

**THE APPLICATION OF THEORY TO INTERVENTION: THE INTERSECTION
OF THEORIES OF DEVIANCE AND JUVENILE DELINQUENCY
INTERVENTION PROGRAMS**

By

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To my patient and immensely supportive husband, Don and
my darling daughter, Ariane.

In memory of my dear Papa who passed away while I was drafting the last
chapter of this dissertation. His respect for education inspired me throughout
my academic career and his pride in my academic pursuits gave me strength
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CHAPTER I

INTRODUCTION

The Blind Man and the Elephant

It was six men of Inostan
To learning much inclined,
Who went to see the Elephant - (Though all of them were blind),
That each by observation - Might satisfy his mind.

The First approached the Elephant,
And happing to fall
Against his broad and sturdy side, at once began to bawl:
“God bless me! But the Elephant - Is very like a wall!”

The Second, feeling of the tusk,
Cried, “Ho! what have we here?
So very round

John Godfrey Saxe

Juvenile delinquency has long been a social concern. For just as long sociologists and criminologists have articulated theories to identify its nature and cause(s). Independently, policy and evaluation researchers have created programs and initiatives intended to prevent or curb juvenile delinquency for at least as long as the concept of adolescence has existed (Platt, 1969). Yet, definitive answers about the nature and cause of delinquency or the effect of programmatic initiatives have proved elusive. As a result, juvenile crime continues to be a substantial social problem. According to the Office of Juvenile Justice and Delinquency Prevention (2001), there are now a record number of

juveniles involved with the juvenile justice system. A recent Office of Juvenile Justice and Delinquency Prevention (OJJDP) report documented an almost a 50% increase in the number of juvenile cases between 1987 and 1996 alone (Teplin, 2001). Despite an abundance of data and ongoing theory development, there are no clear answers to the basic questions surrounding the issues of cause and intervention for juvenile crime. As we enter a new millennium, criminology still “has more to say about the causes of crime than it does about solutions (Barlow, 1995:xi).”

The poem above, Blind Man and the Elephant, is a modern version of the ancient story of six men who, upon studying the same phenomenon, arrive at different conclusions based on their unique perspectives, experiences, and the happenstance of their placement when first encountering the elephant. It also presents an apt metaphor for the hiatus/gap between sociological theorists and their counterparts in the world of program and evaluation research, each describing a part of the elephantine issue of juvenile delinquency, but each perhaps missing the opportunity to understand the beast in whole. I use this story to make the point that like the men studying the elephant, various disciplines and perspectives have arrived at different conclusions and recommendations while studying the single phenomenon of juvenile deviance. Like the men in the story, each perspective contributes a part of the truth but none present the whole truth. In order to arrive at the truth about the “elephant” that is juvenile deviance, it seems obvious that one must at least consider, a variety of other approaches, assumptions, and perspectives as well as the advances and advantages that can

be achieved by a considered approach to their combined application. Given the enormity of what is at stake in terms of the obligation of researchers in this area to youths touched by this phenomenon and to society as a whole, the time has come for us to bring to bear a blended approach with a consideration of all of the relevant literature, theoretical, programmatic and evaluative alike, in order to develop more accurate, more effective, or at least more informed intervention efforts.

Two key sets of literature have contributed to the study of delinquency, each applying their own perspectives and methodologies. Sociologically based modern theories of deviance provide a causal understanding of why persons commit or do not commit deviant acts. Intervention and evaluation researchers have brought programming, treatment development, and evaluation to bear on the subject. The combination of those theories and practices promises to be a first step in bringing the pieces of the juvenile deviance puzzle together. Barlow (1995) argued that theories of deviance that claim, “to explain a broad range of criminal behavior, may also provide broad implications for crime prevention as well (xi)”. Weiss (1993) posited that participants in applied research “can profit from an understanding of the forces and currents that shape events, and from the structures of meaning that sociologists derive from their theories and research (39)” and yet it has been observed that the vast majority of evaluations of social interventions have been atheoretical (Cordray, 1992). Cordray is correct in his observation that it is rare to find a delinquency program evaluation that overtly points to its etiological roots. What he does not explore however, is that most

intervention programs are based on a causal assumption, or some combination of assumptions. As Cullen et. al. (2003) state, “Most treatment programs are not theory ‘neutral’ but theory ‘informed’ (355).” This approach to programming is based on the assumption that by connecting theory and juvenile delinquency program evaluation, one can substantively improve our understanding of juvenile delinquency.

The thesis of this dissertation asserts the premise that a theoretically based empirical assessment of intervention programs designed to reduce delinquency will enhance our understanding of the causes of delinquency and how it can be effectively addressed. Allen Liska (1987) has previously conceived of theories of deviant behavior as one component of a broad theoretical perspective. This theoretical perspective also includes, subject matter, research, and social-policy implications. Policy, defined by Liska (1987) as a “directed course of action to change people or society (23)” is intertwined with theories of deviance. Liska (1987) goes on to say “policy implications provide the practical justification for theory and research (23).” Earlier, D. Glaser (1962; 1974) called for researchers to bridge the gap between theory and practice. Glaser’s vision was one that joined theory and practice in an effort to inform academic researchers and practitioners. He saw the great theory testing potential of program evaluations. Although his position has received a positive reaction, the application of his perspective has been limited.

Authors who previously were silent on the practice of programming and policy development are coming forward in growing numbers to express their

expert opinions on the best way to deal with criminal and/or delinquent behavior. In 1995, Hugh Barlow edited a book that asked several well-known deviance theorists, including Robert Agnew, Jack Gibbs, John Hagan, Robert Bursik and Harold Grasmick, to comment on the connection between theories of deviance and practical application. All of the authors found the connection to be a positive addition to the study of deviance. According to Cullen et. al. (2003), intervention research, specifically research conducted through meta-analytic techniques is, “an untapped source of data for assessing the merits of criminological theories that seek to explain why some individuals commit more crimes than others (355).” Cullen’s work with Gendreau also focuses on the connection between criminological theory and rehabilitative practice (Cullen and Gendreau 1989, 2000, 2001)

Academic criminologists have become increasingly more engaged in the criticism and development of criminal and juvenile justice policy. Don Gibbons (1999) brought attention to the large number of paper topics based on practical application and/or policy issues being presented at the annual meetings of the American Society of Criminology and the Academy of Criminal Justice Sciences. Gibbons also noted that the pages of Crime and Delinquency are increasingly filled with articles focused on crime or delinquency policy. Carol Weiss (1993) has suggested that the sociological perspective has vital relevance to practical data. In their study of deviance theories and school-based gang intervention programs, Winfree et. al. (1996) note that the merging of theory and intervention programming “serves the purposes of both the policy maker and the theoretician

(184).” In a discussion of the future of intervention program research, Keith and Lipsey (1993) suggested that researchers in this area “construct and pursue an agenda of theory-oriented treatment research (56).” Thus we can observe an emerging perspective that recognizes that by bringing together and applying, in conjunction with each other, two (2) of the primary perspectives in the study of juvenile delinquency, together with their methodologies, a more complete, accurate, and useful description of the theory and programmatic approaches for the various problems within the field of juvenile delinquency will emerge.

The purpose of this dissertation is to facilitate and then examine the connection between modern theories of deviance and programs of juvenile delinquency intervention. Once this connection is clarified, the link will be translated into measures appropriate for empirical testing so that the relationship can be scientifically studied and evaluated, informing both deviance theorists and intervention practitioners; thereby reaching a new level of theory testing and program evaluation and design¹. Toward the goal of illuminating and testing the connection between modern theories of deviance and delinquency intervention programming, this paper will identify practical applications for prominent deviance theories by focusing on the causal characteristics, or independent variables

¹ I caution the reader that this project was not developed to directly address policy issues. Indeed, certain policy modifications or directions may be implicated by this research, but it should be understood that this work has been undertaken with the express goal of scientific inquiry and theoretical testing. It is this author's intention not to be constrained or in any way influenced by policy issues so as fall into the trap of bureaucratic limitation. G. Jensen and D. Rojek (1998) caution researchers to be careful when pursuing applied research in the field of criminal justice. They warn of the tendency for researchers in this area to be restricted by “bureaucratic proclamations about what is and is not reasonable (1998:487)” to an extent “that nothing new can be proposed (486).”

related to each of the modern deviance theories. The value of this approach, as Barlow (1995) might put it, is in learning how the practical or policy application embodies the “practical promise (11)” of criminological theory. Practical application is, in essence, the answer “when people ask about hopeful strategies for dealing with crime (11).”

By translating and mapping theories of deviance onto practical intervention programming, our understanding of how and why some intervention programs work and others do not may also be enhanced. In turn, valuable knowledge will be gained in explaining the causal processes associated with delinquency. In this way, the process of theory development will be moved ahead as practical applications of existing theoretical approaches to juvenile delinquency intervention are implemented and tested (Cullen et. al. 2003; Hunter and Schmidt 1996; Shadish 1996). It will also provide another way of critically evaluating or testing deviance theories.

Sociologists commonly use indirect measures and/or self-report survey measures to test deviance theories but there is a wealth of real world data regarding what happens when we translate the causal processing posited by deviance theories into intervention. For example, if a delinquency intervention program focuses on fear and education about the finality/certainty of the criminal justice system, what happens to recidivism of the participants?; If a delinquency intervention program also adds a job training or boosting GPA component, what happens to the recidivism of the participants compared to the non participants? These interventions all tap into the causal processing suggested by modern

theories of deviance, while suggesting a concrete application in the form of intervention programming.

Decades of data are available on the effectiveness, or lack of effectiveness, of various delinquency intervention programs using various change components that may easily translate into practical applications of deviance theories. With a working knowledge of theoretical applications of interventions, we can finally ask and answer the question; do our explanations of delinquency hold up to real world tests? Just because one can posit an explanation of a behavior does not mean that he/she has detailed the intervention of that behavior. Indeed, some theorists focus on process more than others but none of the major deviance theorists go a step further in explaining what their theories mean in the practical terms of crime and delinquency intervention.

In this study, meta-analysis is the primary tool from which, following the theoretical identification of delinquency intervention programs, the practical applications or program components will be compared based on their outcome measures. In a discussion of correctional treatment and criminological theory, Cullen et. al. (2003) identified meta-analysis as a tool that has significant “implications for the viability of extant criminological theories (348).” Meta-analysis accounts and controls for salient methodological factors associated with intervention successes or failures, e.g., control and treatment group similarity, randomness of sampling, initial risk level of subjects, and gender of subjects. Additionally, different types of programs and combinations of program

components are standardized when factors including intensity of program, location of implementation, length of program, staff training and time spent with subjects are considered. By accounting for factors that can independently affect the outcome measure associated with a program, meta-analysis provides an ideal method for comparing theories via their practical applications.

CHAPTER II

LITERATURE REVIEW

This review will first provide an overview of modern deviance theories. The theoretical segment will be followed by a review of the history and literature pertaining to intervention or treatment programs for delinquent juveniles. That section will be followed by a discussion of the casual characteristics or independent variables commonly associated with each of the modern deviance theories. Finally, practical applications, or intervention translations of these theories will be identified.

Theories of Deviance

As Wilson and Herrnstein (1985) stated simply, "Theories of crime abound (41)." Over the past century, sociologists have developed a myriad of theories that attempt to explain delinquent (or criminal) behavior. As such, the scientific study of deviant behavior is firmly rooted in the discipline of sociology. Sociology assumes that deviant behavior is embedded in the external conditions or social system (large or small) that surrounds, affects, and is affected by, an individual. According to Jensen and Rojek (1998), "one of the central premises characterizing a sociological approach has been that delinquency is 'more' than the behavior of individuals (204)." This is especially notable because acts of delinquency are rarely engaged in by a solitary individual (Jensen & Rojek,

1998). Juveniles are likely to commit their crimes in groups, which is less frequently the case with adult offenders.

While most modern deviance theories start at the same place, in the sense that they highlight the importance of social systems, they all focus on different processes in explaining deviant behavior. Regardless of when they were developed, they are a strong and vital tool in the understanding of delinquent or criminal behavior. R. Akers (2000) posited that, “an effective [deviance] theory helps us to make sense of facts that we already know and can be tested against new facts (1)”. It is also important to recognize that these theories are not static entities. Theories are reviewed, tested, compared, and revised regularly in literature. In this way, existing theories of deviance can be tested again and again against new and changing patterns of deviant behavior. Akers does not see the ever growing body of criminological theory as limited to “academic or research . . . but also for the educated citizen and the legal or criminal justice professional (2000:2).”

