other serious analogous problems found in the two groups it seems likely that together they may be populated by members who

would be described by Moffitt as LCP, low level chronics, as well as some AL offenders who at this age have become “ensnared” in deviance.

Further support for Moffitt’s proposition that adult roles and responsibilities lead to declines in AL offending, may be gleaned from my results show that being a parent, married, or a college graduate are associated with lower risks of being in the “Behavior Problem” profile (higher than normal substance use and self-reported offending). Being married, in particular, was also important factor associated with lower risks of being in the “Multiple Problems” group; that is, lower risks of having concomitant problems including serious mental illness, substance dependence, arrests, and school failure. Being very poor was also found to be associated with almost two and one-half times greater risk of “Multiple Problem” group membership, this is consistent with Moffitt’s prediction that LCP offending is a result of the interaction between disadvantaged environments and individual deficits.

Also consistent with Moffitt’s predictions and previous studies (Piquero et al. 2005a), is the finding that being male is associated with a 66% greater risk of fitting the “Behavior Problems” profile and over three times greater risk of fitting the “Multiple Problems” profile. Other findings may be tangentially related to the proposition that AL individuals can be “ensnared” by the consequences of delinquency (substance addiction, a criminal record, or school failure) into more persistent offending; evidence of this phenomenon may perhaps be gleaned from the distribution of individuals in offending profiles based on race. Being Black, Hispanic, or Asian was associated with much lower risks of fitting the “Behavior

Problems” profile (characterized by substance dependence and self-reported offending) compared to being White. However, only being Asian was associated with lower risks of being in the “Multiple Problem” profile, no Asians belong to this group. In other words, Blacks and Hispanics, in particular had lower risks than Whites to be in profiles including higher offending and substance use; but, they had the same risks as Whites of being in the profiles that included arrests and school failure. This may suggest that along with criminal histories and school failure, race may be another characteristic that “ensnares” people into the justice system and limits possibilities for aging out of crime.

It is also important to point out that a considerable proportion of young adults in the “Normal” overall functioning group have deficits in individual types of functioning. About 13% have a serious mental illness or did not graduate from high school, 6% are in the moderate or high behavior problem clusters, and 4% are substance dependent. Further, the number who are in the competent group increases with age, at ages 23 and 24 about 90% of young men and 96% of women are in this group. These results offer support for Moffitt’s (1993) principal contention that individual deficits interact with disadvantaged environments to produce persistent offending rather than a single individual trait. I did not find evidence of four distinct offender groups that map exactly onto those described in the most recent versions of the Developmental Taxonomy: yet, taken together, my results are consistent with a number of its propositions and predictions. They also suggest that for many Americans developing into competent adults is a process that continues beyond adolescence.

## **Support for the Age Graded Theory of Informal Social Control**

This study also offers important contributions regarding the efficacy of Sampson and Laub's (1993; 2003) Age Graded Theory of Informal Social Control for explaining offending and desistance during emerging adulthood. As posited by Sampson and Laub (2005) it is possible that the derived profiles of offenders represent groups of individuals who have similar trajectories, thus have similar patterns of offending and analogous problems, rather than being tantamount to different "types." The strongest evidence I found to contradict this assertion that is the high proportion of emerging adults in the problematic overall functioning profiles who also have serious mental illness. This would seem to be strong evidence pointing toward group membership based on specific individual deficits as predicted by the Moffitt (1993), rather than merely of shared trajectories suggested by Sampson (2008). However, I can not establish the time ordering of offending and serious mental illness and the measure of SMI used in my analysis is a composite; thus, it is possible that a number of these individuals may be depressed or have anxiety disorders that result from rather than being the cause of their offending. Several of my findings were also consistent with the central proposition of AGT that crime is more likely to occur when an individual's bond to society is weak.

### **Emerging Adults' Poverty Status as a Risk Factor**

I also aimed to investigate the poverty status of emerging adults as a risk factor as predicted by AGT that would be associated with higher levels of

emerging adult offending. My results provide some evidence that the current poverty status of American emerging adults constitutes a substantial structural risk factor associated with conditions likely to weaken social ties as predicted by AGT. Many prior studies indicate that poverty and factors associated with poverty constitute significant risks to healthy development during adolescence including poor physical and mental health, teen pregnancy, high school dropout, and involvement in risky and criminal behavior (Kenkel, Ribar, Cook, and Peltzman 1994; Kessler et al. 1994; Orthner et al. 2004).

Other studies have shown that childhood or adolescent poverty, in particular, are related to deficits in functioning during young adulthood (Daniel et al. 2009; Keyes and Hasin 2008; McLaughlin et al. 2010; Poulton et al. 2002). A key proposition of AGT is that social ties embedded in adult transitions (e.g. job stability, marriage) can change an individual's path from delinquency to non-delinquency or vice versa, independent of childhood or adolescent criminal propensity (Sampson, 2008). This study is among the first to investigate whether emerging adults' economic status is associated contemporaneously with offending and multiple co-occurring problems. But the discussion that follows should be interpreted with a great deal of caution given the serious deficit in the data available in the NSDUH to measure economic status for emerging adults.

Among American emerging adults, there was some evidence that their current poverty status was related to physical health, but less evidence of a link between poverty and mental illness or substance use. I found that about twice as many young adults who are very poor report having fair/poor overall physical

health. This result is consistent with previous studies that show a connection between SES and health (Luthar 1999; Seccombe 2002). However, neither serious mental illness nor substance dependence was associated with the current economic status of emerging adults. This may seem to suggest that poverty status of emerging adults may be less important than childhood experiences of poverty in relation to physical and mental health functioning. As others point out (Duncan and Brooks-Gunn 1994), the effect of poverty on early and later child development, as well as the multiple persistent effects of poverty over time, rather than current status, may better explain health problems resulting from the conditions of poverty.

Current poverty status, however, was associated with differences in self-reported offending and arrests of emerging adults. Poor and very poor emerging adults had about 20% lower risks of moderate or high levels of offending than the non-poor. But, in spite of lower levels of offending, they had slightly higher rates of past year arrests. Being poor or very poor during emerging adulthood was also associated with more than double the risk of not being a high school graduate. Beyond that, although there were no differences across economic groups associated with being a young unmarried parent, emerging adults who were very poor had almost 3 times greater risk of both not have completed high school and early parenthood. This suggests that among Americans an individual's current poverty status is a risk factor for offending and analogous problems at this developmental stage. It is highly plausible that academic failure and arrest records would also have a direct negative effect on the ability of emerging adults

to establish social bonds such as through jobs or marriage with conventional members of society.

I also examined the adverse consequences of poverty in an innovative way by using latent class analysis to derive categories of young adults according to their varying levels of cumulative problems. The latent class analyses revealed that about 13% of all American young adults have serious deficits in overall functioning. Young adults who were poor were no more likely than the non-poor to have multiple deficits, regardless of the problem cluster profiles. Further, young adults who were very poor were actually 10% less likely to be in the “Problem Behavior” cluster, the group that included the majority (77%) of young adults with problematic overall functioning.

Notably, however, very poor emerging adults were almost two and a half times more likely than the non-poor to be in the smaller “Multiple Problems” profile of overall functioning, even after controlling for other relevant factors such as gender, race, education and employment status, urbanicity, religiousness, and social mobility. The deficits that seem to set this group apart from the “Behavior Problems” and “Normal” groups is the high prevalence of academic failure or early parenthood, arrests, and serious mental illness, rather than substance dependence or offending. It is possible that members of this group underestimate their involvement with substances and offending; but, in general, my findings indicate the condition of poverty during emerging adulthood is not associated with vastly higher levels of involvement in deviant or criminal behavior.

In spite of these somewhat incongruent results, my findings are consistent with other recent studies (Herrenkohl, Maguin, Hill, Hawkins, Abbott, and Catalano 2000; Natsuaki, Ge, and Wenk 2008) which indicate that poverty is associated with substantial problems in other areas of functioning. In particular, being very poor during emerging adulthood is associated with the presence of substantial individual and multiple problems that are consistent with the AGT proposition that poverty is a social structure that inhibits a person's ability to build social ties during this important transitional stage.

Another aim of this study was to investigate neighborhood cohesion, economic support, church attendance and religiousness as factors that inhibit adult crime by buffering the effects of poverty on offending and analogous problems. These are factors hypothesized to be sources of informal social control that promote social ties and the strengthening of emerging adults "stake in conformity," predicted by AGT. As described in my review of the literature, they have all been investigated as factors that reduce adolescent involvement in delinquency. The following sections discuss the relationship between each of these factors and offending and overall functioning among American emerging adults.

### Neighborhood Cohesion

Growing up in neighborhoods with low levels of cohesion (collective efficacy) typically is associated with a lack of resources, social support, and informal social controls that are essential for healthy youth development (Sampson 2003). My results, however, show that in the early years of adulthood



a sense of neighborhood cohesion is not related to self-reported crime, arrests or academic failure. The only aspect of functioning found to be associated with neighborhood cohesion was being a young unmarried parent. Emerging adults who had the lowest scores on the neighborhood cohesion scale were 3 times more likely, than those at the mean level, of being a young unmarried parent after controlling for their economic status. These findings support recent studies that suggest neighborhood cohesion is not always determined by structural conditions or community disadvantage (Duncan et al, 2003). But, the results are not consistent with a number of studies (Bellair 1997; Sampson et al. 1997) which have shown that collective efficacy reduces adolescents' chances of involvement in crime and delinquency. Sampson and his colleagues (1997) contend that social networks are a necessary, but not necessarily sufficient, condition that provides the informal control of deviance. This contention is supported by my findings that show no significant differences in neighborhood scale scores across economic groups.

There are several possible explanations for my findings about the association between neighborhood cohesion and emerging adult circumstances. First, these findings may be related to the measures of offending in the NSDUH data. Previous studies have found that neighborhood cohesion has differing effects dependent on the type of crime being investigated (Morenoff, Sampson, and Raudenbush 2001; Sampson and Raudenbush 1999; Sampson et al. 1997), but most of these studies investigate property and/or violent crime. I examine the effects of neighborhood cohesion in relationship to individual's membership in an

offending class and overall functioning profiles that include more indicators of substance related offenses than violent or property crime. Second, it is also possible that neighborhood cohesion is a better predictor of adolescent delinquency rather than more serious emerging adult crime.

Third, it may also be the case that the informal social control which results from a sense of community cohesion is a less influential during young adulthood in comparison than for earlier developmental stages. Notably, the only outcome that I found that was related to neighborhood cohesion, becoming a young unmarried parent, would have taken place during adolescence for most emerging adults in this sample. This could suggest a plausible diminution of the influence of community members on individual's behavior during emerging adulthood. It is also possible that adults in a community are less likely to react to unacceptable behavior of young adults than that of adolescents or children. Moreover, it could also be true that not only do fewer adults try to exert control over emerging adults, but emerging adults *also* are less likely to be influenced by attempts at this type of control.

Fourth, some research suggests that self-efficacy (an individual's beliefs about his or her future success), rather than neighborhood cohesion, may be a better predictor for healthy growth and development. Young people who reside in impoverished environments who feel a sense of hopefulness rather than despair about their future may act in ways which constructively improve their circumstances, regardless of levels of informal community social control. Further, my findings may reflect that emerging adults have a greater capacity

than adolescents of perceiving how possibilities for their future may not be limited by structural neighborhood conditions, and as a result are more likely to refrain from behavior that results in adverse outcomes.

Fifth, it also seems likely that because emerging adults, even those who live in poverty, are more mobile than adolescents, they would be able to build other types of social capital unrelated to the neighborhoods in which they reside. For example, they can establish relationships at college or in the workplace that may reduce the influence of their perceptions about community efficacy. Finally, because the data used in this study was collected in 2003 and the vast majority of prior studies rely on data collected before 1990, it is also possible that changes in communities of emerging adults may have taken place in recent years. In particular, contemporary emerging adults are able to engage in “virtual” communities through technological advances which have taken place which now exist; for some their involvement in online communities, or online access to more frequent communication with friends and family members, may ease the adverse effects of, and their perceptions about, the influence of poor neighborhood conditions on their future life chances.

### Economic Supports

In 2003, one quarter of American emerging adults or a family member received some type income support or Food Stamps. Yet, the vast majority of poor and very poor emerging adults did not receive any economic support. Among American emerging adults who were poor or in poverty Food Stamp receipt was much more common than cash assistance. I also found less child

care support than would be expected given the number of unmarried parents between the ages of 18 and 25. Receiving this type of social support, however, did not protect emerging adults from adverse outcomes. In fact, the risk of not graduating from high school, or having a violent, property or multiple type arrest were increased for those who receive social support. I also found that emerging adults who are receiving this type of social support were more than twice as likely to be in lowest functioning group of emerging adults. This seems to suggest that receipt of economic support is a proxy measure of extreme poverty.

These findings are consistent with other studies that show that hunger and food insecurities are linked to adverse outcomes such as behavioral problems and poor academic performance among school-aged children regardless of the receipt of assistance (Heflin and Ziliak 2008). Very little research has assessed the impact of economic support on offending during young adulthood, so it is hard to draw broad conclusions from my findings. But, they do seem to be consistent with conclusions drawn in studies of younger children and families in general that the current levels of economic and food assistance may not be sufficient enough nor provided for an adequate time period to make a real difference in the lives of emerging adults.

### Church Attendance

Prior studies (Petts 2009; Uecker, Regnerus, and Vaaler 2007) indicate that emerging adulthood is the developmental stage during which individuals are least likely to attend church. This signifies a shift in social circumstances for many emerging adults as church participation rates are quite high for American

teens: likely because they typically still reside at home and are under the control of their parents. Popular explanations for this phenomenon include emerging adult involvement in college life, the decline of parental control, and lack of children or spouses which tend to provide incentives for increased religious participation. In 2003, a little more than one-third of American emerging adults reported that they had not been to church at all in the previous year, while only a little more than one-fifth are regular attendees. These rates are consistent with prior estimates of non-participation among emerging adults of between 30 and 40% (Smith and Snell 2009; Uecker et al. 2007) as well as with the findings of Presser and Chaves (Presser and Chaves 2007) which showed that 24% of 19 to 28 year olds in the 2003-2004 Monitoring the Future study reported weekly church attendance.

With the single exception of the finding that frequent church attendees were about 60% less likely than those who never or rarely went to church to be a young unmarried parent, I found no evidence that attending church served as a source of informal social control. As mentioned previously, for many in this study their early parenthood occurred during their adolescence. So this finding does support previous work (Dillon and Wink 2007; Good and Willoughby 2005; Regnerus and Elder 2003) which suggests religious attendance reduces the likelihood that adolescents will engage in risky behavior. Recent research (Idler, 2009) in this area suggests that studies, like the present one, which uses a single indicator assessing the frequency of church attendance fails to account for the varying types of activities that take place among various denominations and in

individual congregations. Of particular relevance in the endeavor to investigate the link between church attendance and emerging adult outcomes, is the likelihood that great variation exists among churches unaccounted for in this study in the levels of social support and informal ties available to emerging adults via their participation in church activities.

### Religiousness

The results of this study show that in 2003 about two thirds of American emerging adults believed their religious beliefs were important and that these beliefs influenced their decisions. Consistent with a number of previous studies that investigate the influence of the importance of religion beliefs (Dillon and Wink 2007; Kendler et al. 2003; Smith and Snell 2009) my results showed that emerging adults with higher levels of religiosity had lower levels of serious mental illness, dependence on drugs, self-reported behavior problems, and drug arrest; and religiousness was associated with greater chances of completing high school, even after controlling for the effects of poverty. However, I did not find that religiousness was related to violent or property arrest. The results regarding self-reported offending should be regarded with some caution because the measures used in this study includes more indicators of drug related crime than violent or property offenses. However, in general, the evidence regarding the association between religiousness and emerging adult criminality from my results is consistent with the conclusions of Baier and Wright (2001) that religiosity is related to lower levels non-violent offending.

An especially important finding is that religiousness served as a promotive factor that diminished the chances of problematic overall functioning among emerging adults, regardless of their economic status. Among American emerging adults, higher levels of religiousness were associated with about 20% lower risks of being among those in the two overall functioning profiles, even after controlling for the effects of other influential variable such as gender, race, education, parental and marital status, social mobility and urbanicity. That is, religiousness had a direct rather than an indirect effect through poverty on emerging adults' chances of being in the groups who have the greatest difficulties in functioning. Thus, in spite of the fact that emerging adulthood may be the stage with the lowest rates of church attendance, my results indicate that religious beliefs acquired during childhood and adolescence may still have an important impact on various aspects of behavior and overall functioning during this important transitional stage when most Americans complete the substantial developmental task of establishing independent lives. This suggests that holding a personal belief in God and/or the power of informal social control exerted through church teachings has an influential positive impact on the lives of individuals even at times when they never or rarely attend church.

On the whole, the analyses in this dissertation offer support for a central proposition of the Age Graded Theory of Social Control. The finding of poverty as a risk factor for multiple co-occurring problems including being arrested, and religion as a promotive factor for offending and co-occurring problems supports the proposition that emerging adult circumstances can lead to changes in the

lifetime propensity for crime. Poverty, in particular, was found to be associated with a number of adverse outcomes at this developmental stage. This is an important finding because there have been few studies that have investigated risk factors related to offending at this developmental stage. Numerous studies have found adult bonds like marriage, parenthood, and jobs are inversely related to emerging adult offending. My findings indicate that these are still important influences on offending and analogous behaviors, as is religiousness, among contemporary emerging adults.

### **Implications**

I set out to determine if important propositions of two prominent DLC theories, Moffitt's (1993) Developmental Taxonomy and Sampson and Laub's (2003; 2005) Age Graded Theory of Informal Social Control explain offending among contemporary American adults. On the whole, I found support for a number of propositions that are shared by both AGT and the Developmental Taxonomy. In particular, my findings regarding the risks associated with poverty and the protective effect of religion on emerging adult offending supports the theoretical propositions of both theories.

Results from the latent class analysis indicate the presence of a small group of mostly males who have high levels of offending and analogous behaviors is roughly compatible with the LCP offenders Moffitt (2008) describes as well as the cumulative continuity of disadvantage described by Sampson and Laub (2008). I also found evidence in the general population of emerging adults



of distinct offender groups with levels and types of offending and concomitant problems that are consistent with the groups of offenders described in the Developmental Taxonomy. Future studies are needed to confirm the existence of these groups, to delineate other important differences in their characteristics, and to examine the biological, environmental, and social sources of their deficits. Nevertheless, the age and gendered patterns of emerging adult offending along with the identification of subgroups of offenders in the general population who differ in severity and types of offending suggests that the Age Graded Theory of Informal Social Control needs to be modified to explain gender differences and account for specific types of offending among emerging adults.

The larger group of emerging adults found to have higher than normal levels of offending and substance dependence, but lower levels of analogous problems loosely fits with the depictions of later desisting AL offending groups proposed in the Developmental Taxonomy. Since AGT offers no explanation for between individual differences in levels of offending, my results point toward the Developmental Taxonomy as a better theory for explaining emerging adult offending among Americans. A number of tenets that are central to each theory could not be examined in this cross-sectional study, such as differences in ages of onset across offender groups or factors that explain individual trajectories of offending over time. Yet, my findings of different offender groups based on types of offending as well as the analogous problems of offenders seems to confirm the existence of different groups of offender in the general population of emerging adults. Theories that purport to explain offending during this developmental

stage need to account for differences in offending among distinct groups of offenders.

Importantly, however, future studies should examine offending across a broad range of self-reported crime and official reports. My study was not limited in the types of arrests included in the data, but only a few broad categories of self-reported offenses were available for use in my analyses. Inclusion of a number of indicators, with more specificity in the level of offending, could help to better distinguish distinct offender groups in future research. Other aspects of problematic emerging adult functioning also deserve more detailed investigation than could be accomplished in this study. Specifically, more precise indicators of mental illness and physical health problems in relation to co-occurring problems including offending during this developmental stage would substantially add to our understanding of barriers to desisting from crime and achieving competent adult overall functioning.

Developmental criminologists should also more fully examine the existence of two distinct high offending groups and the moderate offending group that were identified in my results. It is possible that moderate offenders identified in this study are similar to AL offenders but experience prolonged desistence, especially for substance related crimes. It is equally likely that they are low level chronics or persistent offenders who had low levels of offending in the preceding year. Future studies should examine the correlates, causes, and consequences of membership in these seemingly disparate groups of multi-type offenders. It is also particularly important to discover whether the two distinct groups of high

offenders identified in this study are present in samples of emerging adults who are incarcerated or homeless.

Most DLC theories, including the Developmental Taxonomy and AGT, propose factors that promote or inhibit offending. Recent elaborations of these theories also tend to emphasize the use of multi-outcome approaches to evaluate the efficacy of risk and protective factors. The factors I investigate as risk and protective factors specific to emerging adult offending would be supported by both theories as potential influences of offending, regardless of the different conceptions of offending as a correlate of distinct offender types or as a correlate of problematic individual trajectory. However, my findings regarding the associations between these promoting and inhibiting factors are limited due to the cross-sectional nature of this data and deserve more extensive evaluation especially in future longitudinal studies of emerging adult offending.

For instance, there are multiple likely pathways from poverty to adverse outcomes like criminal offending during emerging adulthood; such as lack of access to health care, lack of treatment for substance dependence, inadequate housing, or malnutrition as well as the continuation of problems related to poverty that transpire at earlier developmental stages. Although I found being very poor was associated with poor overall functioning; I did not find that it was associated with higher levels of a number of self-reported offenses or substance use. Given the limitations of the poverty measure used in this study, the relation between poverty and emerging adult problems deserves much more research attention. Future studies should also more fully investigate other individual, environmental

and social factors associated with specific conditions of poverty that may impede competent functioning, and more research is needed to more fully investigate the causal relationship between poverty and specific types of offenses including multiple types of property and violent crimes that were not included in my study.

Another important endeavor of DLC research is to identify protective factors that help buffer the effects of individual adversities like poverty. My findings show that a sense of community cohesion, economic supports, and church attendance did not protect emerging adults who are poor or very poor from involvement in offending or other functional deficits. There was some evidence that community cohesion had served as a protective factor during the adolescence of emerging adults, but no effects were found for emerging adult behaviors. This finding seems to suggest that the importance of neighborhood characteristics lessen as adolescents make the transition into adulthood. Consequently, interventions aimed at addressing community conditions may be less helpful in addressing problems of emerging adults. Future studies should also evaluate the relationships between particular types of problems, and the context of their occurrence in the lives of American emerging adults. For example, it would be particularly beneficial for policymakers to know what proportion of emerging adults who engage in drinking and driving or who have serious mental health problems are living on college campuses or in poor neighborhoods.

About 25% of all emerging adults received some type economic support, primarily from a publically funded source. My results support the conclusions of

previous studies (Cheng 2007; Oberholser and Tuttle 2004) which indicate that income supports such as TANF, Food Stamps, and child support are not generous enough to help emerging adults overcome the substantial adversities associated with poverty. Future work should more fully investigate how receipt of each of these economic supports may be related to specific problems in functioning. It is possible that income based criteria could be enhanced with other more specific criteria based on particular needs like substance dependence or mental illness that would increase the efficacy of the provision of public resources. In addition, future studies need to examine how other non-public sources of economic support may supplement public resources to more fully elucidate these findings. It is possible that not accounting for private sources of income support such as that provided by parents or private charitable organizations confounds these findings.

As expected, I found low rates of church attendance for American emerging adults. However, the results offer strong evidence that spiritual beliefs, rather than regularly attending church, protects poor and very poor emerging adults from multiple problems. It also was associated with lower offending for non-poor emerging adults; and thus, it can be regarded as a promotive factor. These findings are especially salient given that this is a nationally representative sample of emerging adults rather than a religiously based sample. It may be unlikely that these findings would move policymakers to support policies that mandate or encourage religion as a way to respond to emerging adult problems, although results like these might encourage some parents to insist on more

extensive religious participation for their own children and teens. However, it is possible that future research can uncover more specific aspects of religion that could be duplicated in other organizations that are more regularly attended by American emerging adults. For instance, future studies could develop a greater understanding about the specific mechanisms of religious services or teachings that produce positive results. It would be beneficial to know whether simply being a member of a strong cohesive group reduces problems for emerging adults or if there are specific aspects of coping that are influenced by particular religious teachings.

Perhaps of greatest importance, the findings of this study suggest that there are considerable social problems related to emerging adult substance use that also need to be addressed in further research and practice. More detailed studies are needed to describe the correlates of emerging adult substance use. The self-reported levels of drug sales and drinking under the influence of alcohol and drugs among American emerging adults found in this study seems to indicate that current policies aimed at reducing these types of behavior are insufficient. The exact nature of changes needed in this regard can't be gleaned from this study; future work that examines the conditions under which emerging adult substance use and driving under the influence takes place is needed before effective changes in policy can be determined. It seems clear from this study that poverty and educational attainment are not sufficient explanations of substance related problems. Replication of these results along with more detailed information about antecedent causes of substance related social problems

among American emerging adults would substantially help in forming much needed policies to address the substantial levels of substance use and related problems which may confer such consequential adversities in the lives of American emerging adults.

Another important issue also arises from my findings that deserve further investigation by developmental criminologists. Both Moffitt (2008) and Sampson (2008) agree that offenders can become “ensnared” into more serious criminal offending by factors such as educational failure and criminal records. More work that fully explores the relationship between offending and being arrested during emerging adulthood is needed. Specifically, factors like gender, age, race, or economic status of the offending, or the location crime, or type of offense should be investigated as predictors of arrest. Also, future studies should examine the adverse consequences of arrests on other aspects of emerging adult functioning deserves further research attention.

The results of this study reinforce the conclusions of other researchers (Massoglia and Uggen 2007) that in the future studies that purport to describe or explain offending and/or desistance from crime should not rely solely on arrest data. The self-reported rates of offending found in this study make it clear that researchers who want to fully understand the phenomenon of aging out of crime should not limit their analyses to official reports or to violent and property crime alone. Alcohol and drug related offending was a common phenomenon among emerging adults and my results seem to indicate that a substantial share of substance related crime does not result in an arrest. Future studies of emerging

adult offending should include self-reports of substance related offenses, beyond the limited measures of drug use or sales that are typical in existing studies. In the future, developmental and life course criminological theories should include among their central propositions explanations that can account for the common occurrence of substance related offending in the early years of adulthood.



**Table 1.**  
**Cross-tabulation of Offending and Arrests by Gender<sup>1</sup>**

	Males n=7908		Females n=8200		Total n=16,108	
	n	%	n	%	n	%
<u>Self-Reported Past Year Offenses:</u>						
Stole Item >\$50***						
Never	7585	96.1	8036	98.1	15621	97.1
1 to 9 times	266	3.4	138	1.7	404	2.5
10 or more times	45	0.6	21	0.3	66	0.4
Attack to Hurt***						
Never	7217	91.4	7891	96.2	15108	93.9
1 to 9 times	643	8.1	297	3.6	940	5.8
10 or more times	33	0.4	10	0.1	43	0.3
Sold Drugs***						
Never	7171	91.0	7920	96.6	15091	93.9
1 to 9 times	422	5.4	205	2.5	627	3.9
10 or more times	286	3.6	70	0.9	356	2.2
DUI-Alcohol*** (YES)	2501	31.9	1736	21.4	4237	26.5
DUI-Drug*** (YES)	1465	18.7	861	10.6	2326	14.6
<u>Self-Reported Past Year Arrests:</u>						
Property Crime***						
No	7739	97.9	8122	99.0	15861	98.5
Yes	169	2.1	78	1.0	247	1.5
Violent Crime***						
No	7691	97.3	8121	99.0	15812	98.2
Yes	217	2.7	79	1.0	296	1.8
Sex Offense*						
No	7889	99.8	8193	99.9	16082	99.8
Yes	19	0.2	7	0.1	26	0.2
Drug Offense***						
No	7431	94.0	8079	98.5	15510	96.3
Yes	477	6.0	121	1.5	598	3.7
Other Type Offense**						
No	7852	99.3	8170	99.6	16022	99.5
Yes	56	0.7	30	0.4	86	0.5

<sup>1</sup>Unweighted percentages, \*\*\* p<.000, \*\*p<.010, \*p<.050

**Table 2. Cross-tabulation of Offending and Arrests by Age<sup>1</sup>**

	18 Year Olds n=2317		19 Year Olds n=2003		20 Year Olds n=1988		21 Year Olds n=1991		22-23 Year Olds n=3880		24-25 Year Olds n=3777	
	n	%	n	%	n	%	n	%	n	%	n	%
<b>Sold Illegal Drugs***</b>												
No	2165	92.7	1863	91.9	1869	93.2	1855	92.9	3693	94.9	3646	95.5
One to Nine Times	113	4.3	101	5.1	86	4.3	90	4.1	131	3.5	106	3.4
Ten Times or More	72	3.0	53	3.1	51	2.5	59	2.9	76	1.6	45	1.1
<b>Stole Item \$50 or More****</b>												
No	2243	94.8	1919	94.4	1946	96.4	1940	96.4	3835	98.4	3738	98.1
One to Nine Times	97	4.5	86	4.7	55	3.1	57	3.3	55	1.3	54	1.7
Ten Times or More	15	0.7	16	0.9	6	0.5	9	0.3	14	0.2	6	0.2
<b>Attack w/Intent to Hurt****</b>												
No	2110	90.4	1853	91.3	1872	93.4	1899	94.9	3725	95.4	3649	96.2
One to Nine Times	232	9.1	160	8.2	131	6.3	101	5.0	171	4.3	145	3.7
Ten Times or More	12	0.5	8	0.4	3	0.3	6	0.2	9	0.3	5	0.1
<b>DUI - Alcohol ****</b>												
Yes	435	18.8	479	23.9	496	24.9	602	30.2	1164	30.0	1061	28.1
<b>DUI - Drugs****</b>												
Yes	367	15.6	331	16.5	332	16.7	324	16.2	534	13.8	438	11.6
<b>Arrests****</b>												
None	2181	92.0	1864	92.6	1860	93.0	1873	94.3	3710	95.5	3636	95.5
Property	44	2.0	27	1.3	18	0.9	22	0.8	20	0.5	21	0.7
Drug	72	3.0	80	3.9	81	3.1	74	3.0	103	2.6	75	2.1
Violent	30	1.5	22	1.1	35	2.0	21	1.0	43	0.8	40	1.0
Multi-type	31	1.5	29	1.2	16	1.0	20	0.8	33	0.6	27	0.7

<sup>1</sup>Weighted percentages, \*\*\* p<0.00, \*\*p <0.01, \*p<0.050

**Table 3.**  
**Comparative Model Fit Statistics for Iterative Latent Offender Profile Analysis**  
**(Identification Sample, n=15,868)**

	<i>Model Log Likelihood</i>	<i>Bayesian Information Criterion<sup>^</sup></i>	<i>Entropy</i>	<i>-Bootstrap -2LL difference statistic</i>	<i>Classification Error</i>
2 Class	22999.76	46280.01	0.90	314.26 .000 <sup>^</sup>	0.0121
3 Class	22930.88	46229.31	0.82	176.45 .000 <sup>^^</sup>	0.0269
4 Class	22876.65	46207.89	0.87	67.98 .000 <sup>^^^</sup>	0.0196
5 Class	22871.95	46285.54	0.74	58.58 .489 <sup>^^^^</sup>	0.0474

<sup>^</sup>H0: 2 Class best fit, <sup>^^</sup>H0: 3 Class best fit, <sup>^^^</sup>H0: 4 Class best fit, <sup>^^^^</sup>H0: 5 Class best fit.

**Table 4.**  
**Comparative Model Fit Statistics for Iterative Latent Functioning Profile Analysis**  
**(Identification Sample, n=15,868)**

	<i>Model Log Likelihood</i>	<i>Bayesian Information Criterion<sup>^</sup></i>	<i>Entropy</i>	<i>Bootstrap -2LL difference statistic</i>	<i>Classification Error</i>
2 Class	31531.92	63412.03	0.57	436.75 .000 <sup>^</sup>	.0607
3 Class	31453.07	63380.06	0.60	374.72 .000 <sup>^^</sup>	.0640
4 Class	31424.00	63447.67	0.43	217.11 .038 <sup>^^^</sup>	.1493

<sup>^</sup>H0: 2 Class best fit, <sup>^^</sup>H0: 3 Class best fit, <sup>^^^</sup>H0: 4 Class best fit

**Table 5.**  
**Distribution of Indicators and Covariates within Offending Profiles<sup>1</sup>**

	Low	Substance Involved	Drug Sales	Violent
Cluster Size	0.8498	0.1216	0.0225	0.0062
<b>Indicators</b>				
DUI-Alcohol				
No	0.8269	0.0829	0.7547	0.9025
Yes	0.1731	0.9171	0.2453	0.0975
DUI-Drug				
No	0.9870	0.0031	0.4243	0.9981
Yes	0.0130	0.9969	0.5757	0.0019
Sold Drugs				
Never	0.9835	0.7097	0.5893	0.5355
1 to 9 times	0.0125	0.1616	0.2751	0.4300
10 or more times	0.0039	0.1287	0.1356	0.0345
Stole Item \$50 or more				
Never	0.9867	0.9051	0.9084	0.3025
1 to 9 times	0.0121	0.0825	0.0518	0.5879
10 or more times	0.0012	0.0124	0.0398	0.1096
Hit with Intent to Harm				
Never	0.9619	0.8497	0.7572	0.2552
1 to 9 times	0.0367	0.1415	0.2428	0.6836
10 or more times	0.0014	0.0088	0.0000	0.0612
<b>Covariates</b>				
Gender				
Male	0.4655	0.6303	0.6151	0.6176
Female	0.5345	0.3697	0.3849	0.3824
Age				
1 – 18 years	0.1424	0.1470	0.2015	0.1724
2 – 19 or 20 years	0.2437	0.2817	0.2839	0.3333
3 – 21 years	0.1221	0.1423	0.1286	0.1102
4 – 22 or 23 years	0.2457	0.2372	0.2032	0.2083
5 – 24 or 25 years	0.2461	0.1918	0.1828	0.1758

<sup>1</sup>Unweighted column percentages.

**Table 6.**  
**Distribution of Indicators and Covariates across Offending Profiles<sup>1</sup>**

	Low	Substance Involved	Drug Sales	Violent
<b>Cluster Size</b>	0.8498	0.1216	0.0225	0.0062
<b>Indicators</b>				
DUI-Alcohol				
No	0.9557	0.0137	0.0230	0.0076
Yes	0.5556	0.4213	0.0208	0.0023
DUI-Drug				
No	0.9812	0.0004	0.0111	0.0072
Yes	0.0760	0.8349	0.0891	0.0001
Sold Drugs				
Never	0.8904	0.0919	0.0141	0.0035
1 to 9 times	0.2721	0.5019	0.1579	0.0681
10 or more times	0.1499	0.7035	0.1370	0.0096
Stole Item >\$50				
Never	0.8637	0.1134	0.0210	0.0019
1 to 9 times	0.4085	0.3997	0.0464	0.1453
10 or more times	0.2480	0.3682	0.2180	0.1658
Attack w/Intent to Harm				
Never	0.8702	0.1100	0.0181	0.0017
1 to 9 times	0.5366	0.2964	0.0940	0.0730
10 or more times	0.4529	0.4037	0.0000	0.1433
<b>Covariates</b>				
Gender				
Male	0.8075	0.1565	0.0282	0.0078
Female	0.8903	0.0881	0.0169	0.0046
Age				
1 – 1 (18 Years)	0.8376	0.1237	0.0313	0.0074
2 – 3 (19 or 20 Years)	0.8291	0.1372	0.0255	0.0083
4 – 4 (21 Years)	0.8325	0.1389	0.0232	0.0055
5 – 5 (22 or 23 Years)	0.8575	0.1185	0.0187	0.0053
6 – 6 (24 or 25 Years)	0.8800	0.0981	0.0173	0.0046

<sup>1</sup>Unweighted row percentages.