Control

Social disorganization

This category of theories is based on a concept of Urban Ecology, where cities are equated with one’s natural, ecological environment. In the early twentieth century, sociologists at the University of Chicago linked the unsettled and diverse conditions of urban areas to criminal activity. They hypothesized that when societies or individuals undergo change, bonds to society are weakened

and deviance may result. Sociologists, Thomas and Znaniecki (1918) saw the breakdown of norms and social rules in urban Chicago during the growth in industry and immigration in the 1920s and 1930s. They found that periods of socio-cultural change can result in high levels of disorganization and this disorganization can, in turn, lead to deviant or rule breaking activity. Similarly, R. Park, E. Burgess, and R. McKenzie (1925) found that the movement of persons from simple communities to urban cities such as Chicago, contributed to social disorganization. They attributed a great portion of the delinquent and/or criminal behavior in African-American communities in Northern cities as well as that of European immigrants “to the fact that [they] are not able to accommodate themselves at once to a new and relatively strange environment (1925:106).” This lack of accommodation “. . . breaks up the routine upon which existing social order rests (1925:106)” and results in social disorganization and criminal activity. Robert Faris and H. Warren Dunham (1939) also focused on urbanization and the level of social order in Chicago during the period of American industrialization. In their book, Mental Disorders in Urban Areas (1939), they linked the prevalence of mental illness with social disorganization, finding a positive relationship between mental illness and areas of urban disorganization.

Social bond

Control theorists assume that most individuals in society are motivated to behave in a deviant manner. These theorists focus on why some individuals deviate and others do not. In 1958, Ivan Nye posited that family relationships

(specifically the adolescent-parent relationship) were the most important factor in maintaining social control over adolescents and preventing delinquency. Unlike previous theories however, Nye's conceptualization, and social control theory generally, is based on why persons do not commit crime as opposed to why they do commit crime.

In 1969 Travis Hirschi published Causes of Delinquency, one of the most influential texts on deviance. Like Nye, Hirschi did not focus on why individuals commit crime, but focused on, "why don't individuals commit crime? His answer was focused on four types of social bonds: attachment to others², commitment to conventional activities and actions, involvement in conventional activities, and belief in a common value system (Hirschi, 1969). For Hirschi, these four types of bonds prevent persons from engaging in delinquent activity.

Sampson and Laub (1993) expanded on Hirschi's (1969) original theory with their introduction of life course theory. Like Hirschi (1969), Sampson and Laub connect deviant behavior to the lack of prosocial bonds with others. However, Sampson and Laub (1993) overlay the concept of a human life trajectory, so that the importance and impact of social bonds is traced and tracked throughout one's life course. The theory advanced by Sampson and Laub in their book, Crime in the Making: Pathways and Turning Points Through Life (1993), attempts to explain both continuity and change in crime by focusing on the role of age-dependent informal social controls. They treat the interpersonal bonds a person shares with school, family, and peers that exercise

control over an individual as important, however they posit that the impact of these relationships change over the life course and that as a consequence, the control they impose changes as a person's age. New bonds like marriage and employment come into play and impact their potential for commission of adult crime.

A reformulation of the control perspective was also proposed by Travis Hirschi and Michael Gottfredson in 1990. In their work entitled, A General Theory of Crime, the authors modified Hirschi's original social bond theory by focusing on social experiences within the family rather than outside the familial structure. It was in the conceptualization of the control of these social bonds wherein the theory of social control and the general theory of crime begin to differ. For example, in social control theory, the close attachment to parents or family causes the child not to act deviantly. The bonds act as an indirect control as they are not tangible and can only function as a psychological reminder to the child when he or she is not in the presence of the parent. The key to effective parenting according to social control theory is to indirectly affect the child in a positive manner. In the case of the general theory of crime, the key is direct control, or consistent and positively effective parenting. As was mentioned above, social control focuses on attachment, commitment, involvement, and beliefs but the general theory of crime posits that these attachments are predicated on a person's level of self-control. In essence, Gottfredson and Hirschi's (1990) general theory of crime is based on an individual's ability to learn

² Initially the "others" were not limited to those who are prosocial but Hirschi later noted that these

and exert self-control. They argued that without self-control, attachments to pro-social others outside the family (e.g. teachers and school counselors) cannot easily be made, if at all. The self-control (or lack thereof) that is learned at a young age through direct parental control is the cornerstone of Gottfredson and Hirschi's theory and for them, it supersedes all attachments, commitments, beliefs, and involvement with prosocial others.

Strain

Structural strain and status frustration

Emile Durkheim's (1951) book, Suicide discusses the problematic nature of persons insatiable desires. If these desires are not curbed, they will result in melancholy and dissatisfaction. These desires need to be limited by society so that their potential fulfillment may be possible. According to Durkheim, the unhappiness caused by unattainable, unrestrained desires is greatest in industrial societies due to the increased anomie or normlessness that results from conditions that contribute to unstable restraints such as high mobility and changing economic patterns.

Robert Merton (1938) also utilized the concept of anomie however, his conceptualization of the term differed from Durkheim's (1951). For Merton (1938), anomie was a condition in society that arose from the disparity between culturally appropriate goals and the lack of the necessary legitimate means of goal attainment. Merton (1938) argued that deviant behavior results from the

"other" individuals were prosocial.

frustration of not being able to achieve socially desirable goals due to society's structural constraints. For Merton (1938), American society focused on the "American Dream" which included monetary success and the possession of luxury material goods. Individuals in society handled this disparity in a number of ways, including what he referred to as "innovation." Merton defined innovation as using non-conventional means (e.g., crime) to reach conventional goals that could not be reached legally or in a normative manner.

In Travis Hirschi's (1969) study of male youths in California, Hirschi found a set of relationships that were inconsistent with Merton's position when he found that the "boys whose educational or occupational aspirations exceeded their expectations are no more likely to be delinquent than those boys whose aspirations and expectations were identical (1969:172)." Thus we see the conflict between Hirschi's social control theory and Merton's strain theory. Hirschi asserts that the commonly held, prosocial aspirations serve as a constraint to delinquency, while Merton sees these same societal goals as causing deviance when they cannot be met.

In 1995 Jensen reanalyzed strain theory as a "psychological mechanism mediating the effect of structural variables on delinquency (1995:154)." Jensen's conclusions were mostly consistent with Hirschi in that they showed that persons who are the least invested in prosocial goals and aspirations are the most invested in deviance. Jensen went on to point out that research continues to find the link between class or socioeconomic status and delinquency, however, like

Tittle and Mier, (1990) Jensen finds that the answer to the class and delinquency dilemma may lie in further research of proximate correlates.

Tom Agnew (1992) has developed what he sees as a modern reformulation of strain theory. Agnew posits that the failure to achieve positively valued goals is *just one* of the causes or sources of strain or frustration. Agnew adds two additional conceptualizations of strain: strain as the removal of positively valued stimuli and strain as the presentation of negative stimuli. This version of strain theory has not been well tested, due to the difficulties in determining what types of strain are most highly correlated with crime or deviance in different social groups as well as what factors influence our response to different types of strain. Some researchers have contended that this work does not belong in the same theoretical category with Merton's strain theory because its focus is on personal stress; however, Agnew contends that his general strain theory is a broader version of the original strain theory and is thereby grounded in Merton's work.

Cultural Conflict

Normative conflict and differential association

At the same time Merton's strain theory was popular, another perspective was developing. This perspective focused on the etiology of crime and delinquency and its relationship to learned behavior. This perspective assumes that there are segments of our society in which deviant activity is normative and encouraged. The theories that fall under this heading are less focused on the

relationship between social structure and deviance the than previously discussed theories. This grouping of theories is premised on the relationships and associations involved in a learning process.

With Donald Cressey, Edwin Sutherland published “The Theory of Differential Association” in 1939. This work was premised on the fact that criminal behavior is learned in the same way prosocial behavior is learned. Sutherland and Cressey wrote, “most communities are organized for both criminal and anticriminal behavior and in that sense, the crime rate is an expression of the differential group organization (1939:84).”

In his book, Other People’s Money, Donald Cressey (1953) expanded on his earlier work with Sutherland by detailing what is learned when an individual learns criminal behavior. Focusing on embezzlers, Cressey identified how persons who embezzled did so without guilt or other negative self-directed feelings. Cressey found that rationalizations for criminal activity may be learned either directly from deviant others or indirectly through societal influences.

Sutherland and Cressey (1939) outlined nine statements in their theory of differential association regarding the criminal learning process and how a person becomes involved in delinquent activity. The fourth principle addressed what is learned when one learns to engage in criminal activity. The authors posited that the “techniques” involved in committing delinquent or criminal offenses were learned, in addition to the “motives, drives, rationalizations, and attitudes (1939:75)” associated with acting in a deviant manner. It was this statement that

inspired Bresham Sykes and David Matza (1957) to write an article outlining the techniques of rationalization used by delinquents when committing deviant acts.

Differential association theory has much to offer but as Ross Matseuda (1988) pointed out that it has not been fully tested yet. Matsueda proposed that the theory is plagued by abstract concepts that need to be specified and argued for the use of longitudinal data to test the theory.

Learning Theory

Robert Burgess and Ron Akers (1966) built on differential association theory and operant conditioning to create social learning theory. They transformed Sutherland and Cressey's (1939) nine propositions regarding how a person learns to become deviant into seven social learning theory statements. Like differential association, this theory is premised on the notion that all deviant behavior is learned just as prosocial behavior is learned, however, Burgess and Akers added the concept of operant conditioning and reinforcement. According to Akers et. al. (1979), "deviant behavior can be expected, to the extent that it has been differentially reinforced over alternative behavior (conforming of other deviant behavior) and is defined as desirable or justified (638)." Once rewarded or reinforced so as to denote a favorable outcome, social learning theory tells us that the behavior will be repeated. The reward or reinforcement can be social or nonsocial in origin.

This theory has been tested with significant success. Akers et. al. (1979) found that social learning theory has more explanatory power than other modern

deviance theories. They have proposed that new developments in theories of deviance lie within the perspective of social learning theory and maintain that the theory is easily measurable, testable, and generalizable to all deviant behaviors unlike its predecessor, differential association theory.

Subcultural theories

In 1955, Albert Cohen developed the notion of a deviant subculture that results from status frustration and the rejection of the middle class through his study of adolescent, working class boys involved in gang activity. This theory proposes that disadvantaged adolescents are unable to gain status from conformity so they reject middle class values and seek status from nonconformity, and membership in deviant subcultural groups whose norms are in conflict with the prosocial middle class norms.

Walter Miller (1958) disputed Cohen's premise that deviant subculture and juvenile delinquency is rooted the rejection of middle class values. Instead, Miller argued, juvenile delinquency is simply rooted in the value system of the lower class. According to Miller (1958), the focal concerns of the deviant subculture are developed in response to the conditions in which they live. Unlike Cohen, Miller saw subcultural deviance as an adaptive, positive response to lower class conditions.

Elijah Anderson's (1990) work, The Code of the Streets used field research to point out the complexity of a subculture of violence. Anderson detailed the "code of the streets" for poor inner city Black communities.

Anderson found that there were two subcultures in constant conflict. Persons committed to prosocial common middle class values (“the decent families”) and persons committed to a culture of violence (“street”). Most interestingly, Anderson found that despite the fact that most persons in the community are opposed to the subculture of violence (i.e. members of decent families), the violent subculture still shapes the behavior of almost everyone living in the community. This finding appears to be inconsistent with Cohen’s postulation that a deviant subculture exists as an entity in itself, unmarked and unaffected by other values (e.g. prosocial, middle class). Like Miller, Anderson saw the subculture as a development or adaptation to lower class conditions as opposed to a rejection of middleclass values.

Marvin Wolfgang and Franco Ferracutti’s (1982) influential book, The Subculture of Violence, focused on group differences in interpersonal violence. They identified seven principles describing subcultures of violence, including the fact that no subculture can be totally different from the greater society of which it is part. The predominant norm in the larger culture is non-violence, and the persons belonging to the subculture of violence do not necessarily express violence in all situations. These principles are consistent with differential association and social learning theory, in the sense that the process of becoming a member of a subculture of violence is considered to be learned, just as prosocial behavior is learned.

In a study of 2,000 high school boys in 87 high schools throughout the U.S., Felson et. al. (1994) took a closer look at the process of the subculture of

violence. Their key finding was that the school subculture of violence was better characterized as a subculture of delinquency and that the subculture operated through a social control process. The results of the study suggested that group values might be more important than personal values when it came to producing delinquent behavior. The study was also important in applying the concept of subculture of delinquency to small groups rather than entire ethnic groups, communities, classes etc.

Conflict Theories

Like strain theory, conflict theories are influenced by a Marxist approach that focuses on the social structure as the cause of deviant behavior. While based in structure, these theories differ from the strain theories in that they assume that the economic system of a society affects all aspects of social life and thus determine the opportunities and constraints that persons confront.