**Table 7.**  
**Distribution of Indicators and Covariates within Overall**  
**Functioning Profiles<sup>1</sup>**

	Normal	Behavior Problems	Multiple Problems
<b>Cluster Size</b>	0.8730	0.1001	0.0269
<b>Indicators</b>			
<b>Serious Mental Illness (SMI)</b>			
No	0.8633	0.8094	0.7594
Yes	0.1367	0.1906	0.2406
<b>Substance Dependence</b>			
None	0.9536	0.4014	0.6436
Alcohol or MJ Only	0.0417	0.3975	0.2741
Drug Only	0.0025	0.0666	0.0114
Multiple Types	0.0022	0.1345	0.0709
<b>Behavior Problems</b>			
Low Problem Cluster	0.9325	0.1526	0.6473
Moderate/ High Cluster	0.0675	0.8474	0.3527
<b>Arrest</b>			
None	0.9774	0.7861	0.2634
Property Arrest(s)	0.0043	0.0211	0.1274
Drug Arrest(s)	0.0116	0.1301	0.2633
Violent Arrest(s)	0.0058	0.0108	0.2145
Multiple Type Arrests	0.0008	0.0519	0.1314
<b>Social Problems</b>			
None	0.8506	0.8496	0.3517
Not HS Grad	0.1312	0.1360	0.6324
Unmarried w/ Child >20	0.0152	0.0132	0.0159
Both, Not Grad & Parent*	0.0030	0.0012	0.0000
<b>Covariates</b>			
<b>Gender</b>			
Females	0.5331	0.3670	0.3002
Males	0.4669	0.6330	0.6998
<b>Age Group</b>			
1 – 18 years	0.1426	0.1576	0.1592
2 – 19 or 20 years	0.2450	0.2823	0.2838
4 – 21 years	0.1224	0.1394	0.1410
5 – 22 or 23 years	0.2459	0.2285	0.2204
6 – 24 or 25 years	0.2442	0.1923	0.1957

<sup>1</sup>Column percentages. \*Unmarried Parent under the age of 20.

**Table 8.**  
**Distribution of Indicators and Covariates across**  
**Overall Functioning Profiles<sup>1</sup>**

	Normal	Behavior Problems	Multiple Problems
<b>Cluster Size</b>	0.8730	0.1001	0.0269
<b>Indicators</b>			
<b>Serious Mental Illness (SMI)</b>			
No	0.8813	0.0947	0.0239
Yes	0.8237	0.1316	0.0447
<b>Substance Dependence</b>			
None	0.9354	0.0451	0.0195
Alcohol or MJ Only	0.4358	0.4759	0.0883
Drug Only	0.2373	0.7292	0.0335
Multi-type	0.1099	0.7795	0.1106
<b>Behavior Problems</b>			
Low Problem Cluster	0.9614	0.0180	0.0206
Moderate/High Problem Cluster	0.3846	0.5535	0.0620
<b>Arrest</b>			
None	0.9087	0.0838	0.0075
Property Arrest(s)	0.4055	0.2266	0.3679
Drug Arrest(s)	0.3354	0.4302	0.2344
Violent Arrest(s)	0.4247	0.0905	0.4847
Multiple Arrest Types	0.0768	0.5489	0.3743
<b>Social Problems</b>			
None	0.8871	0.1016	0.0113
Not HS Grad	0.7889	0.0937	0.1173
Unmarried w/Child<20	0.8831	0.0883	0.0286
Both, No HS Grad & Parent*	0.9569	0.0431	0.0000
<b>Covariates</b>			
<b>Gender</b>			
Male	0.8322	0.1294	0.0385
Female	0.9122	0.0720	0.0158
<b>Age Group</b>			
1 – 1 (18 Years)	0.8613	0.1091	0.0296
2 – 3 (19 or 20 Years)	0.8563	0.1131	0.0306
4 – 4 (21 Years)	0.8576	0.1120	0.0305
5 – 5 (22 or 23 Years)	0.8817	0.0939	0.0244
6 – 6 (24 or 25 Years)	0.8968	0.0810	0.0222

<sup>1</sup>Row Percentages

\* Unmarried Parent under age 20

**Table 9.**  
**Factor Loadings for Neighborhood Cohesion and Religiousness Scales**

	<i>Factor Loadings</i>
<u>Neighborhood Cohesion Scale Items (<math>\alpha=.77</math>):</u>	
<i>Close Knit Neighborhood</i>	.54
<i>Willing to Help Neighbors</i>	.63
<i>Generally Get Along</i>	.41
<i>Share Same Values</i>	.44
<i>People Can be Trusted</i>	.59
<i>Kids Skipping School--Do Something</i>	.50
<i>Children Graffiti--Do Something</i>	.52
<i>Scold Children Disrespectful to Adult</i>	.43
<i>Respond to Threat, Fight, Beaten</i>	.53
<i>Organize if Budget Cuts Close Fire Station</i>	.46
<u>Importance of Religion Scale Items (<math>\alpha=.81</math>):</u>	
<i>Religious Beliefs Important</i>	.80
<i>Religious Beliefs Influence Decisions</i>	.85
<i>Important Friends Share Beliefs</i>	.60



**Table 10. Distribution<sup>1</sup> of Demographic Characteristics of Emerging Adults by Poverty Status**

	All		Very Poor		Poor		Non-Poor	
	n	%	n	%	n	%	n	%
(Sample Size)	16,108	100	4,006	25	4,046	25	8,056	50
Gender****								
Males	7,908	51	1,658	43	1,945	51	4,305	55
Females	8,200	49	2,348	57	2,101	49	3,751	45
Race/Ethnicity****								
White, non-Hispanic	10,390	63	2,181	50	2,328	55	5,881	72
Black, non-Hispanic	2,035	13	758	21	583	15	694	9
Hispanic	2,535	18	739	22	844	24	952	13
Asian	499	4	147	5	102	4	250	4
Other	649	2	181	2	189	3	279	2
Age								
Respondent 18	2,358	15	660	15	520	13	1,178	15
Respondent 19	2,022	12	678	16	446	11	898	11
Respondent 20	2,010	13	587	15	502	13	921	12
Respondent 21	2,010	12	572	15	565	14	873	11
Respondent 22 or 23	3,909	25	888	23	1,092	27	1,929	24
Respondent 24 or 25	3,799	23	621	23	921	23	2,257	23
Family Income								
Less than \$20,000	5,620	32	3,863	95	1,689	40	68	1
\$20,000 to \$49,999	6,224	37	143	5	2,330	58	3,751	42
\$50,000 to \$74,999	2,056	14	0	0	27	1	2,029	26
\$75,000 or More	2,208	17	0	0	0	0	2,208	32

<sup>1</sup>Weighted, \*\*\* p<000, \*\*p<.010, \*p<.050

Table 10. Continued

	All		Very Poor		Poor		Non-Poor	
	n	%	n	%	n	%	n	%
<b>Employment***</b>								
Full-Time	7,352	46	913	24	1,923	49	4,516	55
Part-Time	4,124	26	1,209	29	973	23	1,942	25
Unemployed	1,387	8	449	12	369	8	569	7
Other	3,245	19	1,435	35	781	20	1,029	13
<b>Education***</b>								
Less than HS, Enrolled	1,164	7	287	7	273	7	604	7
Less than HS, Not Enr.	2,399	15	844	22	786	19	769	10
HS Grad, Enrolled	1,799	11	608	13	349	8	842	11
HS Grad, Not Enrolled	3,987	24	688	18	1,232	29	2,067	25
Some College, Enrolled	3,319	22	1,118	28	676	18	1,525	20
Some College, Not Enr.	1,568	9	157	4	383	9	1,028	12
College Grad, Enrolled	757	5	221	6	167	5	369	4
College Grad, Not Enr.	1,099	7	79	2	175	5	845	11
<b>Marital Status***</b>								
Married	2,633	15	454	11	875	21	1,304	14
Widowed/ Divorced/ Separated	416	2	114	2	108	2	194	<2
Never Been Married	13,059	83	3,438	87	3,063	78	6,558	84
<b>Number of Children***</b>								
None	12,715	81	2,928	75	2829	72	6,958	88
One	2,034	11	541	13	734	17	759	8
Two	948	5	316	7	340	7	292	3
Three or More	391	2	211	5	141	3	39	<1

\*\*\* p&lt;000, \*\*p &lt; .010, \*p&lt;.050

Table 10. Continued

	All		Very Poor		Poor		Non-Poor	
	n	%	n	%	n	%	n	%
Pregnant*	541	3	147	3	172	3	222	3
<b>Mobility, Past Year***</b>								
Never Moved	7,992	52	1,458	39	1,842	48	4,592	60
Moved Once	4,669	28	1,409	33	1,193	28	2,067	25
Moved Twice or More	3,441	21	1,137	28	1,009	24	1,527	15
<b>Population Density***</b>								
Non-Rural	11,791	79	2,825	76	2,842	77	6,124	82
Rural	4,317	21	1,181	24	1,204	23	1,932	18

\*\*\* p&lt;0.00, \*\*p &lt;.010, \*p&lt;.050

**Table 11. Distribution<sup>1</sup> of Emerging Adult Protective Factors by Poverty Status**

	All		Very Poor		Poor		Non-Poor	
	n	%	n	%	n	%	n	%
Sample Size	16,108	100	4,006	25	4,046	25	8,056	50
<b>Individual Income Supports</b>								
SS or RR Payments**	340	2	103	2	105	2	132	1
SSI Payments***	347	3	156	4	91	2	100	1
Public Assistance****	605	3	397	10	144	3	64	<1
Welfare/Job Plcmt/Childcare****	817	4	409	10	248	5	160	2
Child Support Payments****	517	3	194	4	170	4	153	2
<b>Family Income Supports</b>								
SS or RR Payment****	1,166	8	269	8	375	9	522	7
SSI Payments****	869	5	337	9	269	6	263	3
Public Assistance****	847	5	505	13	225	5	117	1
Welfare/Job Plcmt/Childcare****	1,059	6	506	12	334	7	219	2
Food Stamps****	1,762	10	1,032	25	531	12	199	2
Child Support Payments*	1,340	8	324	8	410	9	606	7
<b>Any Income Support****</b>								
None	11,849	75	2534	63	2711	69	6604	82
Individual OR Family Support	2,308	14	620	17	751	18	937	12
Individual Family & Support	1,951	11	852	20	584	13	515	6
<b>Religious Attendance, (past year)</b>								
Never	5,945	35	1,388	35	1,583	37	2,974	35
Rarely (1 to 24 times)	6,660	42	1,744	44	1,643	42	3,273	43
Often (25 or more times)	3,467	21	865	21	812	22	1,790	23

<sup>1</sup>Weighted, \*\*\* p<000, \*\* p < 0.10, \* p < 0.050

Table 11. Continued

	All		Very Poor		Poor		Non-Poor	
	n	%	n	%	n	%	n	%
Religious Scale Items <sup>1</sup>								
Religious Beliefs Important***	10,893	69	2,785	71	2,777	70	5,331	67
Religious Beliefs Int'l, Decisions*	9,809	62	2,507	65	2,466	62	4,836	61
Important Friends Share Beliefs***	4,414	28	1,228	32	1,148	30	2,038	26
<u>Mean Religious Belief Scale Score***</u>								
Mean (standard error)	.023(.009)		.063(0.019)		.047(0.0169)		-.005(0.013)	
Neighborhood Cohesion Scale Items <sup>1</sup>								
Close Knit Neighborhood	9,611	59	2,041	59	2,341	58	4,869	60
Willing to Help Neighbors***	12,286	76	2,918	72	2,980	75	6,388	79
Generally Get Along***	13,418	84	3,151	79	3,241	81	7,026	87
Share Same Values***	9,479	58	2,164	52	2,188	54	5,127	63
People Can be Trusted***	10,470	65	2,350	56	2,449	61	5,671	70
Kids Skipping School***	8,289	51	1,845	45	2,020	49	4,424	55
Children Graffiti-Do Something***	13,248	82	3,040	74	3,227	79	6,981	87
Scold Disrespectful Children***	8,323	52	1,980	49	2,014	49	4,329	54
Respond to Threat, Fight, Beat***	12,237	76	2,944	73	2,972	73	6,321	79
Organize if cuts close station***	10,593	65	2,514	62	2,589	64	5,490	68
<u>Neighborhood Cohesion Scale Score</u> ***								
Mean (standard error)	.004(.008)		-.005(0.021)		.025(0.019)		-.001(0.013)	

<sup>1</sup>Percents represent proportion that agree or strongly agree. \*\*\* p<000, \*\*p <.010, \*p<.050

Table 12. Distribution<sup>1</sup> of Emerging Adult Offenses and Analogous Behaviors by Poverty Status

Health & Emotional Well-Being	All		Very Poor		Poor		Non-Poor	
	n	%	n	%	n	%	n	%
Overall Health***								
Excellent	4966	32	1,142	29	1,114	29	2,710	34
Very Good	6,523	40	1,570	38	1,616	39	3,337	41
Good	3,782	23	1,007	26	1,067	26	1,708	21
Fair	766	5	256	7	229	5	281	4
Poor	69	<1	31	1	20	<1	18	<1
Recoded, Fair or Poor Health****	835	5	287	8	249	5	299	4
Any Serious Mental Illness	2,331	14	624	14	631	15	1,076	14
Substance Dependence								
None	14334	89	3552	89	3584	89	7198	89
Alcohol or Marijuana Only	1348	9	363	9	346	9	639	8
Illegal or Psychotherapeutic Drug Only	148	<1	22	<1	46	<1	80	1
Multiple Type of Substances	278	2	69	1	70	2	139	2
Behavioral Problems								
Past Year Arrest**								
None	15124	94	3740	93	3795	94	7589	95
Property Only	152	<1	42	1	51	1	59	<1
Drug Only	485	3	110	3	110	3	265	3
Violent Only	191	1	61	2	51	1	79	<1
Multiple Types	156	<1	53	1	39	1	64	<1

<sup>1</sup>Weighted, \*\*\* p<0.00, \*\* p < .010, \*p<.050

**Table 12. Continued**

	All		Very Poor		Poor		Non-Poor	
	n	%	n	%	n	%	n	%
<b>Self-Report Offense Clusters***</b>								
Low	13437	85	3386	86	3397	85	6654	84
High Substance Involved	2155	14	478	12	517	13	1160	15
High Drug Sales	149	<1	32	<1	34	<1	83	1
Violent	127	<1	35	<1	45	1	47	<1
<b>Social Problems</b>								
<b>Social Problems***</b>								
None	13467	84	3105	77	3208	81	7154	89
Less than HS, not enrolled	2354	14	830	21	770	18	754	9
Child/Preg. Unmar, <20 yrs	238	1	56	1	50	1	132	2
Both, Not HS Grad & Child, Unmar <20 yrs	45	<1	14	<1	16	<1	15	<1
<b>Overall Functioning***</b>								
Normal	14464	91	3578	91	3625	91	7261	91
Behavior Problems	1087	7	237	6	286	7	564	8
Multiple Problems	313	2	115	3	80	2	118	1

\*\*\* p<000, \*\* p<.010, \* p<.050

**Table 13. Distribution of Emerging Adult Protective Factors by Gender and Age**

Gender and Age Group	Economic Support***	Religiousness Scale***			Neighborhood Scale				
		Mean	S.E.	[95% Conf. Interval]	Mean	S.E.	[95% Conf. Interval]		
18 year old male	n=1210 16.6%	-.0523632	.0357445	-.1224263	.01777	-0.059302	0.03992	-0.1375428	0.0189391
18 year old female	n=1148 19.1%	.1209022	.0311312	.0598815	.1819229	0.0338579	0.03612	-0.0369403	0.1046561
19 year old male	n=952 14.6%	-.0493844	.0398547	-.127504	.0287352	-0.024914	0.04118	-0.1056267	0.0557993
19 year old female	n=1070 16.7%	.0375773	.0351403	-.0313017	.1064563	0.065047	0.03838	-0.0101863	0.1402803
20 year old male	n=1018 15.0%	-.1647742	.0357069	-.2347638	-.0947847	0.0615208	0.03798	-0.0129327	0.1359744
20 year old female	n=992 15.6%	.1197777	.0380732	.0451498	.1944056	-0.008797	0.0371	-0.0815203	0.0639259
21 year old male	n=967 13.2%	-.0786684	.0388125	-.1547453	-.0025914	-0.014353	0.0392	-0.0911849	0.0624789
21 year old female	n=1043 12.3%	.0692043	.0364795	-.0022997	.1407083	-0.020978	0.03873	-0.0968856	0.0549298
22 & 23 year old male	n=1860 12.2%	-.0566142	.0277175	-.1109436	-.0022848	0.0139788	0.02681	-0.0385777	0.0665353
22 & 23 year old female	n=2049 13.4%	.1097781	.0251119	.060556	.1590003	0.0235519	0.02705	-0.0294653	0.0765691
24 & 25 year old male	n=1901 11.5%	-.0196732	.0266189	-.0718492	.0325029	0.0027254	0.02798	-0.0521113	0.0575621
24 & 25 year old female	n=1898 10.1%	.1764706	.026395	.1247335	.2282077	-0.020607	0.02876	-0.0769716	0.035757
All Young Adults	n=16108 13.7%	.0091631	.0026023	.0040622	.014264	0.0065636	2.11329	-6.84552	3.149161

\*Unweighted percentages and means



**Table 14. Distribution<sup>1</sup> of Emerging Adult Offending Profiles by Gender and Age**

Gender and Age Group	n	Low		High, Substance Involved		High, Drug Sales		Violent	
		n	%	n	%	n	%	n	%
18 year old male	n=1172	955	81.5%	163	13.9%	36	3.1%	18	1.5%
18 year old female	n=1121	950	84.7%	154	13.7%	10	0.9%	7	0.6%
19 year old male	n=932	723	77.6%	166	17.8%	23	2.5%	20	2.1%
19 year old female	n=1056	910	86.2%	132	12.5%	6	0.6%	8	0.8%
20 year old male	n=1000	783	78.3%	190	19.0%	17	1.7%	10	1.0%
20 year old female	n=975	850	87.2%	122	12.5%	0	0.0%	3	0.3%
21 year old male	n=949	722	76.1%	200	21.1%	16	1.7%	11	1.2%
21 year old female	n=1028	922	89.7%	99	9.6%	4	0.4%	3	0.3%
22 & 23 year old male	n=1833	1479	80.7%	318	17.3%	16	0.9%	20	1.1%
22 & 23 year old female	n=2031	1828	90.0%	188	9.3%	8	0.4%	7	0.3%
24 & 25 year old male	n=1887	1576	83.5%	290	15.4%	11	0.6%	10	0.5%
24 & 25 year old female	n=1884	1739	92.3%	133	7.1%	2	0.1%	10	0.5%
All Emerging Adults	n=15868	13437	84.7%	2155	13.6%	149	0.9%	127	0.8%

<sup>1</sup>Unweighted Proportions

**Table 15. Distribution of Emerging Adult Offending and Analogous Behaviors by Gender and Age**

Gender and Age Group	SMI***	Substance Dependence***			Social Problems***		Overall***		
		AIC/MJ	Drug	Multiple	No HS	Parent <sup>1</sup>	Both	Drug	Arrest
18 year old male	n=1210	10.8%	9.1%	.5%	2.5%	13.3%	1.7%	9.8%	3.1%
18 year old female	n=1148	18.8%	7.1%	.9%	2.0%	10.2%	2.2%	5.9%	1.2%
19 year old male	n=952	12.8%	11.3%	.3%	2.5%	15.9%	1.3%	10.9%	3.8%
19 year old female	n=1070	18.6%	7.2%	1.3%	1.5%	11.5%	2.0%	6.3%	.9%
20 year old male	n=1018	12.6%	10.4%	1.1%	2.5%	17.8%	1.3%	9.8%	3.7%
20 year old female	n=992	17.8%	7.2%	.6%	1.1%	13.0%	1.4%	4.9%	.8%
21 year old male	n=967	9.4%	12.0%	.6%	3.3%	18.2%	2.0%	12.0%	3.3%
21 year old female	n=1043	18.4%	7.6%	1.1%	1.2%	13.6%	.8%	4.7%	1.1%
22 & 23 year old male	n=1860	10.9%	11.8%	1.1%	1.5%	16.2%	1.3%	8.1%	2.7%
22 & 23 year old female	n=2049	17.0%	5.6%	1.1%	1.3%	13.5%	1.5%	4.3%	1.0%
24 & 25 year old male	n=1901	10.3%	9.9%	.8%	1.7%	18.2%	1.5%	7.3%	2.5%
24 & 25 year old female	n=1898	17.4%	4.0%	1.1%	1.0%	12.4%	1.3%	3.0%	.8%
All Young Adults	n=16108	14.5%	8.4%	.9%	1.7%	14.5%	1.5%	6.9%	2.0%
<b>Gender and Age Group</b>		<b>Problem Behavior***</b>	<b>Property</b>	<b>Drug</b>	<b>Arrest***</b>	<b>Violent</b>	<b>Multiple</b>	<b>Drug</b>	<b>Arrest</b>
18 year old male	n=1210	18.5%	2.6%	4.7%	1.8%	2.0%	9.8%	3.1%	
18 year old female	n=1148	15.3%	1.1%	1.2%	.7%	.5%	5.9%	1.2%	
19 year old male	n=952	22.4%	2.4%	6.3%	1.6%	1.7%	10.9%	3.8%	
19 year old female	n=1070	13.8%	0.4%	1.9%	.6%	1.0%	6.3%	.9%	
20 year old male	n=1018	21.7%	0.9%	6.5%	3.2%	1.2%	9.8%	3.7%	
20 year old female	n=992	12.8%	0.9%	1.6%	.3%	.4%	4.9%	.8%	
21 year old male	n=967	23.9%	1.3%	6.0%	1.5%	1.7%	12.0%	3.3%	
21 year old female	n=1043	10.3%	0.9%	1.7%	.7%	.4%	4.7%	1.1%	
22 & 23 year old male	n=1860	19.3%	0.7%	4.5%	1.4%	1.3%	8.1%	2.7%	
22 & 23 year old female	n=2049	10.0%	0.3%	.9%	.9%	.3%	4.3%	1.0%	
24 & 25 year old male	n=1901	16.5%	0.6%	3.5%	1.5%	1.2%	7.3%	2.5%	
24 & 25 year old female	n=1898	7.7%	0.5%	.5%	.6%	.3%	3.0%	.8%	
All Young Adults	n=16108	15.3%	0.9%	3.0%	1.2%	.9%	6.9%	2.0%	

Unmarried Parent&lt;20yrs old

Note: Unweighted percentages

**Table 16. Binary and Multinomial Logistic Regressions of Poverty Status and Religiosity Scale on Functioning Measures**

Variables	SMI		Alcohol		Drug		Multiple Types		Behavior Problems		Property Arrest		Drug Arrest		Violent Arrest		Multiple Arr. Types		Not HS Grad		UnMarried Parent		Both <sup>1</sup>		
	or(SE)	rrr(SE)	or(SE)	rrr(SE)	or(SE)	rrr(SE)	or(SE)	rrr(SE)	or(SE)	rrr(SE)	or(SE)	rrr(SE)	or(SE)	rrr(SE)	or(SE)	rrr(SE)	or(SE)	rrr(SE)	or(SE)	rrr(SE)	or(SE)	rrr(SE)	or(SE)	rrr(SE)	
Very Poor	1.0660 (0.0771)	1.0878 (0.0986)	0.5515*** (0.0829)	0.8419 (0.1569)	0.7933** (0.0570)	1.7505* (0.4274)	0.9662 (0.1417)	1.6522* (0.3666)	1.9574** (0.4788)	2.6455*** (0.1918)	0.9780 (0.2105)	2.8244* (1.3082)	1.1443 (0.0812)	1.1000 (0.1017)	0.7098** (0.0838)	0.8898 (0.1755)	0.8241** (0.0583)	1.9346** (0.4909)	0.9024 (0.1408)	1.4880 (0.3455)	1.0611 (0.3116)	2.1962*** (0.1636)	0.6957 (0.1438)	3.2006** (1.4306)	
Poor	1.1443 (0.0812)	1.1000 (0.1017)	0.7098** (0.0838)	0.8898 (0.1755)	0.8241** (0.0583)	1.9346** (0.4909)	0.9024 (0.1408)	1.4880 (0.3455)	1.0611 (0.3116)	2.1962*** (0.1636)	0.6957 (0.1438)	3.2006** (1.4306)	1.1443 (0.0812)	1.1000 (0.1017)	0.7098** (0.0838)	0.8898 (0.1755)	0.8241** (0.0583)	1.9346** (0.4909)	0.9024 (0.1408)	1.4880 (0.3455)	1.0611 (0.3116)	2.1962*** (0.1636)	0.6957 (0.1438)	3.2006** (1.4306)	
Religious Scale	0.8634*** (0.0127)	0.7325*** (0.0287)	0.6659*** (0.0609)	0.6862*** (0.0733)	0.6351*** (0.0197)	0.8480 (0.0768)	0.7479*** (0.0460)	0.8851 (0.0724)	0.7083*** (0.0722)	0.8949*** (0.0290)	0.8962 (0.0927)	0.8984 (0.1692)	1.0877*** (0.0352)	1.1066 (0.1009)	0.5859* (0.142)	0.5713 (0.1721)	0.8141** (0.0595)	1.7990* (0.4412)	0.9815 (0.1455)	1.6864* (0.3793)	2.0425** (0.5024)	2.6635*** (0.1944)	0.9875 (0.2116)	2.8512* (1.3308)	
Very Poor	1.0877*** (0.0352)	1.1066 (0.1009)	0.5859* (0.142)	0.5713 (0.1721)	0.8141** (0.0595)	1.7990* (0.4412)	0.9815 (0.1455)	1.6864* (0.3793)	2.0425** (0.5024)	2.6635*** (0.1944)	0.9875 (0.2116)	2.8512* (1.3308)	1.1627*** (0.0370)	1.1244 (0.1047)	1.2016 (0.1745)	0.7324 (0.0606)	0.8418* (0.0606)	1.9842** (0.5043)	0.9270 (0.1456)	1.5474 (0.3624)	1.0924 (0.3239)	2.1781*** (0.1625)	0.6840 (0.1424)	3.2170** (1.4518)	
Poor	1.1627*** (0.0370)	1.1244 (0.1047)	1.2016 (0.1745)	0.7324 (0.0606)	0.8418* (0.0606)	1.9842** (0.5043)	0.9270 (0.1456)	1.5474 (0.3624)	1.0924 (0.3239)	2.1781*** (0.1625)	0.6840 (0.1424)	3.2170** (1.4518)	0.8649** (0.04179)	0.6897*** (0.0381)	0.7652 (0.1117)	0.7057** (0.0885)	0.6161*** (0.0259)	0.8213 (0.1069)	0.7252*** (0.0631)	0.8743 (0.1110)	0.7202 (0.1375)	0.8512** (0.4542)	0.8650 (0.1110)	1.508 (0.3732)	
Religious Scale	.8649** (0.4179)	0.6897*** (0.0381)	0.7652 (0.1117)	0.7057** (0.0885)	0.6161*** (0.0259)	0.8213 (0.1069)	0.7252*** (0.0631)	0.8743 (0.1110)	0.7202 (0.1375)	0.8512** (0.4542)	0.8650 (0.1110)	1.508 (0.3732)	Very Poor	1.0879 (0.0790)	1.1314 (0.1051)	0.5630 (0.1755)	0.7730 (0.1559)	0.8247* (0.0624)	1.771* (0.4451)	0.9979 (0.1493)	1.687* (0.3806)	2.0371** (0.5056)	2.6612*** (0.1954)	0.9883 (0.2124)	2.9970* (1.3972)
Poor	1.1606* (0.0831)	1.1500 (0.1091)	0.6164* (0.1456)	0.9048 (0.1836)	0.8558* (0.0625)	1.994* (0.5086)	0.9330 (0.1526)	1.5440 (0.3629)	1.0722 (0.3175)	2.184*** (0.1646)	0.6844 (0.1420)	3.3411** (1.491)	Religious Scale*Very Poor	1.0361 (0.0834)	1.1319 (0.1136)	0.9568 (0.2719)	0.7367 (0.1565)	1.061 (0.0868)	0.8805 (0.1989)	1.1112 (0.1707)	1.0854 (0.2290)	0.9962 (0.2456)	1.949* (0.0927)	1.0531 (0.3121)	0.5214 (0.1756)
Religious Scale*Poor	0.9612 (0.0764)	1.1244 (0.1038)	0.6158* (0.1357)	0.8935 (0.1855)	1.080 (0.0800)	1.1231 (0.2533)	1.0292 (0.1526)	.9613 (0.1750)	0.9312 (0.2103)	0.9776 (0.0781)	1.1564 (0.2607)	0.4686 (0.2055)													

<sup>1</sup>Both not a HS Grad and Young Parent

\*\*\* p&lt;0.000, \*\* p&lt;0.010, \* p&lt;0.050

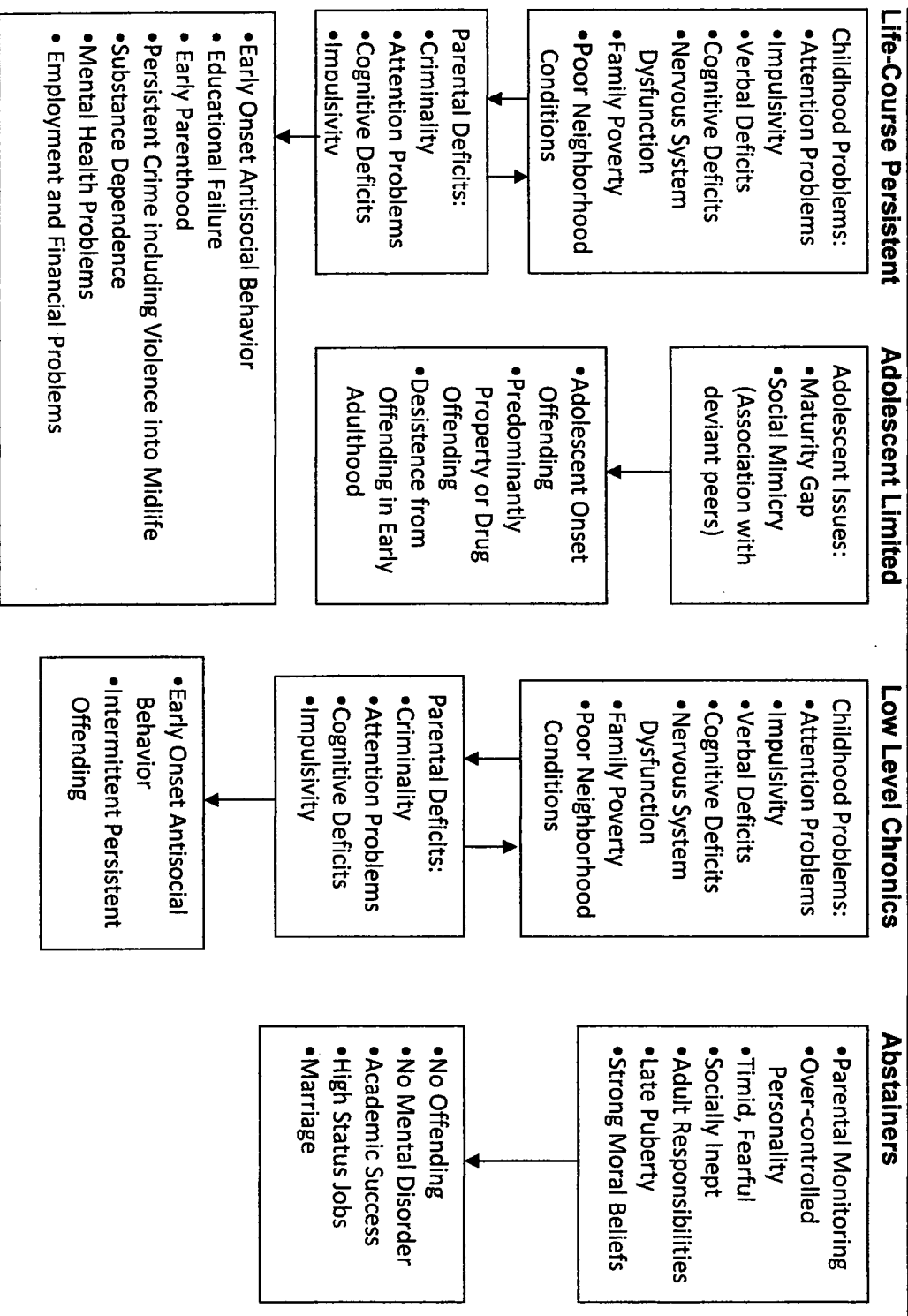
**Table 17.**  
**Multinomial Logistic Regression Predicting Poor Overall Functioning**

<i>(n=15,738)</i>	Behavior Problems	Multiple Problems
	<i>rrr (SE)</i>	<i>rrr(SE)</i>
Religiosity Scale	0.7516*** (0.0348)	0.8241* (0.0629)
Poverty	0.9269 (0.1025)	2.4228*** (0.5339)
Poor	1.0861 (0.1079)	1.10943 (0.2319)
Male	1.6613*** (0.1424)	3.1831*** (0.5847)
Black	0.5930*** (0.0818)	1.0997 (0.2220)
Hispanic	0.6872** (0.0844)	0.7009 (0.1928)
Asian	0.4121* (0.1487)	0.0000*** (0.0000)
Other Race	1.4391 (0.3040)	1.5364 (0.5408)
In School	0.9697 (0.0796)	0.1162*** (0.0338)
Some College	0.8654 (0.0784)	0.1162*** (0.0435)
College Grad	0.5189*** (0.0904)	0.0198*** (0.0200)
Employed	0.9299 (0.0822)	0.5451*** (0.0860)
Parent	0.6590** (0.0986)	0.8614 (0.2096)
Married	0.3955*** (0.0713)	0.2230*** (0.0751)
Rural	0.8676 (0.0779)	0.8178 (0.1282)
2 or More Moves	1.6034*** (0.1465)	2.0299*** (0.3189)
df=60 F(32, 29)=1305.6		
Prob >F= 0.0000		

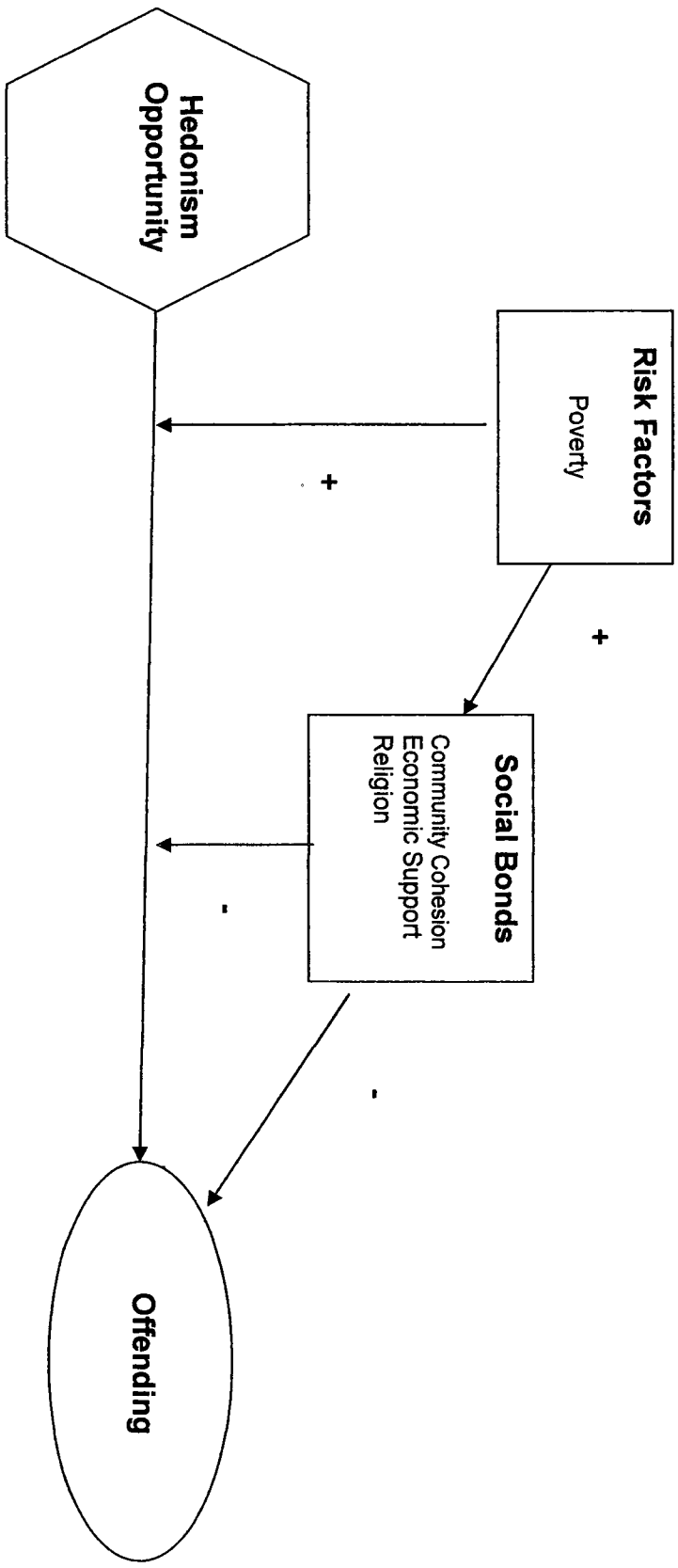
\*\*\* p<0.000, \*\*p <.010, \*p<.050

Figure 1.