While Marx did not precisely link capitalism and crime, Willem Bongers made the connection explicit in 1916. Bongers wrote that capitalism breeds crime. He contended that the primary cause of crime was egoism, a fundamental characteristic of capitalism and capitalist-defined economic relationships. Bongers stated that socialist societies that discouraged egoism and encouraged or rewarded community related behavior would have low levels of crime. Bongers saw humans as very self-centered, with instincts that led to criminal activity unless curbed by the altruistic nature of socialism.

Richard Quinney (1970) also saw crime as connected to capitalism, and took the position that it was the capitalist elite that defined who and what is criminal or deviant. Quinney (1970) argued that definitions of what is criminal are established and applied by those in power. This meant that the social and economic elite created laws that criminalized the behaviors of the socially and economically disadvantaged. Similarly, William Chambliss (1964) wrote that laws are created for the economic betterment of the upper classes and focused on the creation of the first vagrancy law in England after the Black Death, as a prime example. Chambliss argued that the upper class landowners were experiencing a labor shortage and had enacted the new law to reduce geographic mobility and force laborers into working under landowners' terms.

Joseph Gusfield (1963) applied the conflict perspective to the criminalization of alcohol during the temperance movement. In his work, Symbolic Crusade, Gusfield argued that the Protestant power elite in America used law and politics to subjugate Irish Catholics. He wrote that the passage of the 18th Amendment was not motivated by morality, but was a political victory for a Protestant middle class that was threatened by the rising numbers and power of the Irish Catholic immigrants. According to Gusfield, their "moral victory" was really a victory of status, which defined the political, social, and economic values of this historic period.

In an article titled "The Poverty of the Sociology of Deviance" Alexander Liazos (1972) argued that criminology's focus on nuts, sluts, and perverts obscures the real causes of deviant behavior, which lies in the "larger social,

historical, political, and economic (103),” characteristics of society. In 1972 Liazos maintained that the current criminological focus ignored the key problems of society, which he saw as the basic political and economic characteristics of society that were enforced by the power elite.

Steven Spitzer (1975) elaborated on this concept by arguing that “A Marxian theory of deviance and control must overcome the weaknesses of both conventional interpretations and narrow critical models (1975:651).” For Spitzer (1975), the economic system of production in capitalist societies actually created problematic populations. He identified two groups of “problem populations”, “social junk” and “social dynamite”. Social junk, consisted of the elderly, the mentally ill, and children. While expensive, these persons were a harmless burden, managed by state and federal human welfare agencies. The second group, social dynamite, however, was considered dangerous to society. According to Spitzer, this group was comprised primarily of alienated and unemployed youth, managed by the legal system. The existence and maintenance (through institutionalization) of these groups represented a threat to society. Spitzer concluded that industrialized nations were in crisis from the overpopulation of these two groups and recommended solutions such as deinstitutionalization.

Power-Control and Power-Balance Theory

A more recent formulation of conflict theory has been articulated in Hagan, Simpson, and Gillis’ (1985; 1987) work on power-control theory. “The core

assumption of [power-control theory] is that the presence of power and the common absence of control can create conditions of freedom that permit common forms of delinquency (1174).” Like other conflict theory formulations, class is connected with delinquent behavior. The authors posited that delinquency was less likely among girls from patriarchal households than those from more egalitarian households. The authors argued that in the former, girls and wives had less power and freedom to commit deviant acts than in the latter. They also argued that children whose parents were in occupations in which they commanded or controlled others were more likely to commit deviant acts than children of parents in subordinate occupational positions were. Hagan et. al. (1985; 1987) believe the level of domestic social control is negatively associated with attitudes toward risk taking that translate to deviant behavior. While the original paper in 1985 only included the primary male in the model of the family class structure, subsequent work in 1987 included both spouses in the class structure model.

Hagan et. al.’s power-control theory has been criticized for being based on a faulty premise. The authors claim that their work is based on Bonger (1916); however, Bonger argued that class and delinquency were negatively related and power-control theory actually advocates the opposite view, contending occupational dominance or class and delinquency are positively related. In the first test of the theory, Hagan et. al. (1985) found no relationship between socioeconomic status and delinquency but did find some positive relationships between delinquency and some of their neo-Marxist categories. This theory has

also been strongly criticized by Jensen and Thompson (1990) as well as Jensen (1993). In these two papers a number of key methodological problems, among them the exclusion of runaways from the database used by Hagan et. al. to test their theory. Failure to include data on this status crime, especially common among delinquent females, it was argued, could skew any study of the gender delinquency relationship. Jensen and Thompson (1990) looked at three U.S. databases and did not find the class, gender, and delinquency relationships reported by Hagan et. al. Jensen (1993) also argued that power control theory offered little more about delinquency than Hirschi's (1969) theory of social control had already described. Although Hagen et. al. did add power to the social control equation, they failed to support their assertion that power or class have an impact, independent of the lack of social bonds.

Another recent formulation of conflict theory known as control-balance theory was conceptualized by Charles Tittle (1995). Tittle posited that, "the amount of control to which an individual is subject, relative to the amount of control he or she can exercise, determines the probability of deviance occurring as well as the type of deviance likely to occur (142)." This theory is problematic to test and may be unfalsifiable as it may be impossible to measure an individual's "general control ratio." In order to properly test this theory a researcher would need to simultaneously consider all the roles that a person plays, (major and minor) as well as the main statuses he/she occupies. The remaining pieces of the control balance puzzle: autonomy, deviant motivation, opportunity, and constraint are equally difficult to measure. Tittle (1995)

conceded that data applicable to testing the theory is not readily available and suggests that data needs to be collected with specific control-balance variables in mind.

The Labeling Perspective

The earliest statement of the labeling perspective was made by Frank Tennenbaum in 1938, but the theory became especially popular in the 1960s and 1970s (Gove 1980). Labeling theory focused on the idea that some human behavior is socially defined as deviant and that this particularly effects persons on the margin of society. Once marginalized persons are labeled as deviant, they accept the label and embark on a career of deviance. This perspective fits well with conflict theory as it draws attention to who is defined as deviant, the consequences of being deviant, and provides possible motivations for the application of these definitions.

In Social Pathology (1951), Edwin Lemert distinguished between primary deviance, engaging in a behavior defined as deviant, and secondary deviance, where an individual's definition of self actually changes to match the social label of deviant. Lemert stressed that secondary deviance that was most problematic since anyone might engage in primary deviance, but only some individuals reach the secondary self-defining phase.

Ten years later, Howard Becker (1963) outlined the concept of career deviance, which expanded on the notion of sustained secondary deviance. According to Becker, once an individual was labeled publicly as deviant, a

redefinition of self occurs and both an individual's private and public identities become that of a deviant. Once accepting the label of deviant, an individual then begins to associate with deviant groups.

Thomas Scheff (1963) also wrote from the labeling perspective and further augmented the notion of mental illness as a social role, rather than a psychiatric absolute. Scheff introduced the concept of residual deviance. Scheff claimed that any behavior not clearly defined as deviant is residual deviance. In this way, mental illness was defined by the author as residual deviance. Scheff argued that it was through the process of being labeled that mental illness became stabilized, concluding that, "labeling is the single most important cause of careers of residual deviance (450)." .

Walter Gove (1982) stated that labeling theorists at the time of his writing were ignoring recent evidence and developments in psychiatry. Gove challenged labeling theorists by pointing out that psychiatric patients were experiencing a decrease in length of stay and an increase in effectiveness of treatment, patient's rights, voluntary commitments, and better diagnoses. In terms of the relationship between class and institutionalization in a mental hospital, Gove found that upper class individuals were hospitalized and labeled as mentally ill more quickly than lower class persons. If the labeling theorists were correct, there should be a negative relationship between class status and hospitalization but Gove observed the contrary. Gove found that lower class persons tended to have longer hospitalizations and more severe diagnoses than upper-class persons but

this was attributed to a high level of stress, a low state of well being, and delayed hospitalization as compared to high-class persons.

Gove (1982) did not deny the power and influence of stigma, but argued that the stigma that results from labeling was real and that the process of labeling did, indeed point to real issues. Gove's (1982) main point was that labeling was not the only process that was occurring and he posited that there were other things occurring in the social context of the individual. However, Gove (1982) also suggested that the processes that labeling points to were diminishing with changes and advancements in psychiatry and the public perception of mental illness.

Following from Gove's (1982) position that labeling pointed to real, meaningful processes, Bruce Link et. al. (1989) created a modified labeling theory. The authors propose that even if the act of labeling does not directly produce a mental illness, the labeling may still lead to negative outcomes.

Reintegration

Reintegration and shaming, a popular theoretical perspective in other Western countries, has not received as much research focus in the U.S. In Crime, Shame, and Reintegration John Braithwaite (1995) combined labeling theory with elements of other deviance theories, including subcultural theory, control theory, and learning theory, to create a theory of reintegration. For Braithwaite, shaming is the equivalent of the labeling process in which an individual is labeled deviant and then accepts this definition of self. However, unlike most labeling theorists, Braithwaite believes that some labeling or shaming

is appropriate if it is paired with reintegration into the community. The basic tenet is that the rate of crime and delinquent acts will be higher when shaming is stigmatizing and lower when shaming is reintegrative. This theory has not received strong support but it has started to gain attention. Juvenile delinquency intervention research and programs grounded in this untested theory are beginning to appear all over the U.S. at the time of this writing.

The Utilitarian Perspective

Deterrence

This theoretical conceptualization was purposely placed at the end of the theoretical discussion of the exclusively social deviance theories as it has often been argued among theorists that deterrence, or utilitarian theory, is the basis of all modern deviance theories (Gove and Chapman, 2000). The utilitarian perspective posits that individuals are “self-interested utility-maximizers (585)” (Schneider and Ervin, 1990). When associated with deviant acts, the utilitarian conceptualization of human behavior is often directly associated with deterrence theory (Wright, 1984). Like other modern deviance theories, deterrence theory is based on the utilitarian premise that persons are rational actors. Specifically, deterrence theory proposes that if formal controls such as legal sanctions are certain, severe, and swift, criminal behavior will be prevented (Akers, 2000; Wright, 1984). While a great deal of strong, direct empirical support for this theory has not developed, there is weak direct and strong indirect support. This theory is difficult to test since it can consist solely of an *absence* of criminal

activity. Other, indirect, indicators for instance, a person's conceptualization of the level of punishment associated with a particular sanction, are not easily measurable. Finally, the establishment of a measure for the causal connection between deterrence and crime rate has proved to be problematic.

Raymond Paternoster et. al. (1983) differentiated between a deterrent effect and an experiential effect in their article, "Perceived Risk and Social Control." By deterrent effect the authors referred to perception leading to or preventing deviant behavior. Experiential effect was defined as deviant behavior leading to perceptions regarding the commission of deviant acts. Paternoster et. al. (1983) suggested that past studies of deterrence might have actually measured an experiential, not a deterrent effect.

In their discussion of deterrence theory, Michael Geerken and Walter Gove (1975) propose that the "issue for future research [in deterrence] is no longer whether legal sanctions ever deter criminal behavior, but the specification of the conditions under which they have such an effect (1975:497)." They saw the deterrence perspective as a communication process or "mechanism of information transmission (1975:498)" rather than a process of sanction and negative consequence. Geerken and Gove also pointed out the difficulties in studying the theory of deterrence, recognizing that to do so one has to estimate how an individual calculates risk in deciding whether to perform a particular act. This perspective is therefore extremely difficult to test and the validity and replicability of any resultant study is problematic. The authors stated that in order to actually prove the value of deterrence, a researcher would have to first,

demonstrate a positive relationship between the actual and perceived risk of punishment and secondly, he/she would have to demonstrate a positive relationship between perceived risk and the crime rate (1975). They also posited that a thorough study of deterrence would include a measure of the deterrent influence of various information mechanisms such as media, personal experience, oral tradition, etc.

Rational choice

The utilitarian perspective and deterrence theory are often directly associated with the theory of rational choice. In the most frequently cited work on rational choice theory pertaining to crime, Cornish and Clarke (1986) conceptualized offenders as rational decision makers. According to this theory, offenders balance rewards and costs of engaging in an illegal behavior. In the end, a potential offender will choose the behavior that has the greatest rewards with the least costs, or the largest profit from participating in an activity.