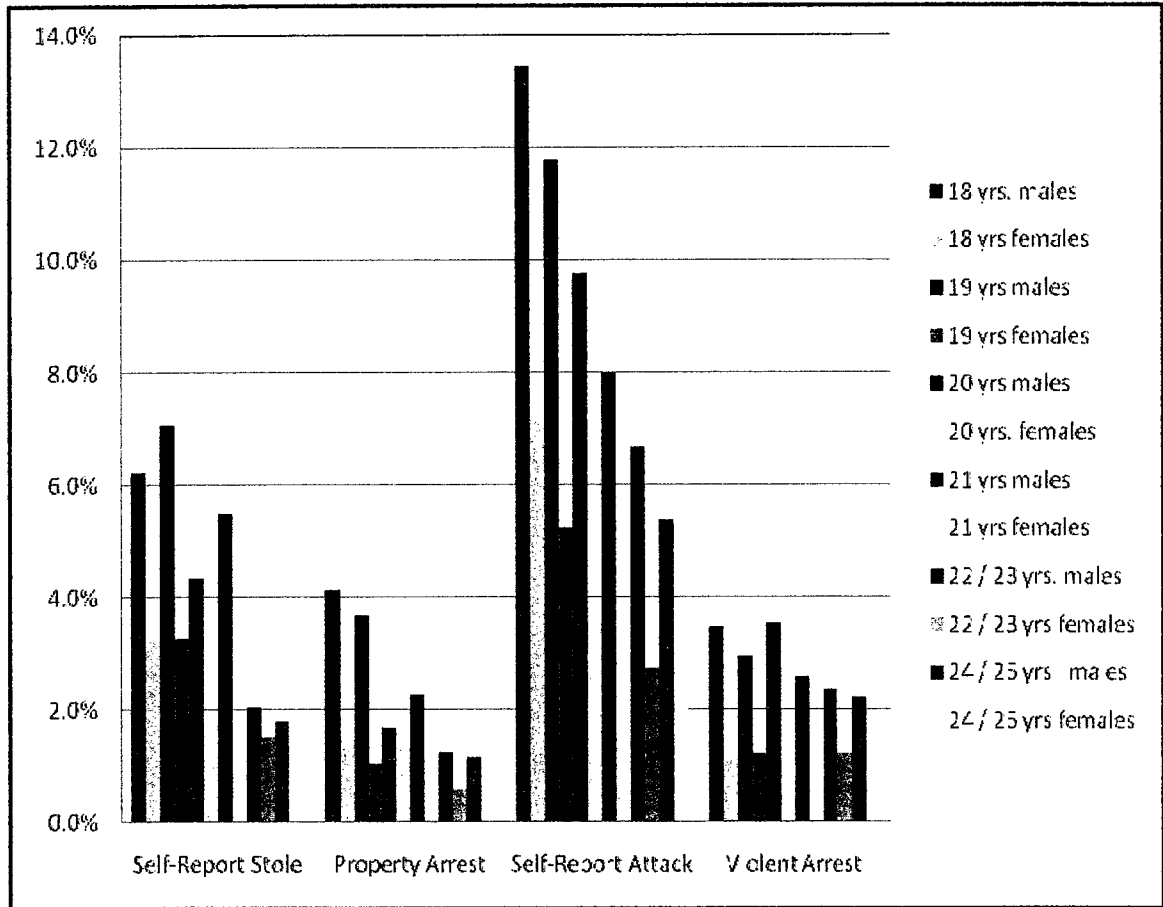
**Model of Moffitt's Developmental Taxonomy**



**Figure 2.**  
**Model of Age-Graded Theory of Informal Social Control**

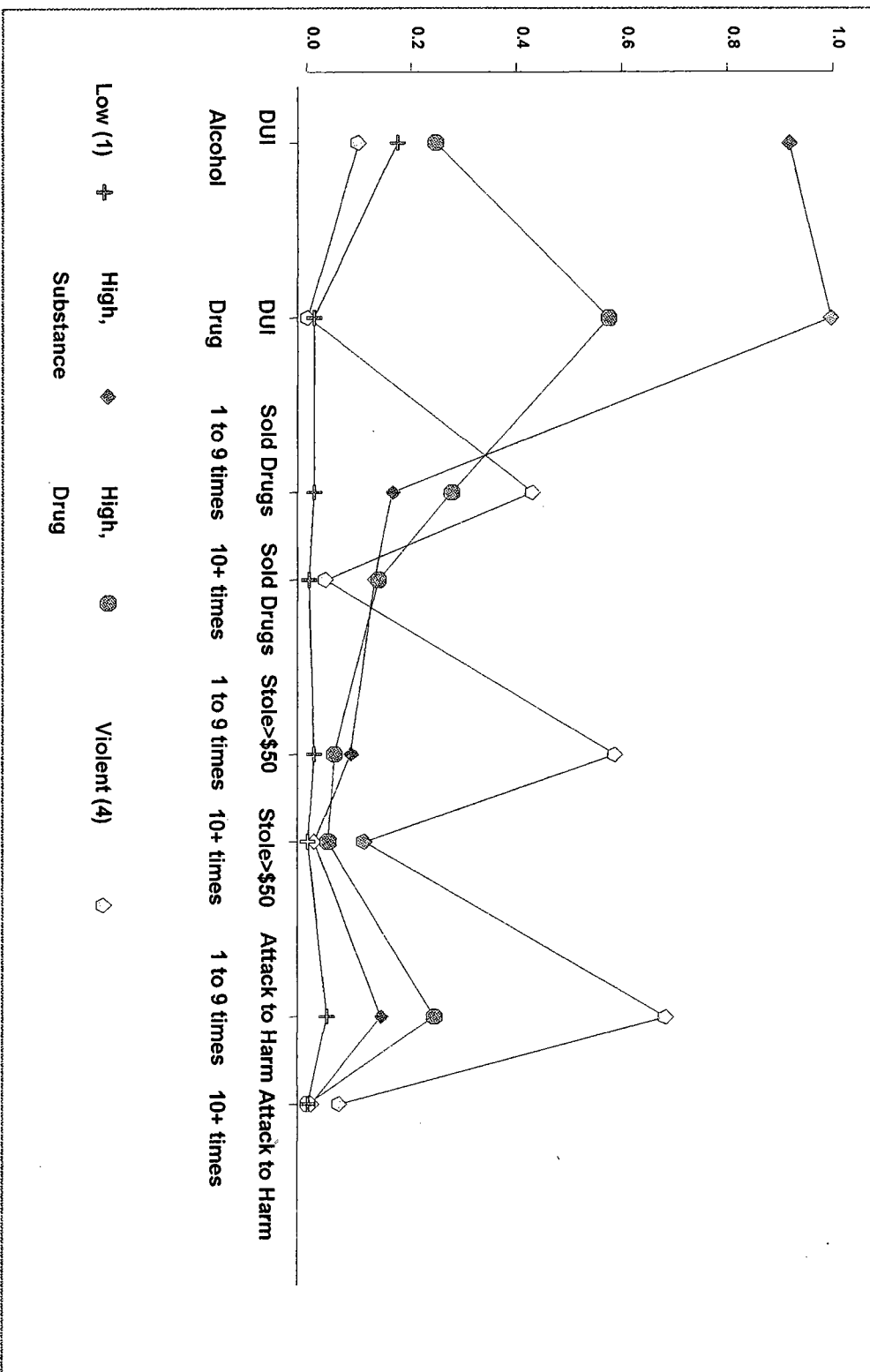


**Figure 3.**  
**Cross-tabulation of Self-Reported Offenses by Gender and Age<sup>1</sup>**



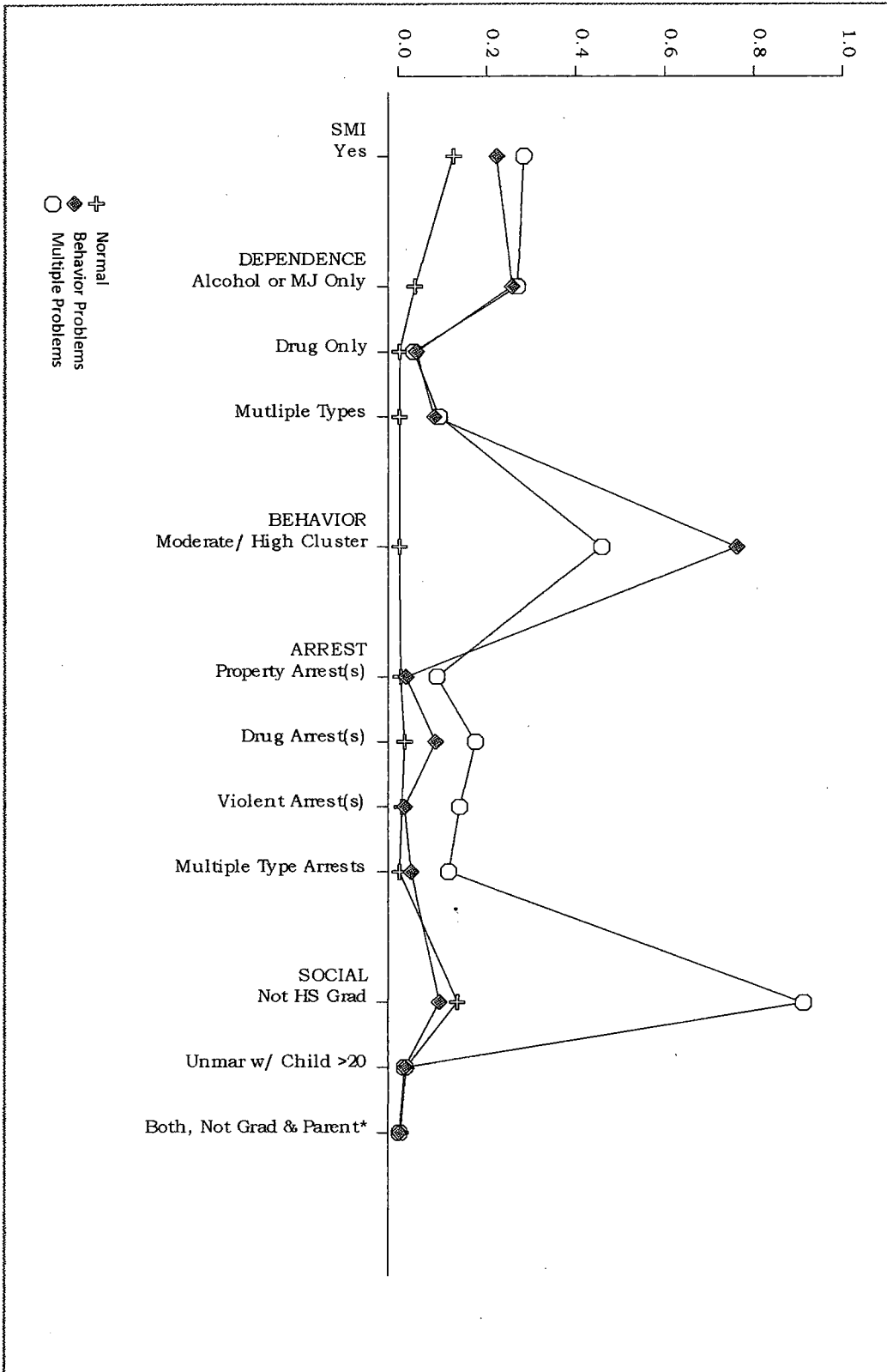
Un-weighted proportions.

**Figure 5.**  
**Latent Class Derived Emerging Adult Offending Profiles**

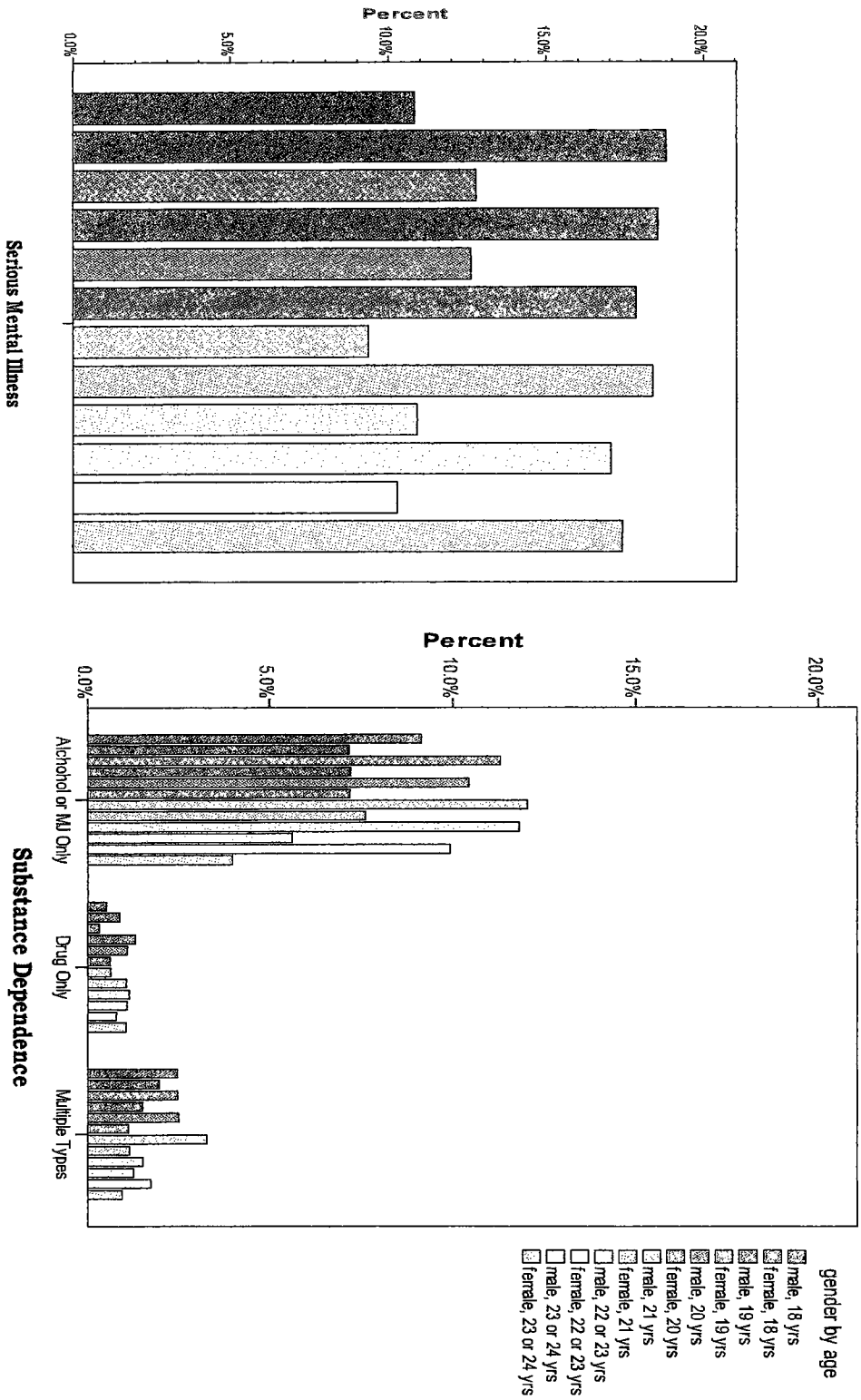




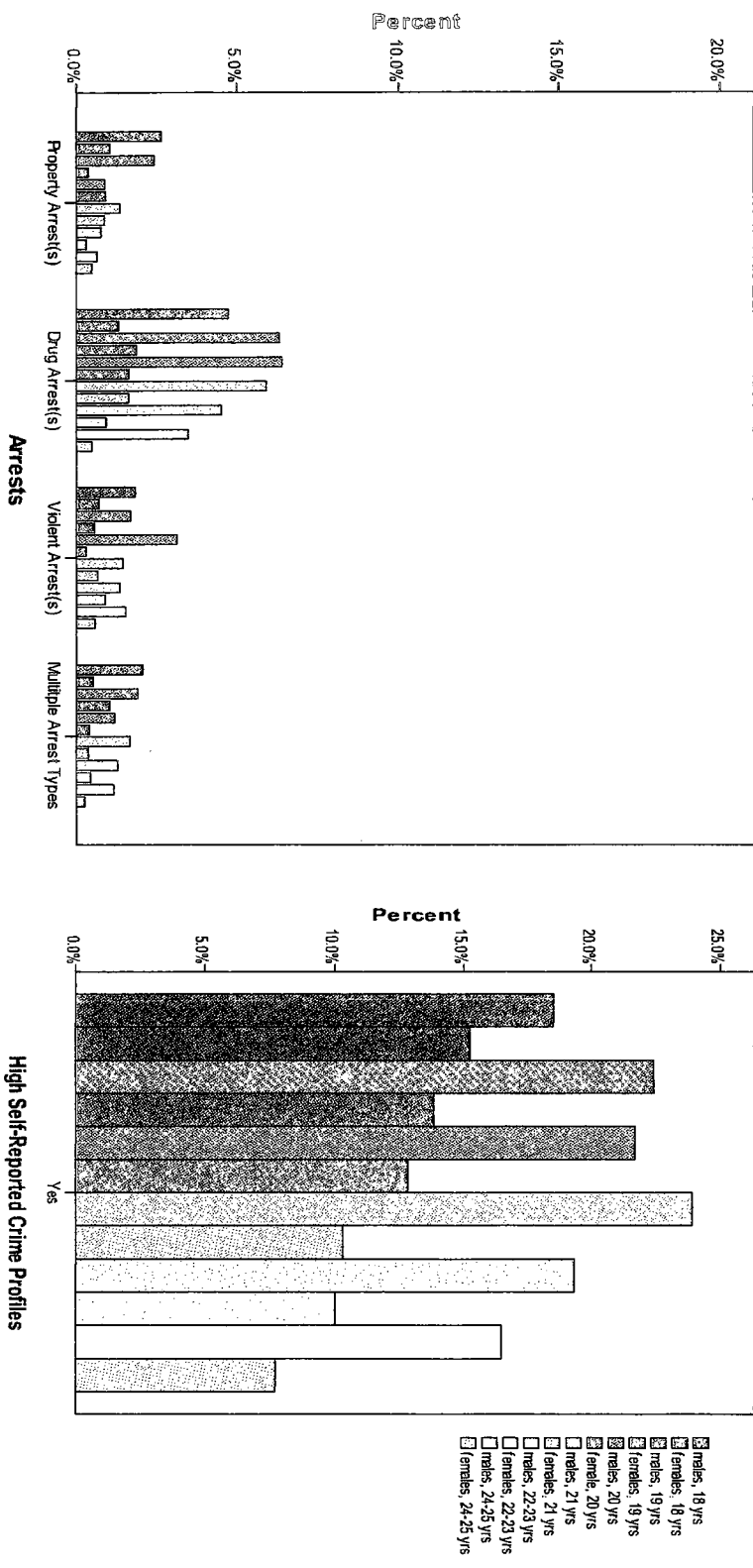
**Figure 6.**  
**Latent Class Derived Emerging Adult Overall Functioning Profiles**



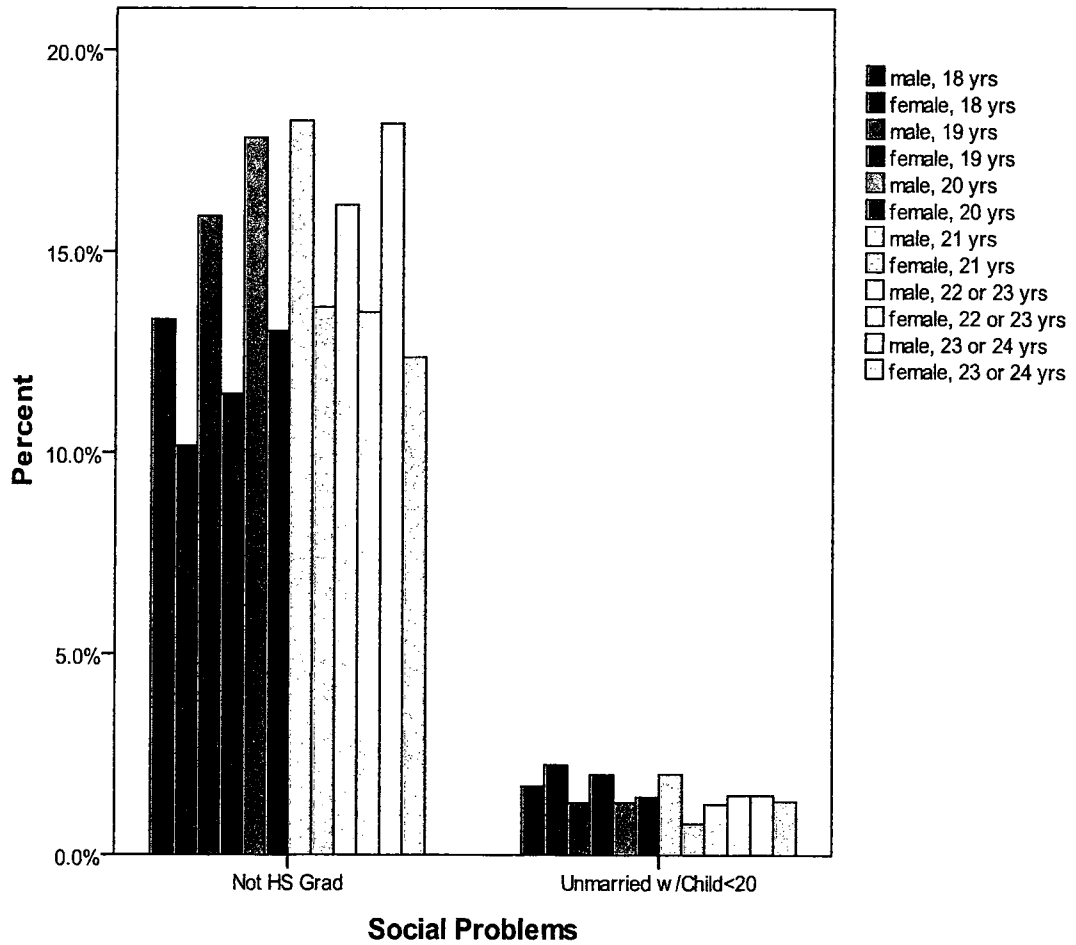
**Figure 8.**  
**Distribution of Health and Emotional Well-Being Indicators by Gender and Age**



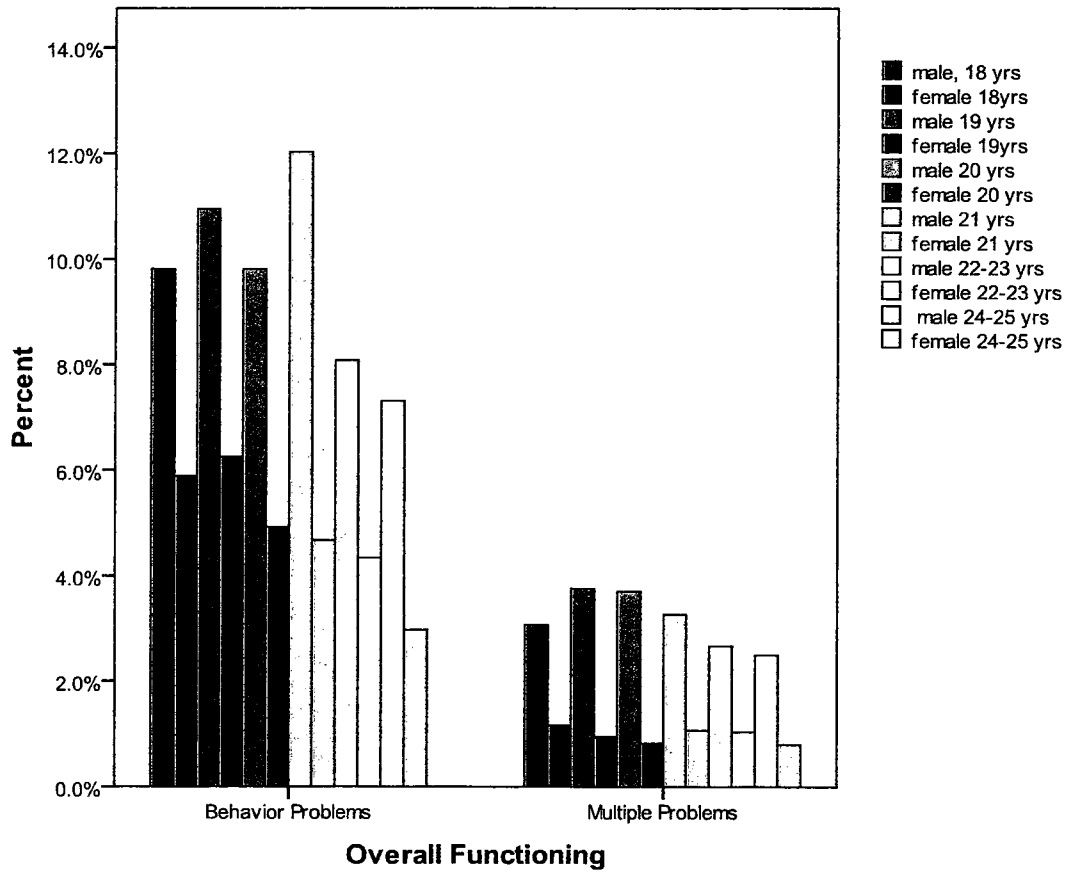
**Figure 9.**  
**Distribution of Behavior Problem Indicators by Gender and Age**



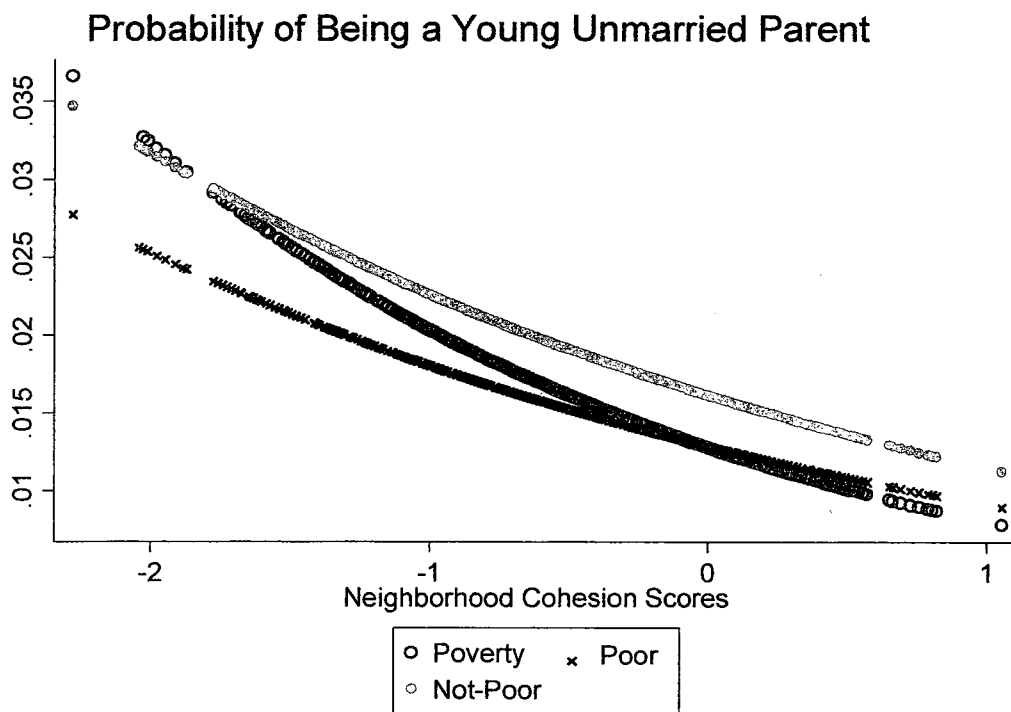
**Figure 10.**  
**Distribution of Social Problem Indicators by Gender and Age**



**Figure 11.**  
**Distribution of Overall Functioning Profiles by Gender and Age**



**Figure 12.**  
**Predicted Probability of Being a Young Unmarried Parent,**  
**by Neighborhood Cohesion Scores and Poverty Status**



**Figure 13.**  
**Predicted Probabilities of Adverse Health Outcomes by Poverty Status and Religiousness**

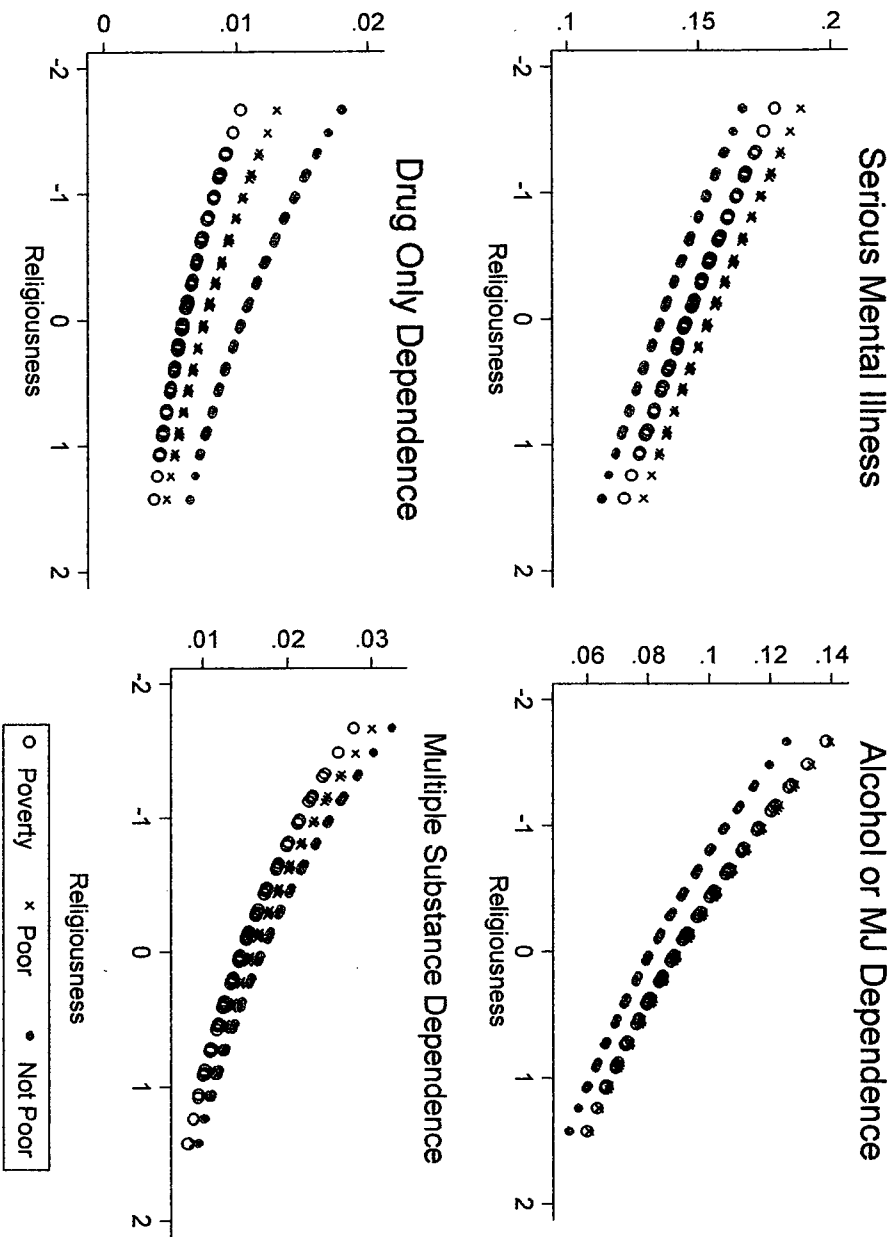
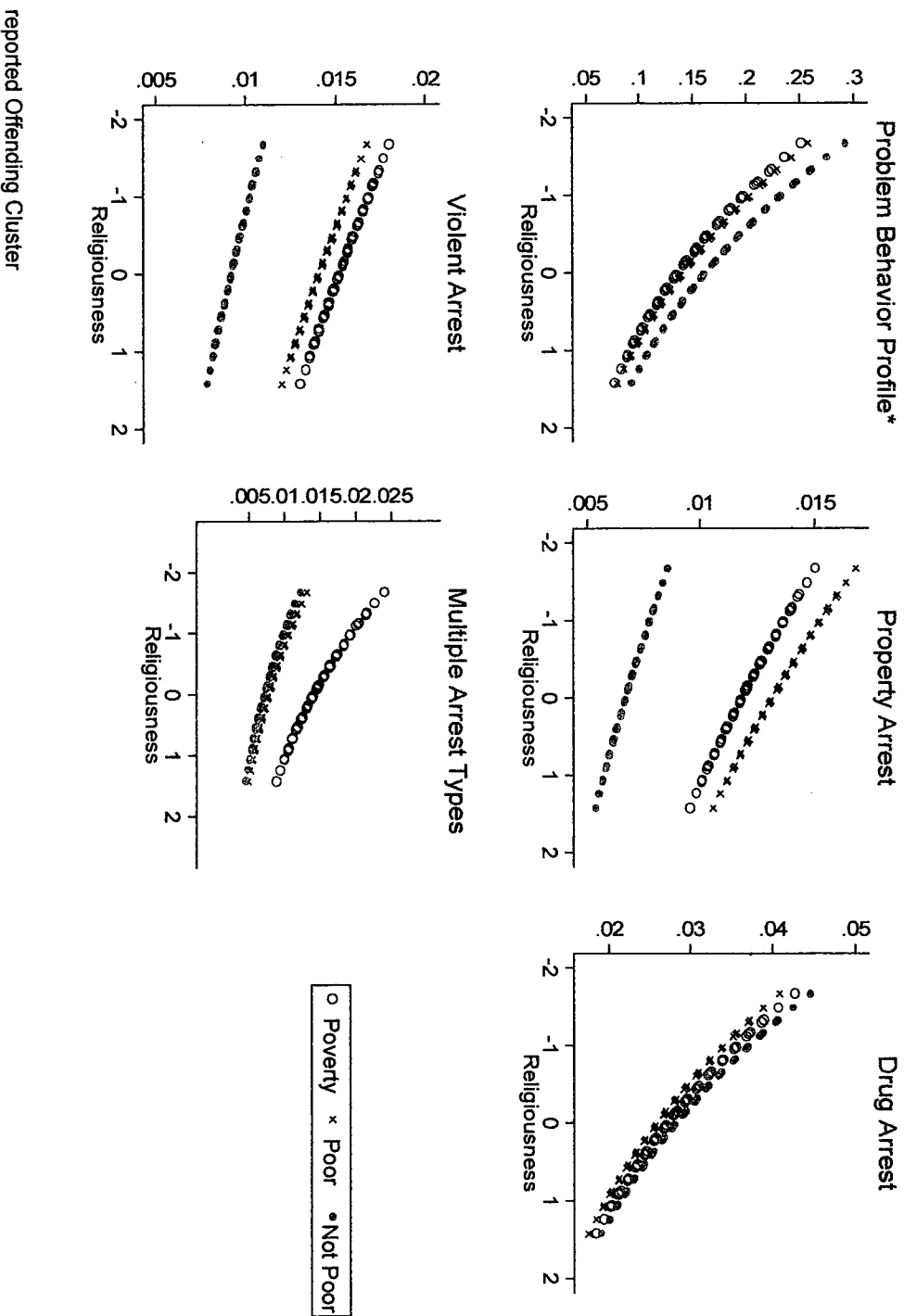