Routine activities and opportunity theory

Opportunity or routine activities theories (e.g., Cohen & Felson, 1979) also follow directly from the utilitarian conceptualization of human behavior. Routine activities theory first appeared in 1979, in an article published in the American Sociological Review. The theory was unique in that it was the first theory to focus on the characteristics of the crime rather than the social and/or psychological aspects of the offender. In an effort to explain crime trends in the U.S. between 1947 and 1974, Cohen and Felson (1979) posited that the pattern

of increased predatory criminal activity was the byproduct of changes in labor force participation and the increase of single-adult households. Cohen and Felson's (1979) article identified the three elements that contributed to the likely occurrence of crime. The three elements, an absence of guardians, the presence of suitable targets, and motivation on the part of the offender, interact with and are enhanced by changes in labor force and household make-up.

Two (2) years later, Cohen, Kluegel and Land (1981) renamed the theory "opportunity theory" and published a test of how the dimensions of social stratification (i.e., income, race, and age) are associated with the risk victimization using National Crime Victimization Survey data. The authors documented a complex relationship between social stratification and the occurrence of predatory offenses. Cohen, Kluegel and Land's (1981) work is particularly interesting because of their discovery that those persons traditionally thought to be most vulnerable, due to a low economic and social status, were actually *not* most likely to be victims of crime.

Terrance Miethe et. al. (1987) also tested routine activities (lifestyle) theory and found that it was most applicable to property crime as opposed to violent crime. They found that the routine activities variables have a strong direct and mediational effect on the risk of victimization for property crime, but that the same did not hold for the risk of violent victimization.

Victimization was also the focus of a study by Gary Jensen and David Brownfield (1986). Using data on high school students, they looked at the relationship between the risk victimization and the risk of offending. Jensen and

Brownfield concluded that delinquent activity was positively related to victimization. Following from that result, they concluded that the issue of gender disparity and criminal victimization could be attributed to the low level of female criminal activity.

In his review of rational choice, deterrence, and social learning theories, Ron Akers (1990) says, “deterrence and rational choice are subsumable under general social learning or behavioral principles (1990:655)”. For Akers, deterrence and rational choice are complete models of criminal causality and due to their basis in the utilitarian perspective; these concepts of deviance are better expressed as aspects of social learning theory (1990).

Internal Mechanisms

Early biological theories

Beginning with Cesare Lombroso in the late 1800s, a plethora of theories have been offered by researchers to explain the deviant behavior of juveniles via an individual’s biology or physical characteristics. Early theories of deviance assumed that there was something in the biology of the individual that stood out as “criminal.” Lombroso (1911) suggested that atavistic persons, or genetically inferior persons, possessing pronounced jaws or cheekbones, large eyes, etc. had a tendency toward criminal behavior. Based on the work of Lombroso, E.A. Hooton (1939) argued that persons who engaged in criminal behavior were physically and genetically inferior to non-criminal persons. Biological explanations continued with William Sheldon (1949), who posited that, the shape

of the human body or somatype was the best predictor of deviant behavior. Additional theorists to claim a correlation between physical appearance and criminal behavior were Sheldon and Eleanor Glueck (1950). In a matched sample of delinquent and non-delinquent Boston youths, the Gluecks found that the delinquent youths had a larger body size and were physically more masculine. Researchers such as Charles Goring (1913) have argued against those biological perspectives and have attempted to point out inaccuracies within them.

Following from these biologically based theories, sociologists have stepped in and changed the causal focus to social factors, e.g., the state of a person's community, his/her peers and subculture. Some sociologists have not completely ruled out biological causes or factors for delinquency rather, they have incorporated biologically based explanations into their social causal explanations.

Biopsychosocial theories

Although this grouping of theories incorporates biological explanations of delinquency, they barely resemble the work of Lombroso, Sheldon, and Hooten. In 1985, Wilson and Herrnstein opined that there was an inappropriate absence of scientific interest and research with regard to the relationship between the social and the biological causes of deviance. Fishbein (1990) answered Wilson and Herrnstein's call for more thought on the relationship between the social and the biological in regard to crime causality. Fishbein believed that the answer to

the question, why do people engage in deviant behavior, could not be found if sought from only one disciplinary perspective. Instead, Fishbein argued for a multidisciplinary approach that invoked sociology, psychology, and biology. For example, Fishbein states, "When a biological disadvantage is present due to genetic influences or when a physical trauma occurs during developmental stages of childhood, the resultant deficit may be compounded over time and drastically interfere with behavioral functioning throughout life (1999:72)".

Fishbein asserted that the biological affects and is affected by the social. It is the ability of the social to modify and augment the biological that makes her perspective and that of researchers like her not deterministic. For Fishbein and others in this research area, it is not a foregone conclusion that someone born with a low IQ due to developmental defects in utero will become delinquent and or engage in deviant behavior. The developmental deficit will be lessened or accentuated by social environment, economic environment, etc.

Gove (1985; with Wilmoth, 1990; with Wood et. al., 1997) has also expanded his firmly grounded sociological perspective to consider various factors and perspectives and their interaction with social and/or structural causality of risky or deviant behavior. While examining the effect of age and gender on deviant behavior, Gove (1985; 1995) has brought issues of physical energy, psychological drive, and the need for stimulation to the table. Gove has linked the age patterns of deviance with the career of an athlete, pointing out that the physicality of career criminal activity and professional sports participation is quite high and demanding and therefore requires a person to have great strength and

stamina. Gove pointed out that as career criminals age, their criminal activity declines; likewise as professional athletes age, their sports activity declines. Neither group necessarily declines activity by choice, rather it declines by necessity, as their bodies become less well suited for active, high-risk behaviors. Gove (1995) also argued that, like physical strength, the psychological drive or staying power as well as the need for stimulation also peaks in adolescence and declines with age.

David Rowe's 1986 study of twins showed that delinquency was best explained by the combination of the effects of heredity and family environment. Likewise, in Travis Hirschi and Michael Hindelang's (1977) study of the relationship between delinquency and IQ scores of youths, they pointed out the relationship (though relatively weak) between an individual's IQ and his/her behavior. They stated however, that the relationship was indirect. Hirschi and Hindelang (1977) also asserted that low IQ had a negative effect on school performance and that, poor school performance led to delinquency.

Alan Booth and Wayne Osgood's (1993) study resulted in similar, integrated findings. Booth and Osgood looked at the connection of testosterone and antisocial or aggressive behaviors. They stated that testosterone levels were mediated by the degree of social integration and prior delinquent activity. Essentially, they found that there was an interaction between social environment and testosterone.

Wilson and Herrnstein's (1985) theory of criminal behavior also focused on the interaction between the psychological and the social. The authors argued,

“All human behavior is shaped by two kinds of reinforcers (45)”. They referred to these reinforcers as primary and secondary, with the primary reinforcer equating to innate human drives and secondary reinforcers were seen to be the result of external, social processes such as learning. The authors stated that these reinforcers work together, combining internal human drives and socialization. They posit that social forces or circumstances modify and/or amplify the innate, primary reinforcements of behavior.

Gove and Wilmoth (1990) also brought biological and psychiatric considerations to bear on the issues of human behavior. The authors explored the connection between criminal behavior and neurophysiologic highs. The authors argued that the consideration of what is physically taking place in an individual’s brain chemistry might help to explain crimes that involve little or no monetary reward. The authors worked from the premise that crime is a risky and arduous activity and that engaging in these types of activities results in neurophysiologic highs from the activation of the dopamine synapse in the nucleus accumbens. The activation of this chemical in the brain is defined as pleasurable by those experiencing it. Persons are lead to deviant activity by social interactions, structure, and/or consequences, but the neurophysiological reward may motivate certain individuals to persist in a criminal activity that is not otherwise rewarding.

Expanding from Akers’ social learning theory and the notion of nonsocial rewards and reinforcement, Wood et. al.(1997) also connected the social with the biological. Their study of male, habitual offender inmates resulted in two main

findings. First, the inmates freely acknowledged the “rush” or pleasurable sensations they felt when committing crimes. Secondly, the researchers found that the sensations increased in intensity as the subject moved from property to violent crimes. The authors argued that the pleasurable sensations functioned as positive rewards for criminal behavior. They referred to such rewards as endogenous because they were generated by and within the individual the deviant act was committed. The authors posited that these rewards interacted with exogenous, or social rewards to motivate criminal behavior.

While these findings were relevant to social learning theory, they were also quite relevant to Lee Ellis' arousal theory (1987, 1991, 1996). Ellis stated that those who engaged in criminal behavior tended to bore easily and often sought new stimuli to enhance their lives. To some degree, Gottfredson and Hirschi's (1990) general theory of crime as well as of Wood et. al.'s (1997) notion of nonsocial reinforcement fit with arousal theory. The general theory of crime associated engaging in criminal or deviant activity with a lack of self or impulse control. While the authors clearly focused on social interaction factors (e.g. poor parenting) as causal, impulse control nevertheless represents an internal mechanism not unlike Gove and Wilmoth's (1990) endogenous rewards, that encouraged or discouraged deviant activity. Working off social learning theory, Wood et. al. (1997), like Gottfredson and Hirschi (1990), did not discount the preeminence of social interaction, however, they did acknowledge that the physical rush or endogenous reward might play a role in motivating deviant behavior.

Juvenile Delinquency Intervention

Now, we turn to the other set of juvenile delinquency literature, that of intervention programs. In this section, intervention will be clarified and defined. This section will also briefly look at the history of delinquency intervention programs and related initiatives, and examine their nature.

Sorting Out Prevention, Rehabilitation, and Intervention

The prevention and rehabilitation are amorphous concepts. In their article, Wright and Dixon (1977) discussed the problematic nature of the usage of the terms “prevention” and “rehabilitation” in research literature. They conducted a literary search of the phrase “delinquency prevention” and found over 300 references. Upon examining the references however, Wright and Dixon found that the prevention references referred to a wide variety of attempted “interventions” with juveniles that took place both prior to and after the occurrence of delinquent behavior. In a separate work, Gilling (1998) said of the term prevention that due to the diversity of meaning, it is “an extraordinarily unhelpful word (3).”

Others have attempted to bring a greater degree of precision to the use of “prevention” and “rehabilitation” (see for example, Alissi, 1974, Jensen and Rojek, 1998). Jensen and Rojek (1998) defined prevention as something that takes place before the path to adult criminality has been set. In juxtaposition to rehabilitation, “prevention” is something one engages in with pre-delinquents or a population of juveniles presumed to be non-deviant. Rehabilitation on the other

hand is something that occurs after an individual engages in criminal or delinquent behavior. In contrast, some have (see for example, Brantingham and Faust, 1976 and Hawkins, 1981) have utilized the public health model³ and divided delinquency prevention into three phases, primary prevention, which involves nondelinquents, secondary prevention, which involves pre-delinquents, and tertiary prevention, which involves juveniles who have acted in a criminal or delinquent manner.

Different theoretical constructs emphasize different aspects of intervention. Some pointing to prevention, some to rehabilitation, and others point to both. In this dissertation the concept of intervention will include programs that prevent and/or rehabilitate, however, in the analysis distinction will be made between programs that focus on prevention and those that focus on rehabilitation.

History of Juvenile Delinquency Intervention

The concept of working with juveniles in an effort to prevent or curb delinquent behavior is certainly not new, however those efforts have changed over time. In 1918, C. Cooley wrote “when an individual actually enters upon a criminal career, let us try to catch him at a tender age, and subject him to rational social discipline.... [that has already been] successful in enough cases to show that it might be greatly extended (405).” Since Cooley first made this suggestion delinquency intervention has transitioned from a handful of conferences and

³ This three-part model of prevention is primarily used to discuss the issue of disease prevention.

grass roots projects to large-scale intervention efforts funded by millions of state, federal, and private dollars, culminating in with the congressional support of the Delinquency Prevention Act in 1974. Through this act the U.S. Congress created an office (the Office of Juvenile Justice and Delinquency Prevention) within the Justice Department to help states and communities prevent and control juvenile delinquency. This act has been continuously reauthorized by Congress and continues to provide research and federal funding to delinquency intervention.

A literature database search on the PsychInfo bibliographic database screening key psychological literature sources from 1887 to the present, reveals that variations on the words delinquent (including all variations) within a few words of prevent or rehabilitate (including any all variations) began to appear in published social science in 1914. The academic literature at this time tended to discuss prevention as a recommendation for further development and enforcement of compulsory education, especially “vocational educational systems,” (Mead, et. al., 1914) or further instruction in “social virtues” (Mead et. al., 1914; Kellog, A. L., 1914). Specific programmatic strategies were rarely, if ever, discussed or even referenced. This perspective was short-lived however. The move toward intervention programming and specific treatment was aided by the creation of the Division on Prevention of Delinquency of the National Committee for Mental Hygiene. The Division sponsored numerous demonstration clinics to investigate, improve, and disseminate new methods of delinquency prevention and rehabilitation. It also became a leader in the child guidance movement, with T. W. Salmon, in the 1920s. The move toward

intervention for delinquent juveniles corresponded with the University of Chicago's intensified interest in urbanization in Chicago, referred to earlier in this text as the ecological model of deviant activity, or social disorganization. By the mid to late 1920s, "juvenile delinquency campaigns" had appeared in most large urban cities. In 1926, Los Angeles County developed a juvenile delinquency campaign with the specific goal of reducing the number of persons under age 25 in prison. At that time this demographic made up 42% of the prison population. The "campaign" focused on encouraging stricter "parental administration". Although the study and application of delinquency intervention at that time should be viewed as being at an experimental stage, Thomas and Thomas (1928) reported that "maladjustment" or delinquent behavior had two possible causes, (1) organic or biological, and (2) through social learning processes. The authors made a direct connection between those causes and appropriate methods of limiting delinquent activity. They also acknowledged that it was too early at that time to evaluate the effectiveness of any community or guidance clinic efforts properly.

Delinquency intervention grew as a concept in the early and mid 1900s and was widely accepted by persons by the 1970s. Advocacy for delinquency intervention, especially programs that focused on individuals who had already engaged in criminal behavior declined in the mid 1970s. A study by Robert Martinson (1974) that proclaimed "nothing works" in terms of rehabilitation for offenders received great attention and was the catalyst for a wide-spread skepticism of all intervention development and funding (McGuire, 1995). James

McGuire (1995) argued that the use of meta-analysis as a tool for rigorously examining the effects of large numbers of intervention programs caused communities, researchers, and governments to re-examine the potential of juvenile delinquency prevention and rehabilitation programs in the mid to late 1980s. Since then, there has been a resurgence of interest in delinquency intervention, including two large meta-analyses (Andrews et. al., 1990 and Lipsey, 1992; 1995) that have found positive treatment effects for some delinquency intervention programs. In a recent study of attitudes toward juvenile rehabilitation Moon et. al. (2000) noted “the remarkable tenacity of the public’s belief that rehabilitation should remain an integral goal of juvenile corrections. . . . [U.S. citizens] are not prepared to relinquish hope that kids who get in trouble can be saved (57).”

Creating an Intervention

Lyle Shannon (1961) outlined three requirements for developing an appropriate strategy of intervention. These issues serve to inform any group who chooses to undertake an intervention. First, in order to responsibly develop an appropriate intervention program, an individual or group must have an understanding of human behavior (e.g., causal factors and behavioral motivation) as well as the limitations to predictions of behavior. In this dissertation I take the position that the rich tradition from modern theories of deviance is relevant to meeting this criterion. Second, the intervention must have the ability to alter human behavior based on these predictions. It must also rely on “a body of

scientific research that tends to support the explanation of the group in question and with which the therapy in question appears to be consistent (33).” The third, and possibly most important requirement is that for the theory to provide the basis for understanding human behavior it also needs to provide the basis for any predictions and programmatic strategies for behavior change. Similarly, Nation et. al. (2003) found that one of the key factors that can predict program effectiveness is whether or not an intervention program is theory driven, or, “based on empirically tested intervention theories (451).”

Discussion of intervention programs and their causal factors

Identifying the primary theoretical perspective behind an intervention program is important, because one’s theory choice informs the design and goals of the intervention (Gendreau and Ross, 1979; Simon, 1998). Indeed, different theories may suggest contradictory practical applications. A program developer with a strain based theoretical perspective would assert that a program that keeps youths in school is an appropriate delinquency prevention program because school provides juveniles with the necessary skills to achieve goals without resorting to delinquent behavior. Education and building job skills are the solutions to status frustration. Adherents to the social control based perspective would concur with this approach to intervention programming. They would arrive at that conclusion via a different path however, holding that juveniles in school are more likely to develop attachments to conventional others, belief, and commitment to conventional goals. This theoretical perspective would also

propose that schools enhance a youth's involvement in normative activities, thereby reducing opportunities for deviant activity. On the other hand, cultural conflict theory perspectives would suggest that because the source of an individual's alternative value definitions and non-normative socialization result from his/her subculture and surroundings, letting the juvenile drop out of school may be the best preventative solution to his/her deviant behavior. By leaving school, and removing him/herself from a potentially deviant subculture, a juvenile would eliminate the conditions generating his/her deviant behavior, and find exposure to more conventional values outside the school system. Some research has demonstrated that dropouts had higher delinquency rates while in school compared to the rate after they drop out. Finally, theoretical perspectives centered on internal mechanisms would suggest that whether or not a juvenile stays in school is generally irrelevant. If a juvenile had a propensity to commit deviant acts because of a pathology or an impulse control problem, a change in social events would have little effect unless paired with a treatment that addressed an individual's psychological or physiological needs. Aside from the fact that a youth's disorder or deficit may be more easily exposed if the child were in school, the social interaction provided by school itself would not be viewed as a relevant factor in delinquent or criminal behavior. For theoretical perspectives based on internal mechanisms, an intervention program focused on keeping youths in school would therefore be seen as neither positive nor negative. Any type of dropout prevention program would not fully address the cause of delinquent behavior.

Testing Theory in an Evaluation Context

One is faced with the question of how to actually test theories in a program evaluation context? The connection between theories of deviance and studies of program intervention may be stated simply, all of the theories of deviance discussed in this chapter propose causes of delinquency. Delinquency interventions manipulate causal variables to determine their effects and some of these variables correspond to causal processes proposed by theories of delinquency (Hunter and Schmidt 1996; Shadish, 1996). By identifying the primary causal variables suggested by each of the theories and identifying the primary variables that are being manipulated in an intervention, theories and interventions may be matched. If the causal processes posited by a theory are correct, one would expect an intervention based on the manipulation of the key causal variables suggested by the theory(s) to inhibit any future delinquency. However, if the intervention, based on the manipulation of the key causal variables of a theoretical perspective does not result in a reduction or cessation of delinquent behavior, the causal frame of the theory is not supported, and may be viewed as flawed.

Trochim and Cook (1992) wrote that the connection between program data (outcomes, pretest control, etc.) and theory lies in “pattern matching”. “In order to see whether our theories make sense, we must put them up against data to look for a correspondence,” they go on to say that the “patterns are the forms we use to represent both theories and data in order to treat them in comparable terms (1992:49).” Patterns are a “translation device” permitting theories and

program based evaluation data to meet and be examined. In its simplest form, if a theoretical grouping predicts that “if x occurs then y will occur” consistent with the pattern in the data, one can say that the theory has been supported. Where this becomes complicated is in that several theories may propose similar hypotheses or results making it difficult to isolate the most appropriate causal design or most robust theory.

Chen and Rossi (1980; 1983; 1987) referred to this simple pattern as the “black box” and warned that researchers must go beyond the expected binary pattern to gain the richer understanding of human deviant behavior and its relation to theoretical explanations. Wilson et. al. (2000) argued that “black box” research,” will fail to illuminate the mechanics of why and how programs work (348-349).” Turning attention to more complex patterns, combinations of practical indicators for a theory or group of theories present a first step in breaking open the “black box”. Useful, falsifiable theories, provide enough information for patterns of prediction to be developed and can therefore be used to generate patterns of prediction (Chen and Rossi, 1980, 1983,1987; Trochim and Cook, 1992) that can, in turn, be used to identify the same patterns in observed data. Each theory grouping examined in this paper, suggests a pattern of causality, or a pattern for change behavior. These patterns can be matched to the data presented in program evaluation outcome measures. Pattern matching can be used to find support for a specific theory or set of theories, minimizing or eliminating the problem of the “black box” and misattribution.

By creating patterns of theoretical indicators to be matched with programmatic data, more is learned about a theory's performance in practice and best methods of application. Application of theories of deviance to program evaluation data can help fine-tune a theoretical approach through awareness and consideration of programmatic variables (see Figure 1). For example, if a researcher compared several programs meeting the theoretical pattern of Hirschi's social control theory, observations could be made about patterns of success/failure or a mixed pattern of outcomes. In the latter case, valuable information can be gained through a comparison of program specific variables such as amount of treatment time, training of those implementing the program, treatment attrition, etc. This step can be best accomplished through the use of meta-analysis (Lipsey, 1992; Lipsey and Wilson, 2001).

Lipsey (1992) wrote, "the potential exists to use meta-analysis to probe a body of research more deeply in order to discover patterns of relationships, to improve our understanding of intervention, to aid our explanation of study results (239)". Lipsey also referred to the place of meta-analysis in theory. He suggested that another potential of meta-analysis is, "to assist in theory construction (239)." In discussing the place of theory in program evaluation via meta-analysis, Cordray (1992) suggested that if overarching theories can account for variations in program effects, "it may be possible to exploit the natural variation across studies, answering questions that can not be answered by a single study (86)."

While I concur that the method of meta-analysis has a place in theory construction, I also posit that it has a place in theory modification and even

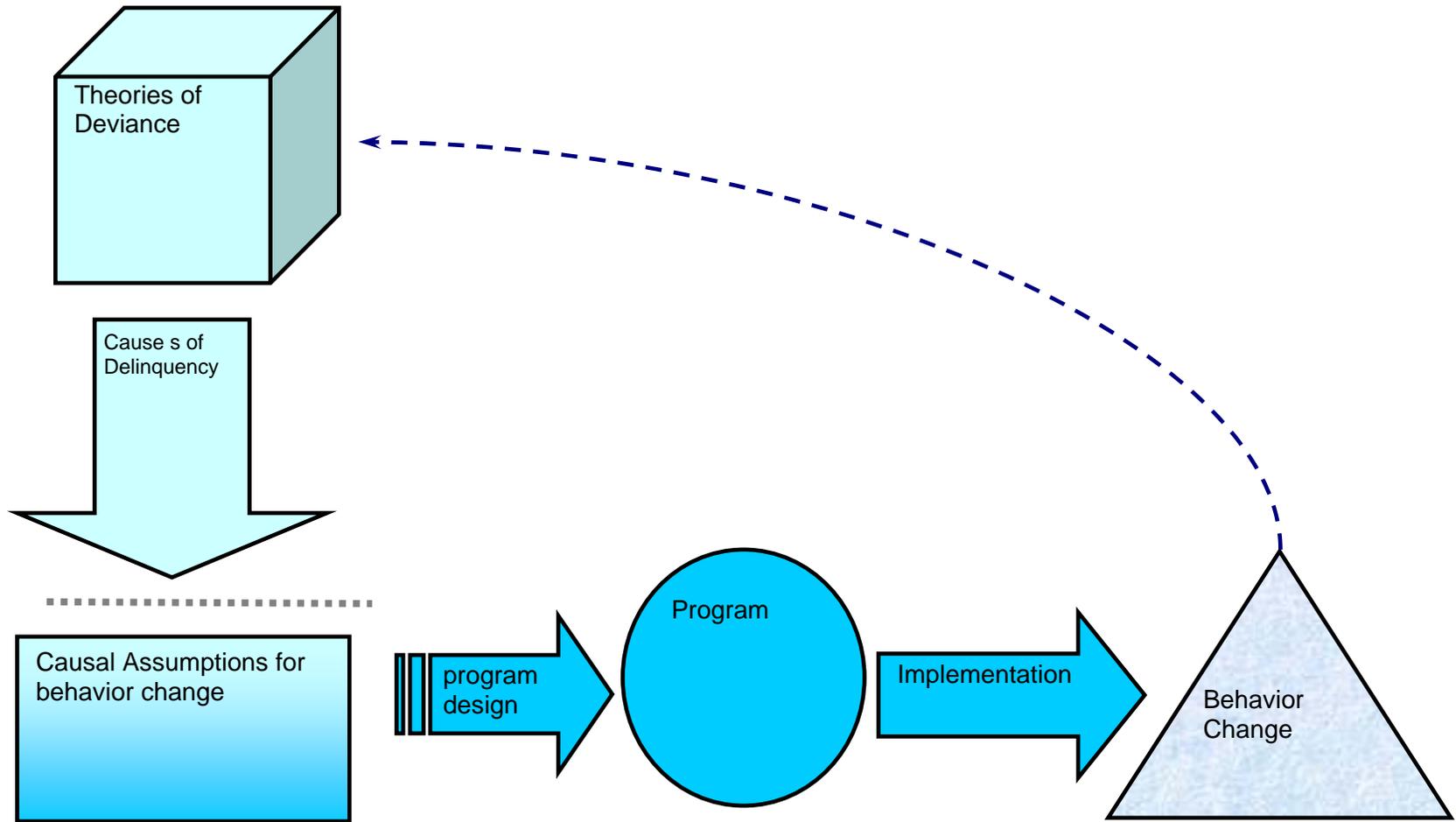


Figure 1. The link between theories of deviance and intervention programming.

deconstruction. Through the exercise of theory testing, researchers can potentially breakdown, modify, or create theory and thus improve causal models.