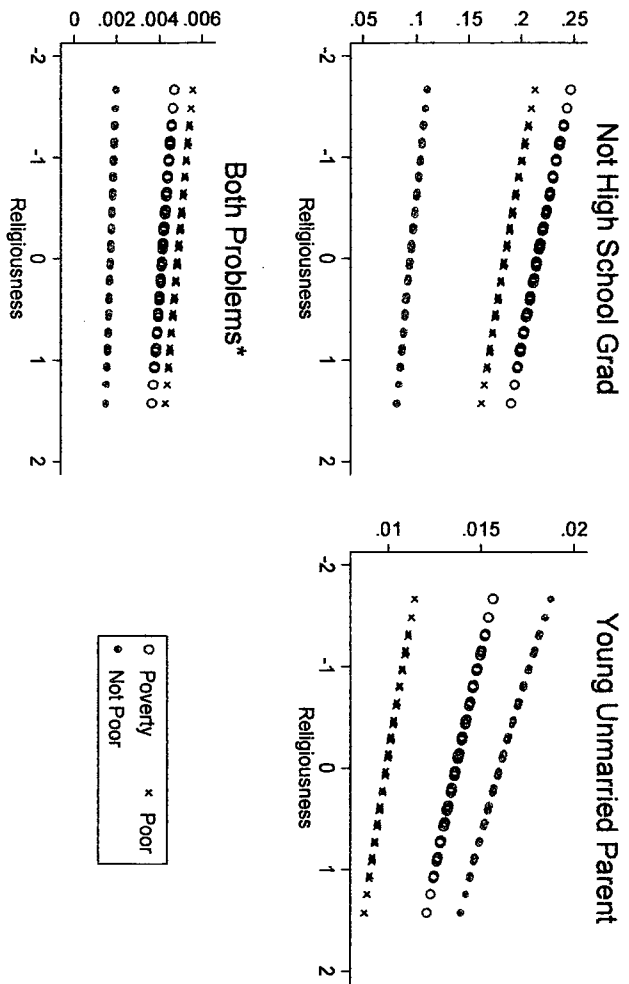
Figure 14. Predicted Probabilities of Self-Reported Offending and Types of Arrests by Poverty Status and Religiousness



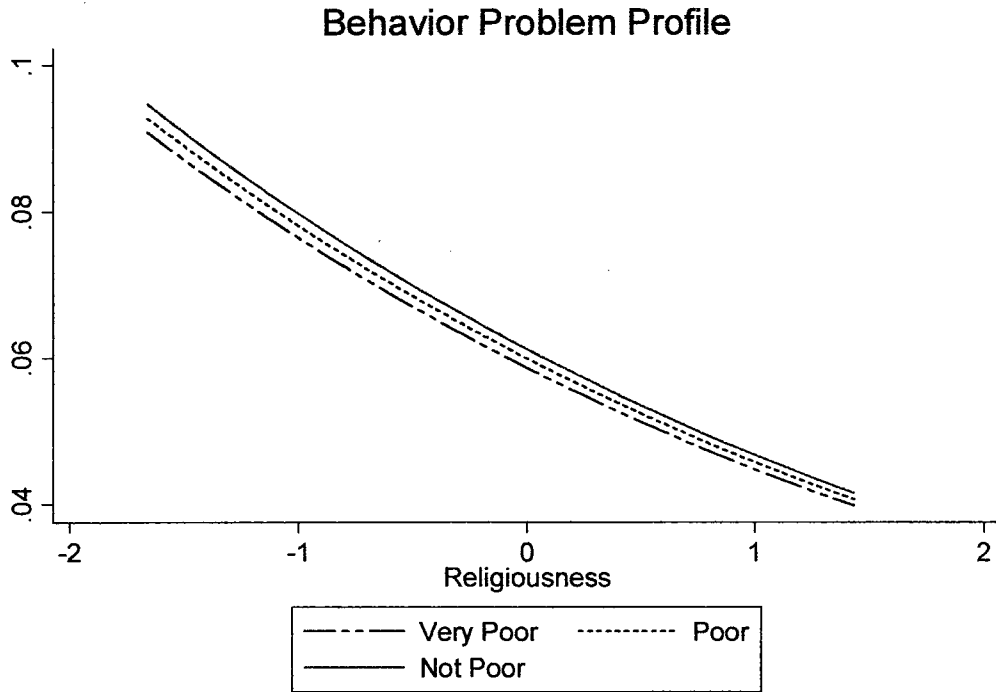
\*Problematic Self-



**Figure 15.**  
**Predicted Probabilities of Social Problems by Poverty Status and Religiousness**

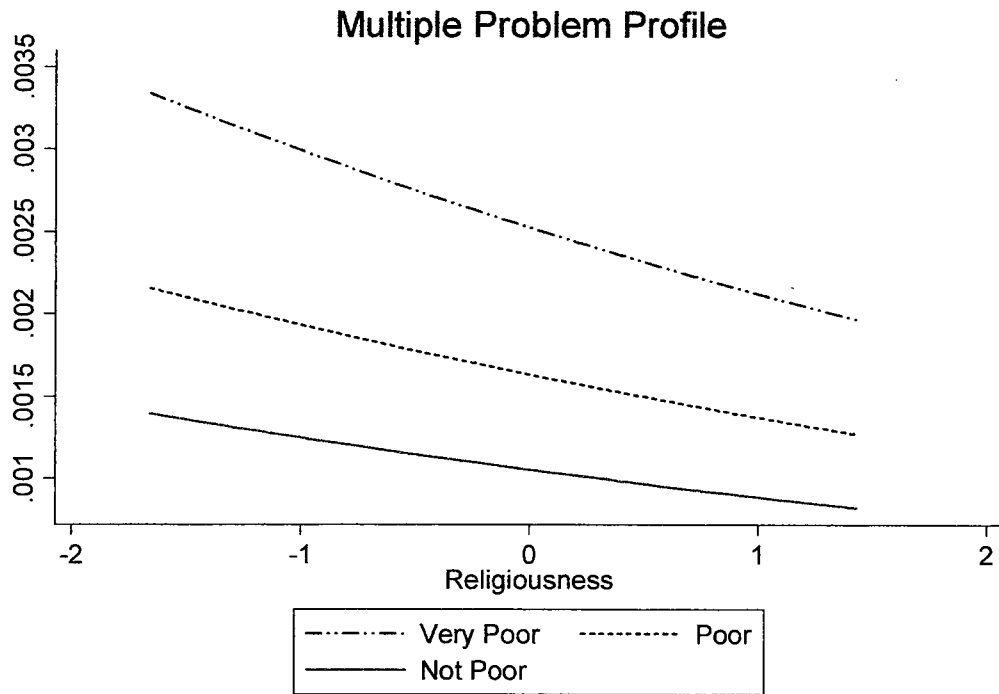


**Figure 16.**  
**Predicted Probability of being in Behavior Problem Profile**  
**by Religiousness Scores and Poverty Status<sup>1</sup>**



<sup>1</sup>controlling for variables shown in Table 17

**Figure 17.**  
**Predicted Probability of being in the Multiple Problem Cluster**  
**by Religiousness and Poverty Status**



<sup>1</sup>controlling for variables shown in Table 17

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-Appendix A-  
Offender Profile Indicator Distribution and Classification Probabilities

DUI-A	DUI-D	Sold Drugs	Stole >\$50	Attack to Harm	Freq	Modal	Cluster1	Cluster2	Cluster3	Cluster4
No	No	Never	Never	Never	10427	1	0.9962	0.0031	0	0.0008
Yes	No	Never	Never	Never	2110	1	0.9466	0.0531	0	0.0003
No	No	Never	Never	1 to 9 times	353	1	0.9721	0.0066	0	0.0213
No	No	1 to 9 times	Never	Never	143	1	0.8582	0.0355	0.0004	0.106
Yes	No	Never	Never	1 to 9 times	133	1	0.8825	0.1097	0	0.0079
No	No	Never	1 to 9 times	Never	109	1	0.9157	0.0079	0	0.0765
No	No	10 or more times	Never	Never	48	1	0.8697	0.0002	0.0034	0.1267
Yes	No	1 to 9 times	Never	Never	37	1	0.5511	0.415	0.0062	0.0277
Yes	No	Never	1 to 9 times	Never	36	1	0.8401	0.1312	0.0001	0.0286
No	No	Never	Never	10 or more times	11	1	0.8831	0	0	0.1169
No	No	Never	10 or more times	Never	11	1	0.9892	0.0064	0	0.0044
Yes	No	10 or more times	Never	Never	5	1	0.8536	0.0038	0.092	0.0506
No	No	Never	10 or more times	1 to 9 times	4	1	0.8782	0.0127	0	0.1092
Yes	No	Never	1 to 9 times	1 to 9 times	4	1	0.4339	0.1501	0.0006	0.4154
Yes	No	Never	10 or more times	Never	4	1	0.8925	0.1059	0	0.0016
Yes	No	Never	Never	10 or more times	3	1	0.9487	0	0.0001	0.0511
No	No	10 or more times	10 or more times	Never	2	1	0.5457	0.0003	0.0025	0.4515
Yes	No	Never	10 or more times	1 to 9 times	2	1	0.7613	0.2001	0	0.0385
Yes	Yes	Never	Never	Never	1106	2	0.0008	0.9984	0.0008	0
No	Yes	Never	Never	Never	318	2	0.0151	0.9843	0.0005	0.0001
Yes	Yes	1 to 9 times	Never	Never	206	2	0.0001	0.8183	0.1816	0
Yes	Yes	Never	Never	1 to 9 times	136	2	0.0004	0.997	0.0026	0
No	Yes	1 to 9 times	Never	Never	57	2	0.001	0.8694	0.129	0.0006
Yes	Yes	Never	1 to 9 times	Never	46	2	0.0003	0.9833	0.0163	0.0001
Yes	Yes	1 to 9 times	Never	1 to 9 times	40	2	0	0.5658	0.4341	0.0001

## Appendix A-Cont'd: Offender Profile Indicator Distribution and Classification Probabilities

DUI-A	DUI-D	Sold Drugs	Stole >\$50	Attack to Harm	Freq	Modal	Cluster1	Cluster2	Cluster3	Cluster4
No	Yes	Never	Never	1 to 9 times	24	2	0.0069	0.9906	0.0017	0.0008
No	Yes	Never	1 to 9 times	Never	10	2	0.0054	0.9813	0.0109	0.0024
Yes	Yes	Never	1 to 9 times	1 to 9 times	9	2	0.0001	0.9449	0.0543	0.0006
No	Yes	1 to 9 times	Never	1 to 9 times	7	2	0.0003	0.6567	0.3367	0.0062
Yes	Yes	Never	10 or more times	Never	7	2	0.0004	0.9992	0.0004	0
Yes	No	1 to 9 times	Never	1 to 9 times	6	2	0.2398	0.4001	0.0208	0.3394
Yes	Yes	1 to 9 times	10 or more times	Never	2	2	0	0.8908	0.1091	0
No	Yes	Never	10 or more times	1 to 9 times	1	2	0.0033	0.9937	0.001	0.0021
No	Yes	1 to 9 times	10 or more times	Never	1	2	0.0005	0.9222	0.0755	0.0018
Yes	No	1 to 9 times	10 or more times	Never	1	2	0.3458	0.5509	0.0046	0.0988
Yes	Yes	Never	10 or more times	1 to 9 times	1	2	0.0002	0.9983	0.0014	0
Yes	Yes	1 to 9 times	10 or more times	1 to 9 times	1	2	0.7023	0.2973	0.0004	0.0004
Yes	Yes	10 or more times	Never	Never	129	3	0	0.0028	0.9972	0
Yes	Yes	10 or more times	Never	1 to 9 times	39	3	0	0.0008	0.9991	0
Yes	Yes	1 to 9 times	1 to 9 times	Never	29	3	0	0.1696	0.8303	0.0001
Yes	Yes	10 or more times	1 to 9 times	1 to 9 times	25	3	0	0	0.9999	0.0001
Yes	Yes	10 or more times	1 to 9 times	Never	21	3	0	0.0001	0.9999	0
Yes	Yes	1 to 9 times	1 to 9 times	1 to 9 times	19	3	0	0.0558	0.9438	0.0005
No	Yes	10 or more times	Never	Never	18	3	0.0008	0.0042	0.9944	0.0006
No	Yes	10 or more times	Never	1 to 9 times	10	3	0.0001	0.0012	0.9964	0.0023
Yes	Yes	10 or more times	10 or more times	1 to 9 times	8	3	0	0.0015	0.9984	0.0002
Yes	Yes	10 or more times	Never	10 or more times	6	3	0	0	1	0
No	Yes	10 or more times	1 to 9 times	1 to 9 times	5	3	0	0.0001	0.996	0.004
Yes	Yes	10 or more times	10 or more times	Never	5	3	0	0.0051	0.9949	0
Yes	Yes	10 or more times	10 or more times	10 or more times	4	3	0	0	0.9998	0.0002
Yes	Yes	10 or more times	1 to 9 times	10 or more times	3	3	0	0	0.9999	0.0001



## Appendix A-Cont'd: Offender Profile Indicator Distribution and Classification Probabilities

DUI-A	DUI-D	Sold Drugs	Stole >\$50	Attack to Harm	Freq	Modal	Cluster1	Cluster2	Cluster3	Cluster4
No	Yes	1 to 9 times	1 to 9 times	Never	2	3	0.0001	0.2325	0.7608	0.0066
No	Yes	1 to 9 times	1 to 9 times	1 to 9 times	2	3	0	0.0789	0.8925	0.0286
No	Yes	10 or more times	10 or more times	1 to 9 times	2	3	0.0001	0.0022	0.9868	0.0109
Yes	Yes	1 to 9 times	Never	10 or more times	2	3	0	0	0.9996	0.0003
No	Yes	10 or more times	Never	10 or more times	1	3	0	0	0.9973	0.0027
No	Yes	10 or more times	1 to 9 times	Never	1	3	0	0.0002	0.9987	0.0011
Yes	Yes	1 to 9 times	1 to 9 times	10 or more times	1	3	0	0	0.9994	0.0006
No	No	Never	1 to 9 times	1 to 9 times	27	4	0.2967	0.0056	0	0.6976
No	No	1 to 9 times	1 to 9 times	1 to 9 times	25	4	0.0027	0.0007	0.0005	0.9961
No	No	1 to 9 times	Never	1 to 9 times	15	4	0.2188	0.02	0.0007	0.7605
No	No	1 to 9 times	1 to 9 times	Never	11	4	0.0694	0.008	0.0018	0.9208
No	No	10 or more times	Never	1 to 9 times	8	4	0.1949	0.0001	0.0059	0.7991
Yes	No	1 to 9 times	1 to 9 times	1 to 9 times	4	4	0.0061	0.0285	0.0326	0.9328
Yes	No	1 to 9 times	10 or more times	1 to 9 times	3	4	0.0789	0.2785	0.008	0.6346
Yes	No	10 or more times	Never	1 to 9 times	3	4	0.2853	0.0028	0.2354	0.4764
No	No	Never	1 to 9 times	10 or more times	2	4	0.0657	0	0	0.9343
No	No	1 to 9 times	Never	10 or more times	2	4	0.0454	0	0.0007	0.9539
No	No	1 to 9 times	10 or more times	10 or more times	2	4	0.0083	0	0.0002	0.9915
No	No	10 or more times	1 to 9 times	Never	2	4	0.0592	0	0.0144	0.9264
No	No	10 or more times	1 to 9 times	1 to 9 times	2	4	0.0023	0	0.0042	0.9935
No	No	10 or more times	10 or more times	10 or more times	2	4	0.007	0	0.0013	0.9917
No	No	1 to 9 times	1 to 9 times	10 or more times	1	4	0.0004	0	0.0004	0.9991
No	No	10 or more times	Never	10 or more times	1	4	0.0385	0	0.0059	0.9556
No	No	10 or more times	10 or more times	1 to 9 times	1	4	0.0411	0	0.0015	0.9574
Yes	No	1 to 9 times	Never	10 or more times	1	4	0.1	0	0.0439	0.8562
Yes	No	1 to 9 times	1 to 9 times	Never	1	4	0.1088	0.2281	0.0755	0.5876
Yes	No	10 or more times	1 to 9 times	1 to 9 times	1	4	0.0043	0.0001	0.2193	0.7763

-Appendix B-

Distribution of Overall Competence Indicators and Classification Probabilities

SMI	DEPENDENCE	BEHAVIOR	ARREST	SOCIAL PROBLEMS	Freq.	Modal	Cluster1	Cluster2	Cluster3
No	None	No	None	None	9157	1	0.9908	0.0074	0.0018
No	None	No	None	Not HS Grad	1394	1	0.9723	0.0074	0.0203
Yes	None	No	None	None	1180	1	0.9968	0.0021	0.0011
No	None	Problem Cluster	None	None	949	1	0.6262	0.3656	0.0081
No	Alcohol or MJ Only	No	None	None	354	1	0.8301	0.1556	0.0143
Yes	None	No	None	Not HS Grad	225	1	0.9854	0.0021	0.0125
Yes	None	Problem Cluster	None	None	178	1	0.8533	0.1399	0.0067
No	None	No	None	Unmarried w/Child<20	167	1	0.9888	0.0065	0.0047
Yes	Alcohol or MJ Only	No	None	None	141	1	0.9406	0.0495	0.0099
No	None	No	Drug Arrest(s)	None	135	1	0.7957	0.0823	0.122
No	None	Problem Cluster	None	Not HS Grad	119	1	0.5729	0.3422	0.0849
No	Alcohol or MJ Only	No	None	Not HS Grad	75	1	0.7201	0.1381	0.1419
No	None	No	Violent Arrest(s)	None	56	1	0.7937	0.0133	0.193
No	None	No	Property Arrest(s)	None	43	1	0.8088	0.0355	0.1558
Yes	None	Problem Cluster	None	Not HS Grad	38	1	0.7949	0.1334	0.0717
Yes	Alcohol or MJ Only	No	None	Not HS Grad	33	1	0.852	0.0459	0.1021
No	None	No	None	Both, No HS Grad & Parent	32	1	0.9972	0.0028	0
Yes	None	No	None	Unmarried w/Child<20	23	1	0.9953	0.0018	0.0029
Yes	Drug Only	No	None	None	20	1	0.8562	0.1376	0.0061
Yes	Multi-type	No	None	None	20	1	0.6944	0.2706	0.035
No	None	Problem Cluster	None	Unmarried w/Child<20	17	1	0.6453	0.333	0.0217
No	Drug Only	No	None	None	16	1	0.6313	0.3613	0.0074
Yes	None	No	Violent Arrest(s)	None	15	1	0.8676	0.0041	0.1283
Yes	None	No	Drug Arrest(s)	None	13	1	0.891	0.0259	0.0831