In their examination of the connection between correctional treatment research and criminological theory, Cullen et. al. (2003) point out that meta-analytic treatment findings “. . . have implications for the variability of extant criminological theories. (348).” While there is a strong tradition of testing theories of deviance forensically, such has not yet reached the level of testing in intervention practice. Through pattern matching techniques and meta-analysis, intervention programs can serve as a new arena for theory testing. Once test results have been gathered, and theories supported, supported with qualifications, or not supported, researchers can then modify, deconstruct, or as Lipsey (1992) envisioned, construct rigorous theoretical models.

CHAPTER III

METHOD

Database

The database of program evaluations that was used for this project is the Effects of Intervention on Delinquency database or the Juvmeta database. This database was originally developed and created by Mark Lipsey, Ph.D. in the early 1990s and was specifically designed for use in meta-analytic research (Lipsey, 1992; 1995). These data or studies were gathered through a series of thorough bibliographic searches of published and unpublished literature from various disciplines, practitioners, think tanks, and government agencies.

“Meta-analysis can be understood as a form of survey research in which research reports, rather than people, are surveyed (Lipsey and Wilson, 2001:1).” The full Juvmeta database includes over 500 of such surveyed research reports or studies. Journal articles, book chapters, and dissertations make up 55% of studies in the Juvmeta database, 45% are conference papers, and technical reports. Document years contained in this database range from 1950 to 2002. All programs were conducted in the U.S. or English speaking countries, with approximately 89% of the studies conducted in the U.S. In terms of the methodological characteristics of the Juvmeta studies, most of the comparison groups are no-treatment or treatment as usual in a non-programmatic setting (87%) with wait-list control groups and minimal contact making up the second

highest percentage, at 8% and placebo controls or alternative, sham treatments being the least common, at 4%. The quality of the research designs for this data set includes both experimental (36%) and quasi-experimental (60%).

The existing database variables were used and new codes associated with the deviance theories were added to the existing database in Stage One of the analysis (discussed later in this chapter). The additional codes were analyzed separately and in conjunction with the existing Juvmeta variables.

Eligibility Criteria

Characteristic of a good meta-analysis database (Cooper and Hedges, 1994; Lipsey and Wilson, 2001), data was collected for the Juvmeta database based on clear statements describing the population of studies that was to be collected. The studies collected for Juvmeta database met the following standards of eligibility (Lipsey, 1992; 1995): (1) Juveniles, age 12-21 years who received an intervention, broadly defined, that could have some positive effect on their subsequent delinquency, (with the exception of drug and alcohol programs with no antisocial measure aside from consumption), (2) Quantitative results were reported for a comparison between a treatment condition and a control condition for at least one delinquency outcome measure, (3) the assignment of juveniles to conditions was random or, if not, pretreatment group differences were reported by means of, for example, a pretest on the dependent variable, demographic comparisons, matching, etc., and (4) The study was conducted between 1950 and 2002 in an English-speaking country and reported in English.

The full Juvmeta database contains 534 studies meeting these eligibility criteria. The studies were retrieved and coded by trained personnel (see Appendix A for the Juvmeta coding manual). Almost 200 items describing study methods and procedures, subject characteristics, treatment and program characteristics, delinquent (e.g., number of arrests, number of police contacts, number of aggressive acts, etc.) outcome effect sizes, and related variables were coded (Lipsey, 1992; 1995).

Analysis

This section is divided into the three stages of analysis utilized in this project. In the first analytical stage, the theoretical constructs discussed in the literature review were operationalized and coded onto each of the intervention programs in the Juvmeta meta-analytic database. This stage was followed by an examination of the programs contained in the Juvmeta database with stated theoretical underpinnings. The analysis concluded with a meta-analysis of intervention programs that incorporated the theoretical variables coded in stage one. Delinquent outcome measures were used to generate study effect sizes.

For the purposes of this study, the most rigorous program evaluations in the Juvmeta database were selected and coded⁴. Studies employing less robust methods or treatment and control group assignment were omitted allowing the author to focus on studies with the most valid treatment effect estimates. This

⁴ This methodological decision was based on feedback from the author's proposal defense. At this time the Dissertation Committee recommended that the project's scope should be narrowed to allow for a more realistic and substantively meaningful research goal.

form of restriction, sometimes referred to as using “the gold standard” is a normative practice for program reviews and meta-analyses. It allowed for the most straightforward approach to examining the primary study goal, the intersection between theory and practice. Studies that used random or quasi-random participant selection were included in stage one of analysis, or the theoretical coding process (see Table 1). These selection criteria resulted in 186 codeable studies (see Appendix B for a bibliography of these studies).

Table 1. Group Assignment Coding Question

How are subjects assigned to treatment and control groups?

Random or Quasi-random:

[Note: If originally random/quasi-random but degrades due to attrition, refusal, etc. prior to trt onset, use category under “nonrandom”, below.]

01 randomly after matching, yoking, stratification, blocking, etc. [This means matched or blocked first then assigned by pairs or blocks. This does not refer to blocking after trt for the data analysis.] (N= 23)

02 randomly without matching, etc. (included cases such as when every other person goes to the control group) (N= 149)

03 regression discontinuity; quantitative cutting point defines groups on some continuum (this is rare) (N= 2)

04 waitlist control or other such quasi-random procedures presumed to produce comparable groups (no obvious differences). [This applies to groups which have individuals apparently randomly assigned by some naturally occurring process, e.g., first person to walk in the door.] (N= 12)

Stage One - Coding

The theoretical perspectives discussed in the literature review were operationalized as indicators and matched with the programmatic content in each study⁵. Lipsey and Wilson (2001) suggest that meta-analysts use caution when determining a coding scheme. Because a meta-analyst may only code what is

contained in the study documents, some items of interest may not be sufficiently reported. Due to the novel nature of this project as well as the potential limitations suggested by Lipsey and Wilson (2001), the most appropriate approach to developing theoretical codes was determined to be induction. An inductive approach allowed the evaluation studies to inform the depth and potential scope of the theoretical coding scheme. This was preferable to imposing a prescribed theoretical platform onto the intervention programs. Such treatment of the data would have obscured key programmatic characteristics and theoretical indicators and in doing so, introduced an unacceptable level of bias. The theory coding protocol was developed through a multiphase qualitative design process that allowed for induction to be used to its best advantage.

Closed-ended items are most advantageous for meta-analysis coding because the primary use of the database that is created will be statistical analysis (Lipsey and Wilson, 2001). The inductive process was utilized to reach the goal of closed-ended theoretical coding items. Because the coding process was qualitative in nature, the development of the coding protocol was carefully monitored. The general structure of the coding process was based on Wanous et. al.'s (1989) suggestions for handling judgment calls in meta-analytic coding. The authors suggest that a coder should try to standardize the judgments as much as possible and recommend a narrative review before coding. They also

⁵ Any existing programmatic codes in the Juvmeta database were not utilized. The codes were designed to categorize programs for treatment type comparisons and were based on psychological treatment categorizations that were not appropriate for this project.

suggested that a coder should be conscious of judgments, chart and report decisions, and empirically test when feasible.

Following Wanous et. al.'s (1989) suggested approach, a six phase coding strategy for mapping theory onto programs was developed by the author. First, a matrix of possible program characteristics for each of the deviance theories noted in Chapter 2 were generated (see Table 2). These theoretical indicators were based on independent variables used to test the theories in deviance literature as well as theoretical descriptions and discussions in Criminological Theories (Akers, 2000), Jensen and Rojek's Exploring Delinquency (1998), and Traub and Little's Theories of Deviance (1999). Class lecture and discussion notes from multiple deviance and juvenile delinquency classes taught by Walter Gove, Ph.D. and Gary Jensen, Ph.D. at Vanderbilt University between 1996 and 2000 were also used to develop the indicators.

In the second phase, a narrative review of the 186 eligible Juvmeta studies was then conducted and text-based notes were taken on the eligible studies in a database created specifically for this purpose⁶ (see Appendix C for a screen shot of the Phase II coding screen). Notes focused on program components, implied and stated causal constructs, ideas on how to categorize and conceptualize various program components, as well as initial notes on links between program components and theoretical causalities.

⁶ FileMaker Pro 6 was used to create the inductive theoretical review database. This application was also used to create the Juvmeta Database.

Table 2. Theories and Associated Causal Factors by Primary Characteristics and Indicators

Theories	Primary Characteristics and Indicators (elements targeted for change)	Examples of Possible Theoretical Applications
Social Bond	attachment (relationship with teachers, parents, etc.) involvement in school, community conventional goals (seek degree) enhancement of bonds with prosocial others increase/maintain parental supervision and affection (Cullen et. al. 2003)	social skills training family/parent communication training parenting classes community policing after school programs education vocational training big brother/big sister programs truancy programs
Social Learning	reinforcements (social and nonsocial) isolate from criminal associations attachment to family, school target crime excusing rationalizations reward pro-social behavior	family/parent communication training parenting classes after school programs education cognitive-behavioral therapy vocational training residential psychological treatment/counseling
Self Control	increase/maintain parental supervision impulsivity reduction/control stability of values across the life course age relevance parenting (first 8 years) increase/maintain parental supervision enhanced self-control and affection (Cullen et. al. 2003)	psychological counseling cognitive-behavioral therapy parenting classes self-control or impulse control

Table 2, continued

Theories	Primary Characteristics and Indicators (elements targeted for change)	Examples of Possible Theoretical Applications
Differential Assn	removal from delinquent peers definitions favorable/unfavorable to law breaking (value orientation) modification of criminal attitudes/values target crime excusing rationalizations isolate from criminal associations reward prosocial behavior	cognitive-behavioral therapy residential treatment (long term exposure to conventional values) group therapy
Conflict	reduction of anger at the system empowerment of marginalized groups not focused on integration capitalism economic organization poverty rates/income inequality racial and economic distributions heterogeneity unemployment	minority based programs minority empowerment programs
Arousal theory	risk taking sensation seeking	psychological counseling cognitive-behavioral therapy
Life Course	change of attitudes/values over the life course commitments age relevance new relationships (e.g., marital status) enhancement of bonds with prosocial others family responsibility	education vocational training family/parent communication training
Primary/Secondary reinforcement	reward prosocial behavior sensation seeking belief/adherence to social convention innate drives toward stimulus	psychological counseling cognitive-behavioral therapy drug therapy parenting classes focused on teaching prosocial behavior

Table 2, continued

Theories	Primary Characteristics and Indicators (elements targeted for change)	Examples of Possible Theoretical Applications
Neurophysiologic Reward	age relevant sensation seeking risk taking	psychological treatment cognitive-behavioral therapy drug therapy sports programs that promote prosocial risk behaviors)
Deterrence	increase supervision/control fear of punishment police presence, police expenditures police arrest ratio & arrests knowledge of law enhanced penalties swiftness of punishment certainty of punishment/arrest death penalty severity of punishment police clearance rates	intensive supervision scared straight shock incarceration
Labeling	absence of stigma class relevance reduction of marginalization socio-economic status	nonintervention programs intermediate sanctions
Routine activities	income, race, and age relevant motivated offenders time periods of criminal activity lifestyle relevance accessible, portable goods residential population density gun availability presence of bars and taverns police per capita structural density/urbanization marital status, unemployment absence of guardians	neighborhood watch community policing after school programs vocational training

Table 2, continued

Theories	Primary Characteristics and Indicators (elements targeted for change)	Examples of Possible Theoretical Applications
Power-Control	increased family supervision/control socio-economic status, class relevance parental occupation gender relevance patriarchy family structure informal domestic control	parenting classes focused on enhanced supervision
Control-Balance	increased family supervision/control control and supervision family structure gender relevance control ratio level of autonomy opportunity level of constraint	parenting classes focused on enhanced supervision
Social Disorganization	ecological characteristics unemployment crime in area racial heterogeneity/composition urbanization SES residential mobility/stability physical and population compositional variables (e.g. levels of household density)	language classes education community support or resource centers minority/immigrant support structures
Agnew's Strain	stress, frustration communication skills problem solving	psychological counseling stress management

Table 2, continued

Theories	Primary Characteristics and Indicators (elements targeted for change)	Examples of Possible Theoretical Applications
Merton's Strain	reduce material deprivation(Cullen et. al. '03) education, skill level future expectations strength of non-economic institutions relevance of socio-economic status unemployment rates perceived opportunities class relevance problem solving	education vocational training opportunity enhancement
Cultural Conflict	norms level of poverty region self-esteem enhancement class relevance definitions favorable to violence race relevance	residential treatment (long term exposure to conventional values) conflict resolution anger management
Reintegration	reintegration into community reduction of shaming absence of stigma community support	halfway houses community corrections restitution community service intermediate sanctions

Phase II was followed by the full development of the coding instrument (see Table 3 for a listing of coded items and Appendix D for a screen shot of the Phase III coding instrument). Additional items were added to the coding screen including confidence rating scales on the theoretical codes. These scales ranged from 1 – 5, with 1=high confidence and 5=no confidence, indicating a guess based on other study attributes). For the more important items in a coding protocol, Orwin and Crodray (1985) posited that a confidence rating should be used. These types of ratings were already present in the Juvmeta database for items such as those describing the methodological characteristics of a study.

Table 3. Variables - Phase III Coding

Study number
Date of last update
Author(s) last name(s)
Title of study in brief
Year of implementation
Program descriptor
Treatment/Program name
Funding source
Primary program components
Change factors
Theoretical causal process associated with program change factor – decision tracking dialogue box
Theoretical or causal attribution (yes, no, undecided)
If yes or undecided – describe
Comments
Confidence in theory/program linkage
Additional info needed (yes/no)
Recode needed (yes)
Text relevant to dissertation (yes)

During Phase III, a subsample of eligible Juvmeta studies was used to refine the format and flow of the FileMaker Pro coding screen. At this point in the process, most of the coded items were still open-ended questions. A decision

tracking dialogue box was developed within the FileMaker Pro coding instrument for the primary coding item, the theoretical causal process associated with the primary program change factor. This dialogue box allowed for thought processes and decision points to be tracked and referenced later in the coding process. For example, when coding each study all the theories of deviance that might possibly be reflected in the program components were listed. Each of the theories on the list included a dialogue regarding why and/or why not the program is an application of the causal construct associated with a particular theory (see Figure 2 for an example of this coding strategy).

In Phase IV of the coding process, the items presented in Table 3 along with the dialogue box were coded for all eligible studies. This phase of the coding process required a systematic review of the primary program components that were delivered to the treatment groups. Descriptions in the intervention studies were the primary source of this information. Other relevant program literature was sometimes used if it contained more detailed information to get a richer understanding of a particular intervention program. The additional information was sometimes necessary as the program descriptions in the initial studies could be abridged and did not always provide sufficient information to properly sort out the theoretical causal dimensions.

The coding items in Phase IV were designed to be re-examined and developed into close-ended questions so that a substantive statistical analysis could ultimately be conducted with the theory variables and the program effect sizes. Decision tracking notes related to the theoretical codes were maintained

throughout the entire coding phase (see Table 4). These notes ensured standardization in decision making and allowed for the continuous strengthening and tightening of the theoretical codes.

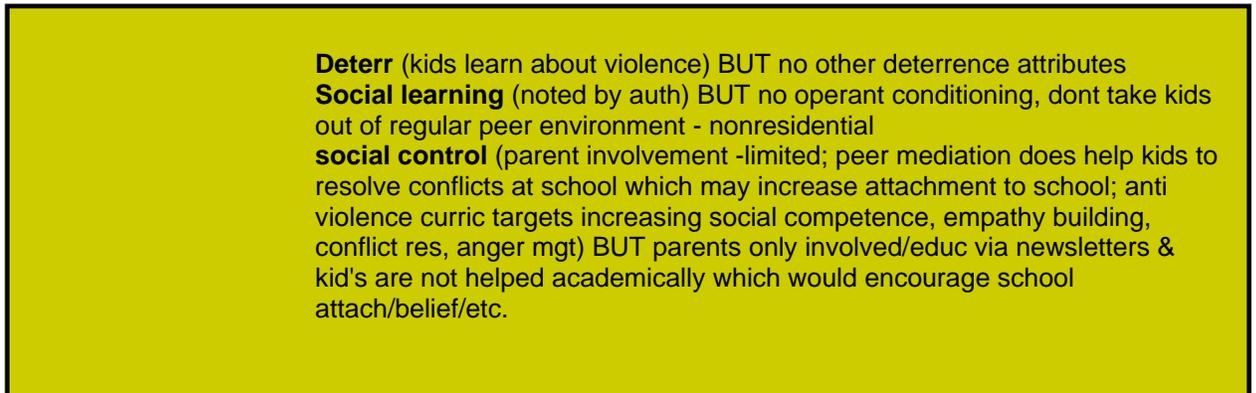


Figure 2. Theory Code Dialog Box

In the fifth phase of the inductive coding process, each of the 186 studies was re-coded for theory/program intersection using a close-ended question and a confidence scale. The coding decisions were based on the theory/program decision tracking dialogue box (see Figure 2) as well as the decision tracking notes (Table 4).

Once completed for 186 studies, the close-ended theory codes were examined for conceptual consistency and validity. Items with low confidence scores were reexamined during Phase V as well. In this way, the theoretical codes were continuously tightened and refined. During this phase, the initial theoretical indicator matrix presented in Table 2 was also elaborated and used as an additional log of decision points.

In the final or sixth phase, additional close-ended items were added to the File Maker Pro coding screen. To further refine the theory codes, a theory fit field was added to the main theory item. This item measured the strength of the theory to application connection. Specific decision points were also developed for this item and recorded. Codes that allowed for additional refinement of the attribution code were added as well. The number of causal constructs or theories attributed to the program (single or multiple) as well as the identification of specific theories were also coded as close-ended questions in this coding phase. During the entire coding process, the coding protocol was tightened and strengthened. Throughout the coding process, rules were established and tracked in the dialog box on the coding screen as well as within the decision tracking notes (see Table 4) to assure replicability and validity. The nature of the qualitative coding process required the author to modify some coding rules during the coding process; however, all rule modifications were applied to all studies coded, including those coded prior to the modification so that coding consistency was maintained.

Stage Two - Theoretical Fit and Consistency

Stage two of analysis examined the breakdown and frequency of theoretical codes as well as the strength of each theory application. This stage of analysis also included a qualitative examination of how well the intervention programs actually used and interpreted the theory(s) they claimed to be founded

Table 4. Decision Tracking Notes

Theories	Decision Tracking Notes (Indicators)	Decision Tracking Notes, Phase V (cut points & misc theory notes)
Social Bond	<p>key assumption: kid needs stronger ties to family, school, and other conventional inst.</p> <p>key indicator(s): attachment to prosocial others; embeddedness in prosocial activities, community</p> <p>family preservation of service delivery</p> <p>increased empathy</p> <p>social adjustment</p>	<p>*extends Nye's social bond theory</p> <p>* human beings are inherently anti-social and prone to deviate UNLESS prevented from doing so by conformity-demanding commitments to others.</p> <p>*central elements fostering conformity = internalization of accepted norms and sensitivity to the needs of others</p> <p>* key prog piece = bond/attachmnt; sensitivity to the expectations of others.</p> <p>*parent/kid = primary bond</p>
Social Learning	<p>Key assumption: Kid needs to re-learn nondel responses thru grp process & reinforcement</p> <p>key indicator(s): grp process (imitation, normative interaction) + reinforcement/conditioning</p> <p>removal from del peers</p> <p>DA + operant conditioning emph</p> <p>behavioral therapy (role play)</p> <p>facilitation of modeling pro social beh</p> <p>contingency contracting</p> <p>residential</p> <p>reinforcement = retraining to evoke different, prosocial response</p>	<p>* adds operant conditioning and reinforcement to DA</p> <p>* dev beh is expected if it has been differentially reinforced over alternative beh and defined as desirable</p> <p>* crime is learned thru imitation or modeling. The likelihood of subsequent beh is determined by the extent of diff reinforcement (e.g., rewards and punishmnts following the beh)</p> <p>* for a program to be SLT - it MUST have a strong reinforcement component.</p>
Self Control	<p>Key assumption: kid needs impulse control, better parenting skills</p> <p>key indicator(s): increase impulse control + increase parenting/family control</p> <p>empathy</p> <p>internal v. external locus of control</p> <p>family element</p>	<p>* "traces the important restraints on criminal conduct to childrearing practices, allows the diversity of criminal activity, predicts its stability over long periods of time, and is comfortable with the simplicity and immediacy of the benefits associated with it"</p> <p>low or high levels of social control are the result of child rearing practices.</p> <p>* the distinguishing prog factor for this theory is self-control or locus of control(?)</p>

Table 4, continued

Theories	Decision Tracking Notes (Indicators)	Decision Tracking Notes, Phase V (cut points & misc theory notes)
<p>Differential Assn</p>	<p>Key assumption: kid needs to re-learn nondel responses thru grp process within pro social context</p> <p>key indicator(s): grp process + removal from del peers</p> <p>learn from associates (peers)</p> <p>residential</p> <p>increase sources of conventional reinforcement/context</p>	<p>* we learn to be deviant in the same way we learn to conform</p> <p>* "Excess of definitions favorable to law violation over definitions unfavorable to law violation"</p> <p>* it is actually an anti-social-disorganization statemnt</p> <p>* this theory coded onto prog only if there is grp process b/c criminal beh is learned like noncrim beh - in communication w/ others, predominantly in intimate grps. Kids learn 1.) tech/skills, 2.)motives/drives/rationalizations/attitudes</p> <p>*thru assoc with others we learn values, norms, motivation, rationalizations, techniques, & defs</p> <p>*People are more likely to engage in crim beh is, when the situation presents itself, he/she has been previously exposed to defs favorable to law violation for a longer period of time, earlier in life, with more intensity, and more frequently than defs un</p>
<p>Conflict</p>	<p>Key assumption: kid a victim of grp domination caused by capitalist system - kid needs to be empowered</p> <p>key indicator(s): no focus on integration; empowerment of marginalized grps</p>	<p>* sort of a political theory of deviance; group dominance as causal factor in development of laws.</p> <p>* if this is an a programmatic aspect, it is not the primary component.</p>
<p>Arousal theory</p>	<p>Key assumption: kid seeking "high"; kid needs to re-direct his/her source of "high" and learn to control his/her desire for the "high"</p> <p>key indicator(s): redirect kid's ability to get "high" to pro-social source</p>	<p>*a prog for this theory would have to focus on redirecting the source of endogenous reward and/or decrease the need for this reward.</p> <p>* subsumed under SocCtrl (impulse ctrl)</p>

Table 4, continued

Theories	Decision Tracking Notes (Indicators)	Decision Tracking Notes, Phase V (cut points & misc theory notes)
<p>Life Course</p>	<p>Key assumption: kid needs strong ties to conventional others and institutions throughout his/her life.</p> <p>key indicator(s): work with kids thru adulthood focus on bond building at all stages of life</p>	<p>*Akers (ASC 2006) would argue that it is not theory in and of itself. Considers it to be theories applied thru the life course rather than a life course theory.</p> <p>* not really applicable for my coding. Not dealing w/ the kids over time (life course) only dealing w/ kids.</p> <p>* so if social bonds built with kids - default to social ctrl.</p> <p>* gets subsumed under social contrl</p>
<p>Primary/Secondary reinforcement</p>	<p>Key assumption: Kid needs to re-learn nondel responses thru grp process & reinforcement</p> <p>key indicator(s): grp process (imitation, normative interaction) + reinforcement/conditioning</p>	<p>this is an overlap with social learning.</p> <p>* subsumed under SocCtrl (impulse ctrl)</p>
<p>Neurophysiologic Reward</p>	<p>Key assumption: kid seeking "high"; kid needs to re-direct his/her source of "high" and learn to control his/her desire for the "high"</p> <p>key indicator(s): redirect kid's ability to get "high" to pro-social source</p>	<p>* endogenous rewards; not sure how this is diff from arousal theory</p> <p>* subsumed under SocCtrl (impulse ctrl)</p>
<p>Deterrence</p>	<p>Key assumption: kid needs to be punished and/or exposed to certainty of punishment</p> <p>key indicator(s): specific deterrence + general deterrence (learn of the certainty, severity, swiftness of punishment.) <-- deter as communication.</p>	<p>*deter as communication mech (Gove and Geerken)</p> <p>* effect perception of severity, certainty, swiftness, then effect behavior</p> <p>* reward/costs element that is included in SLT</p> <p>*coded as Deter if no operant conditioning/reinforcement piece.</p> <p>*certainty of punishmnt (or perceived certainty) empirically shows the strongest effects.</p>
<p>Labeling</p>	<p>Key assumption: kid as victim of societal stigma and as a result -> secondary deviance; kid needs to NOT be exposed to labeling process of the CJ system</p> <p>Key indicator(s): nonintervention to avoid secondary deviance; absence of stigma; reduce contact with cj system</p> <p>deviance as attributed designation rather than inherent in the individual</p>	<p>* deviance is an attributed designation rather than something inherent in the individual. "What is deviant is the product of a political process of decision making"</p> <p>* the deviant is no different than any of us.</p> <p>*secondary deviance will not occur if kid is not caught and labeled in the first place. So this theory should be very focused on nonintervention.</p>