## Appendix B- Cont'd: Distribution of Overall Competence Profiles and Classification Probabilities

SMI	DEPENDENCE	BEHAVIOR	ARREST	SOCIAL PROBLEMS	Freq.	Modal	Cluster1	Cluster2	Cluster3
Yes	None	No	Property Arrest(s)	None	11	1	0.8854	0.0109	0.1037
Yes	Multi-type	No	None	Not HS Grad	8	1	0.5065	0.202	0.2915
No	Drug Only	No	None	Not HS Grad	6	1	0.5815	0.3404	0.0781
Yes	Alcohol or MJ Only	No	Drug Arrest(s)	None	6	1	0.3831	0.2798	0.3371
No	Alcohol or MJ Only	No	None	Unmarried w/Child<20	4	1	0.8263	0.1369	0.0369
Yes	None	No	None	Both, No HS Grad & Parent	4	1	0.9992	0.0008	0
Yes	None	No	Multiple Arrest Types	None	4	1	0.5611	0.088	0.351
Yes	None	Problem Cluster	Property Arrest(s)	None	4	1	0.3577	0.345	0.2973
No	None	No	Drug Arrest(s)	Unmarried w/Child<20	3	1	0.672	0.0614	0.2666
No	None	No	Violent Arrest(s)	Unmarried w/Child<20	2	1	0.6084	0.009	0.3826
Yes	None	Problem Cluster	None	Both, No HS Grad & Parent	2	1	0.9416	0.0583	0
Yes	Alcohol or MJ Only	No	None	Both, No HS Grad & Parent	2	1	0.9805	0.0195	0
No	None	No	Property Arrest(s)	Unmarried w/Child<20	1	1	0.6507	0.0252	0.3241
No	None	Problem Cluster	None	Both, No HS Grad & Parent	1	1	0.8193	0.1807	0
No	Drug Only	No	None	Unmarried w/Child<20	1	1	0.6509	0.3292	0.0198
Yes	None	No	Drug Arrest(s)	Both, No HS Grad & Parent	1	1	0.9889	0.0109	0.0003
Yes	None	Problem Cluster	None	Unmarried w/Child<20	1	1	0.8581	0.1244	0.0175
Yes	Alcohol or MJ Only	No	None	Unmarried w/Child<20	1	1	0.9314	0.0433	0.0253
No	Alcohol or MJ Only	Problem Cluster	None	None	303	2	0.0633	0.929	0.0078
Yes	Alcohol or MJ Only	Problem Cluster	None	None	109	2	0.1924	0.7933	0.0143
No	Multi-type	Problem Cluster	None	None	74	2	0.0091	0.9856	0.0053
No	None	Problem Cluster	Drug Arrest(s)	None	71	2	0.0981	0.795	0.1069
No	Alcohol or MJ Only	Problem Cluster	None	Not HS Grad	51	2	0.0574	0.8623	0.0803
Yes	Multi-type	Problem Cluster	None	None	49	2	0.0314	0.9674	0.0112
No	Drug Only	Problem Cluster	None	None	38	2	0.0218	0.9764	0.0018
No	Alcohol or MJ Only	Problem Cluster	Drug Arrest(s)	None	35	2	0.0047	0.9476	0.0478

## Appendix B Cont'd: Distribution of Overall Competence Profiles and Classification Probabilities

SMI	DEPENDENCE	BEHAVIOR	ARREST	SOCIAL PROBLEMS	Freq.	Modal	Cluster1	Cluster2	Cluster3
No	Alcohol or MJ Only	No	Drug Arrest(s)	None	28	2	0.1981	0.5152	0.2867
No	Multi-type	No	None	None	19	2	0.4048	0.5617	0.0336
Yes	Alcohol or MJ Only	Problem Cluster	None	Not HS Grad	19	2	0.1648	0.6951	0.1401
Yes	Drug Only	Problem Cluster	None	None	19	2	0.0733	0.923	0.0037
No	None	Problem Cluster	Multiple Arrest Types	None	18	2	0.0192	0.8404	0.1404
Yes	Alcohol or MJ Only	Problem Cluster	Drug Arrest(s)	None	16	2	0.0155	0.8876	0.0969
No	None	Problem Cluster	Property Arrest(s)	None	14	2	0.1724	0.592	0.2356
No	Multi-type	Problem Cluster	Drug Arrest(s)	None	14	2	0.0006	0.9677	0.0317
No	Alcohol or MJ Only	Problem Cluster	Multiple Arrest Types	None	12	2	0.0009	0.9402	0.0589
No	Drug Only	Problem Cluster	None	Not HS Grad	12	2	0.0209	0.9591	0.0199
Yes	None	Problem Cluster	Drug Arrest(s)	None	10	2	0.254	0.5779	0.1682
No	Alcohol or MJ Only	Problem Cluster	Property Arrest(s)	None	9	2	0.01	0.8614	0.1287
No	Alcohol or MJ Only	Problem Cluster	Drug Arrest(s)	Not HS Grad	9	2	0.0031	0.638	0.359
No	Alcohol or MJ Only	Problem Cluster	Violent Arrest(s)	None	9	2	0.0199	0.6565	0.3236
Yes	Multi-type	Problem Cluster	Drug Arrest(s)	None	9	2	0.0022	0.9318	0.066
Yes	Multi-type	Problem Cluster	None	Not HS Grad	8	2	0.0275	0.86	0.1125
Yes	Multi-type	Problem Cluster	Multiple Arrest Types	None	8	2	0.0004	0.9187	0.0809
No	Alcohol or MJ Only	No	Multiple Arrest Types	None	7	2	0.0404	0.5673	0.3923
No	Alcohol or MJ Only	Problem Cluster	Multiple Arrest Types	Not HS Grad	7	2	0.0005	0.5882	0.4113
No	Multi-type	Problem Cluster	None	Not HS Grad	7	2	0.0084	0.9351	0.0565
No	Multi-type	Problem Cluster	Multiple Arrest Types	None	7	2	0.0001	0.9608	0.0391
No	Multi-type	Problem Cluster	Multiple Arrest Types	Not HS Grad	7	2	0.0001	0.6879	0.312
No	Alcohol or MJ Only	Problem Cluster	None	Unmarried w/Child<20	6	2	0.07	0.9078	0.0222
No	Drug Only	Problem Cluster	Drug Arrest(s)	None	6	2	0.0016	0.9873	0.0111
No	Drug Only	Problem Cluster	Multiple Arrest Types	None	5	2	0.0003	0.9859	0.0138
No	Multi-type	No	None	Not HS Grad	5	2	0.2971	0.4218	0.2811

## Appendix B-Cont'd: Distribution of Overall Competence Profiles and Classification Probabilities

SMI	DEPENDENCE	BEHAVIOR	ARREST	SOCIAL PROBLEMS	Freq.	Modal	Cluster1	Cluster2	Cluster3
No	Multi-type	Problem Cluster	Drug Arrest(s)	Not HS Grad	5	2	0.0005	0.7323	0.2673
Yes	Multi-type	Problem Cluster	Drug Arrest(s)	Not HS Grad	5	2	0.0013	0.5579	0.4408
No	Multi-type	No	Drug Arrest(s)	None	4	2	0.0368	0.7077	0.2555
Yes	None	Problem Cluster	Multiple Arrest Types	None	4	2	0.0564	0.693	0.2506
Yes	Alcohol or MJ Only	Problem Cluster	Property Arrest(s)	None	4	2	0.0302	0.7328	0.237
Yes	Drug Only	Problem Cluster	None	Not HS Grad	4	2	0.0691	0.8908	0.0401
No	None	Problem Cluster	Drug Arrest(s)	Unmarried w/Child<20	3	2	0.0911	0.6523	0.2566
No	Alcohol or MJ Only	Problem Cluster	Drug Arrest(s)	Unmarried w/Child<20	3	2	0.0048	0.8672	0.128
No	Drug Only	Problem Cluster	Drug Arrest(s)	Not HS Grad	3	2	0.0014	0.8872	0.1114
Yes	Multi-type	Problem Cluster	Multiple Arrest Types	Not HS Grad	3	2	0.0002	0.5045	0.4953
No	Drug Only	No	Drug Arrest(s)	None	2	2	0.1007	0.7999	0.0994
No	Multi-type	Problem Cluster	Property Arrest(s)	None	2	2	0.0014	0.9104	0.0882
Yes	Alcohol or MJ Only	Problem Cluster	Multiple Arrest Types	None	2	2	0.0028	0.878	0.1191
Yes	Drug Only	Problem Cluster	Property Arrest(s)	None	2	2	0.0124	0.9211	0.0665
Yes	Drug Only	Problem Cluster	Drug Arrest(s)	None	2	2	0.0056	0.9708	0.0237
Yes	Drug Only	Problem Cluster	Multiple Arrest Types	None	2	2	0.001	0.9696	0.0294
Yes	Drug Only	Problem Cluster	Multiple Arrest Types	Not HS Grad	2	2	0.0008	0.7469	0.2524
Yes	Multi-type	No	Drug Arrest(s)	None	2	2	0.094	0.5086	0.3974
Yes	Multi-type	No	Multiple Arrest Types	None	2	2	0.0171	0.4987	0.4842
No	Alcohol or MJ Only	Problem Cluster	None	Both, No HS Grad & Parent	1	2	0.1528	0.8472	0.0001
No	Alcohol or MJ Only	Problem Cluster	Multiple Arrest Types	Unmarried w/Child<20	1	2	0.0009	0.8443	0.1549
No	Drug Only	Problem Cluster	Violent Arrest(s)	None	1	2	0.0089	0.8929	0.0983
No	Drug Only	Problem Cluster	Multiple Arrest Types	Not HS Grad	1	2	0.0003	0.8648	0.135
No	Multi-type	No	Multiple Arrest Types	None	1	2	0.0066	0.6858	0.3076
No	Multi-type	Problem Cluster	None	Unmarried w/Child<20	1	2	0.0101	0.9744	0.0154
No	Multi-type	Problem Cluster	Violent Arrest(s)	None	1	2	0.0031	0.7554	0.2415

## Appendix B-Cont'd: Distribution of Overall Competence Profiles and Classification Probabilities

SMI	DEPENDENCE	BEHAVIOR	ARREST	SOCIAL PROBLEMS	Freq.	Modal	Cluster1	Cluster2	Cluster3
No	Alcohol or MJ Only	Problem Cluster	Violent Arrest(s)	Not HS Grad	4	3	0.0045	0.1532	0.8423
Yes	None	No	Property Arrest(s)	Not HS Grad	4	3	0.4257	0.0054	0.569
Yes	Alcohol or MJ Only	Problem Cluster	Violent Arrest(s)	Not HS Grad	4	3	0.0081	0.0769	0.915
No	Alcohol or MJ Only	Problem Cluster	Property Arrest(s)	Not HS Grad	3	3	0.0042	0.3735	0.6223
Yes	None	No	Drug Arrest(s)	Not HS Grad	3	3	0.4775	0.0142	0.5083
Yes	None	No	Multiple Arrest Types	Not HS Grad	3	3	0.1205	0.0193	0.8602
Yes	None	Problem Cluster	Violent Arrest(s)	Not HS Grad	3	3	0.0749	0.0283	0.8969
Yes	Alcohol or MJ Only	No	Violent Arrest(s)	Not HS Grad	3	3	0.0587	0.0071	0.9342
Yes	Alcohol or MJ Only	Problem Cluster	Multiple Arrest Types	Not HS Grad	3	3	0.0013	0.3973	0.6014
Yes	Multi-type	Problem Cluster	Property Arrest(s)	Not HS Grad	3	3	0.0016	0.2989	0.6994
Yes	Multi-type	Problem Cluster	Violent Arrest(s)	Not HS Grad	3	3	0.0016	0.1145	0.8839
No	Multi-type	No	Property Arrest(s)	Not HS Grad	2	3	0.0092	0.0767	0.9142
No	Multi-type	No	Drug Arrest(s)	Not HS Grad	2	3	0.01	0.1969	0.7931
Yes	Alcohol or MJ Only	No	Property Arrest(s)	None	2	3	0.4142	0.1282	0.4576
Yes	Alcohol or MJ Only	No	Property Arrest(s)	Not HS Grad	2	3	0.0718	0.0227	0.9054
Yes	Alcohol or MJ Only	No	Multiple Arrest Types	None	2	3	0.0922	0.3635	0.5442
Yes	Alcohol or MJ Only	Problem Cluster	Property Arrest(s)	Not HS Grad	2	3	0.0087	0.2152	0.7762
Yes	Alcohol or MJ Only	Problem Cluster	Violent Arrest(s)	None	2	3	0.0496	0.4598	0.4906
No	None	No	Multiple Arrest Types	Unmarried w/Child<20	1	3	0.2407	0.1187	0.6406
No	Alcohol or MJ Only	No	Violent Arrest(s)	Unmarried w/Child<20	1	3	0.1369	0.051	0.8121
No	Multi-type	No	Violent Arrest(s)	Not HS Grad	1	3	0.0077	0.0246	0.9677
Yes	None	Problem Cluster	Property Arrest(s)	Not HS Grad	1	3	0.0871	0.086	0.8268
Yes	None	Problem Cluster	Property Arrest(s)	Unmarried w/Child<20	1	3	0.2498	0.213	0.5372
Yes	Alcohol or MJ Only	No	Violent Arrest(s)	None	1	3	0.3979	0.0471	0.555
Yes	Alcohol or MJ Only	No	Multiple Arrest Types	Not HS Grad	1	3	0.0138	0.0557	0.9305
Yes	Drug Only	No	Multiple Arrest Types	Not HS Grad	1	3	0.0169	0.2079	0.7752

Appendix B- Cont'd: Distribution of Overall Competence Profiles and Classification Probabilities

SMI	DEPENDENCE	BEHAVIOR	ARREST	SOCIAL PROBLEMS	Freq.	Modal	Cluster1	Cluster2	Cluster3
Yes	Alcohol or MJ Only	Problem Cluster	None	Unmarried w/Child<20	1	2	0.2067	0.7534	0.0398
Yes	Alcohol or MJ Only	Problem Cluster	None	Both, No HS Grad & Parent	1	2	0.391	0.6089	0.0001
Yes	Drug Only	Problem Cluster	Property Arrest(s)	Not HS Grad	1	2	0.0073	0.5499	0.4428
Yes	Multi-type	Problem Cluster	Property Arrest(s)	None	1	2	0.0046	0.8228	0.1726
No	None	No	Drug Arrest(s)	Not HS Grad	48	3	0.3501	0.037	0.6129
No	None	No	Violent Arrest(s)	Not HS Grad	36	3	0.2637	0.0045	0.7318
No	None	No	Property Arrest(s)	Not HS Grad	19	3	0.3084	0.0138	0.6778
No	None	Problem Cluster	Drug Arrest(s)	Not HS Grad	18	3	0.046	0.3816	0.5723
No	None	No	Multiple Arrest Types	None	17	3	0.3866	0.2158	0.3977
No	None	Problem Cluster	Violent Arrest(s)	None	11	3	0.2475	0.3252	0.4272
No	None	No	Multiple Arrest Types	Not HS Grad	10	3	0.0751	0.0429	0.882
No	None	Problem Cluster	Property Arrest(s)	Not HS Grad	8	3	0.0497	0.1747	0.7756
No	Alcohol or MJ Only	No	Violent Arrest(s)	None	8	3	0.2692	0.1135	0.6173
Yes	None	No	Violent Arrest(s)	Not HS Grad	8	3	0.3715	0.0018	0.6268
No	None	Problem Cluster	Multiple Arrest Types	Not HS Grad	7	3	0.0077	0.3465	0.6457
No	Alcohol or MJ Only	No	Drug Arrest(s)	Not HS Grad	7	3	0.0496	0.1318	0.8186
Yes	None	Problem Cluster	Multiple Arrest Types	Not HS Grad	7	3	0.0156	0.1956	0.7889
Yes	Alcohol or MJ Only	Problem Cluster	Drug Arrest(s)	Not HS Grad	7	3	0.0076	0.4474	0.545
No	None	Problem Cluster	Violent Arrest(s)	Not HS Grad	6	3	0.0454	0.061	0.8936
No	Alcohol or MJ Only	No	Violent Arrest(s)	Not HS Grad	6	3	0.0362	0.0156	0.9482
Yes	None	Problem Cluster	Violent Arrest(s)	None	6	3	0.4135	0.1526	0.4339
No	Alcohol or MJ Only	No	Property Arrest(s)	None	5	3	0.2552	0.2813	0.4636
No	Alcohol or MJ Only	No	Multiple Arrest Types	Not HS Grad	5	3	0.0079	0.1138	0.8782
Yes	None	Problem Cluster	Drug Arrest(s)	Not HS Grad	5	3	0.0919	0.2139	0.6943
Yes	Alcohol or MJ Only	No	Drug Arrest(s)	Not HS Grad	5	3	0.0848	0.0634	0.8518
No	Alcohol or MJ Only	No	Property Arrest(s)	Not HS Grad	4	3	0.0437	0.0493	0.9069

Appendix B-Cont'd: Distribution of Overall Competence Profiles and Classification Probabilities

SMI	DEPENDENCE	BEHAVIOR	ARREST	SOCIAL PROBLEMS	Freq.	Modal	Cluster1	Cluster2	Cluster3
Yes	Drug Only	Problem Cluster	Violent Arrest(s)	Not HS Grad	1	3	0.0093	0.2709	0.7198
Yes	Multi-type	No	Violent Arrest(s)	Not HS Grad	1	3	0.0128	0.0115	0.9758



-Appendix C-  
Institutional Review Board Approval

University of New Hampshire

Research Integrity Services, Office of Sponsored Research  
Service Building, 51 College Road, Durham, NH 03824-3585  
Fax: 603-862-3564

13-Nov-2009

Dawson, Jean  
Sociology, Horton Hall  
18 Lancaster Crossing  
Salem, NH 03079

**IRB #: 4700**

**Study:** Competencies & Problems of Poor and Non-Poor American Young Adults

**Approval Date:** 06-Nov-2009

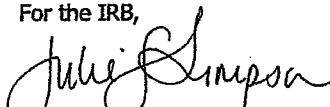
The Institutional Review Board for the Protection of Human Subjects in Research (IRB) has reviewed and approved the protocol for your study as Exempt as described in Title 45, Code of Federal Regulations (CFR), Part 46, Subsection 101(b). Approval is granted to conduct your study as described in your protocol.

Researchers who conduct studies involving human subjects have responsibilities as outlined in the attached document, *Responsibilities of Directors of Research Studies Involving Human Subjects*. (This document is also available at <http://www.unh.edu/osr/compliance/irb.html>.) Please read this document carefully before commencing your work involving human subjects.

Upon completion of your study, please complete the enclosed Exempt Study Final Report form and return it to this office along with a report of your findings.

If you have questions or concerns about your study or this approval, please feel free to contact me at 603-862-2003 or [Julie.simpson@unh.edu](mailto:Julie.simpson@unh.edu). Please refer to the IRB # above in all correspondence related to this study. The IRB wishes you success with your research.

For the IRB,



Julie F. Simpson  
Manager

cc: File  
Dillon, Michele