Table 4, continued

Theories	Decision Tracking Notes (Indicators)	Decision Tracking Notes, Phase V (cut points & misc theory notes)
Routine activities	<p>Key assumption: reduce suitable targets & opportunities, increase guardianship, dec. motivated offender; essentially reduce kid's opportunity for crime</p> <p>key indicator(s): community as target of intervention -</p>	<p>* focus on characteristics of the crime rather than the characteristics of the offender.[abs of guardians, suitable targets, & motivated offender]</p> <p>* b/c of the focus (abv) may not be applicable. By removing your focus from the offender, a program of this theory would fall into neighborhood watch etc. not focus on changing the kid's beh, interactions, etc. This type of prog would not be eligible for Juvmeta.</p>
Power-Control	<p>Key assumption: kid is del b/c of family structure; change family structure - change del behavior; kid needs different family structure</p> <p>key indicator(s): modification of family structure - patriarchal vs/ egalitarian</p>	<p>* focus on the link b/w class relations and the relative position of husbands and wives in the workplace.</p> <p>* less egalitarian family then less female del</p> <p>* a prog assoc with this theory must have some component regarding family structure (patriarchy v. egalitarian)</p>
Control-Balance	<p>Key assumption: the ratio of autonomy/repression needs to be modified to change del behavior; kid needs more/less autonomy</p> <p>key indicator(s): modification of parenting styles - inc/dec kid's autonomy</p>	<p>"The ctrl premise of the theory contends that the amnt of control to which an individual is subject, relative to the amnt of ctrl he/can exercise, determines the probability of deviance occurring as well as the type of deviance likely to occur."</p> <p>* prog must include some component that manipulates a kid's autonomy/repression ratio - try to get these in balance to produce conformity</p>
Social Disorganization	<p>Key assumption: kid negatively affected by a lack of bonds, communication, ties within heterogeneous community; kid needs to be more connected to community</p> <p>key indicator(s): change to community support/resources - strengthen community</p>	<p>* Change is bad & progress is a terrible thing</p> <p>* breakdwn of bonds, family, and neighborhood assns, as well as social ctrls in the community.</p> <p>* the change target is nt the dev kid but the society that the kid is in. Therefore this theory would nt be represented in Juvmeta b/c the trt assoc with this theory would nt involve the kids so much as it would involve the community structure.</p>

Table 4, continued

Theories	Decision Tracking Notes (Indicators)	Decision Tracking Notes, Phase V (cut points & misc theory notes)
Agnew's Strain/Genera; Strain Theory	<p>Key assumption: Kid needs to reduce the strain inducers in his/her life</p> <p>key indicator(s): stress management + reduce stress producing events/situations</p> indiv therapy focus on personal stress	<p>*strain results from failure to achieve socially valued goals + removal of positive stimuli & presentation of negative stimuli.</p> <p>* prog has to have a component that reduces strain all forms)</p>
Merton's Strain	<p>Key assumption: Kid is experiencing material deprivation and as a result committing del acts to achieve conventional goals; kid needs to increase opportunities for status attainment</p> <p>key indicator(s): increase opportunity structure (skills training, access to resources)</p> increase income 1st step onto career ladder	<p>*lack of legitimate means to reach societal goals. This can result in innovation - or achieving goals thru illicit means.</p>
Cultural Conflict	<p>Key assumption: Kid seeks status within subculture b/c can't achieve status within conventional culture; kid needs to be resocialized within conventional norms; allow kid to succeed within larger, normative culture</p> <p>key indicator(s): increase self esteem/success within conventional culture + conflict resolution</p> class association self-esteem (middle class) sex role conceptions and masculine identification (del as rejection of feminizing influences in childhood - fathers not around) schools = middle class values therefore lower class kid can suffer defeat and rejection subcult serve 2 functions - something to succeed at + enabling kid to retaliate agnst middle class norms (sanction aggression agnst those at whose hands his ego has suffered)	<p>* kids seeking status from nonconformity (via subcultural grps whose norms are the antithesis of the mainstrm community) b/c it can't be achieved thru conformity.</p> <p>* subcult values can exist simultaneously with conventional value orientation.</p> <p>*e.g. gangs socialize when kid's parents cannot.</p> <p>* program would have to reorient kid to conventional value orientation BUT have to give kid something he can succeed at.Process for this theory would include grp proc learned beh/identification</p> <p>* Cohen:subcult = prob solving tech; functional solutn</p>
Reintegration	<p>Key assumption: kid needs to feel shame for dev act but then must be reintegrated into community</p> <p>key indicator(s): connection to victim (e.g., meeting, restitution) + increase kid's social relations/resources/support within community</p>	<p>* combines aspects of opp theory, control, subculture, SLT, labeling.</p> <p>* Code as this theory when primary focus of program is reintegration into community.</p> <p>* shaming is necessary but so is reintegration</p>

upon. Many juvenile intervention programs did not mention modern deviance theories, much less claim to be based on one or more, however, some programs purported to be direct applications of one or more theories of deviance.

The presence or absence of direct evidence that a study in the Juvmeta database was designed or developed based on one or more theoretical perspectives discussed in Chapter 2 of this dissertation, was coded during the theoretical coding stage (Analytical Stage One). The coding item was also accompanied by a confidence rating item. This analytical stage was designed to scrutinize the program developer and/or implementers practical use of a particular theory. In this way, the strength of connection between theory and program was examined and evaluated.

Stage Three – Meta-Analysis

Meta-analysis applies, “statistical procedures to collections of empirical findings for the purpose of integrating, synthesizing, and making sense of them” (Niemi, 1986:5). In this final stage, meta-analysis was used to quantitatively assess the practical applications of the theoretical constructs in an intervention program context. This stage also controlled for methodological features, general study characteristics, as well as participant and programmatic issues, such as quality of implementation, so as to provide the clearest picture of which theoretical construct was associated with programs that had high program effects and which construct was associated with lower program effects.

Meta-Analysis

One of the first articles using modern quantitative research synthesis, or meta-analysis was published in the 1970s (Smith and Glass, 1977) and since that time, this valuable methodology has been continuously tested, expanded, and improved. As a result, researchers in many disciplines have conducted thousands of meta-analytic studies in the past three decades.

Programmatic effect is measured using an effect size statistic. This statistic represents the "quantitative findings of a set of research studies in a standardized form that permits meaningful numerical comparison and analysis across the studies (Lipsey and Wilson, 2001:5)". There are several forms of effect sizes used in meta-analysis. The type of effect size is determined by the type of study findings as well as how the findings are reported in the targeted sample of studies. The studies contained in the meta-analytic database utilized for this dissertation, contained experimental and control groups as part of experimental or quasi-experimental designs. There are several types of effect sizes used with data that report group contrasts, such as: standard mean difference, odds-ratio, relative risk, and correlation coefficients.

In addition to an overall effect size for independent studies, meta-analysts have developed "various diagnostic and validation procedures (Cordray, 1992:86)." For example, if effect sizes are heterogeneous, the meta-analyst searches for the variables that may explain the observed variation, such as sample size, length of intervention for each independent assessment, or for the purposes of this project, theoretical construct.

The empirical findings focused on in this study were the programmatic effect of juvenile delinquency intervention programs with various theoretical associations. This was determined by the outcome measures of the study treatment and control groups. This method has been used test deviance theories previously with useful and substantive results (see for example, Pratt, 2001; Pratt and Cullen, 2000; Winfree et al., 1996) and is the best method for organizing, assessing and comparing the results of a large number of juvenile delinquency intervention programs. This method allows the researcher to isolate the actual *effect* of a treatment program while controlling for the methodological variability and program component variability in the programs focused on (Lipsey and Wilson, 2001; Cooper and Hedges, 1994).

Meta-analysis was the most appropriate methodology for this study in that, it allowed this author to code a large number delinquency intervention studies based on their associated theoretical construct and then analyze the distribution of the theories based on programmatic effectiveness determined by delinquent outcome measures. No other method would lend itself as well to these research goals.

Data analysis

The first step in meta-analytic data analysis is descriptive in nature. In this study, the first step focused on the characteristics of the theoretical codes generated in Stage One of the analysis as well as the relevant variables in the Juvmeta database such as methodological variables, study and participant

characteristics, and strength of implementation. This step led to the more extensive, model specification step, which produced statistically independent effect sizes. Inverse variance weights were calculated to reflect the different sample size or statistical precision of the studies. Once this analytical step was completed, the data was appropriately prepared for the next step, which included the creation of a mean effect size with confidence intervals and most importantly, a test of effect size heterogeneity. An ANOVA procedure specifically designed for meta-analytic data (Lipsey and Wilson, 2001) was used for ascertaining the mean effect size for each category of the theoretical variable.

In the latter step, a homogeneity test, or Q statistic (Hedges & Olkin, 1985), was used to determine whether the variability in the distribution of an effect size estimate was greater than what would be expected from sampling error alone. For example, if the effect sizes were found to be homogeneous (or the Q test was non-significant), it could be said that the distribution of an effect size estimate would be no greater than what would be expected from sampling error alone. However, if the effect sizes were heterogeneous (or the Q-test was significant), it would mean that the variation among the effect sizes is greater than one would expect from sampling error. A variety of descriptive study level variables in the database (i.e., source of program participants, attrition, and length of intervention) were examined to determine if they contributed to the heterogeneity of the effect size distribution.

The final step examined the relationships between effect sizes and the coded theory categories. This step allowed for a more in-depth understanding of

whether a program rooted in a specific theory of deviance was associated with high or low program effects.

Target analysis

Specifically, this final step of analysis compared mean delinquency effect sizes across theoretical indicators. Once the meta-analytic results were produced, the distribution of effect sizes was examined with regard to the corresponding theory. The magnitude of effect sizes associated with different theories was an indication that the intervention targets compatible with some theoretical indicators had higher effects while those compatible with other theoretical indicators had lower effects. The theoretical indicators associated with larger effect sizes on delinquency outcome variables implied that the causal variables hypothesized by those theories were supported and received greater validation than the theoretical constructs associated with smaller program effects.

Statistical controls were used to address variables or program characteristics (e.g., methodological measures, key study features, participant characteristics, measures of program implementation, etc.) so that the main, theoretical comparison could be properly isolated and examined. Meta-analysis regression procedures (Lipsey and Wilson, 2001) were used to determine which variables explained variance in the distribution of effect sizes. An ANOVA analog procedure was also used to examine the effect size means by theory category when accounting for all appropriate controls.

Coding

Two levels of coding occurred with this database. First, coding for theoretical constructs related to the programmatic change factors was completed by the author and is described in Stage One of the analysis. The second level of coding took place in the Juvmeta database. This coding was completed by a trained team of coders, all of whom were doctoral students in social science disciplines such as sociology and psychology or held at least a Master's Degree in a social science discipline⁷.

Coder training

The coder training for the Juvmeta database began with a coding trainee reviewing the codebook and coding a study with one of the codebook authors. The trainee then coded one or more studies independently. This process continued until the trainee reached consistency with the codebook author.

The original codebook for this database was conducted using hardcopy. However, while coders continued to utilize the paper codebooks for notes and guidance, a computerized version of the codebook, developed by David Wilson and modified by the author, was eventually used for coding studies since approximately 1994 (see Appendix A for a copy of the Juvmeta Codebook).

⁷ It should be noted that, once trained, the author coded a large set of the studies contained in the original database.

Effect size

The findings of this meta-analysis were presented in the form of effect sizes. An effect size “is a statistic that encodes the critical quantitative information from each relevant study finding (Lipsey & Wilson, 2001:3).” An effect size is useful because it standardizes the statistical findings of various studies so that they can be compared and substantively interpreted. Effect sizes allow us to understand both the direction and magnitude of a relationship, but unlike the reporting of statistical significance, they are not confounded by sample size.

Different effect size statistics are used depending on the type of study findings available in a study, how the findings are reported, and the purpose of the meta-analysis. (see Wilson and Lipsey 2001 and Cooper and Hedges, 1994). In the Juvmeta database used for this study, Lipsey and Tidd (2007) developed a set of transformation algorithms to standardize the study effect sizes in the Juvmeta database. All the effect sizes were transformed into the most common outcome measure, an arrest/no arrest dichotomy. In addition to the outcome standardization, the time to post-test was also standardized at one year.

Given the standardization of outcomes (Lipsey and Tidd 2007), the phi statistic, which is the product-moment correlation used with two dichotomous variables, was the most appropriate effect size statistic for these analyses. Phi is a more conservative estimate than the other effect size statistic candidates that could have been used on these data. Odds ratios and relative risk statistics provide an extremely large effect when recidivism base rates are high. The phi

coefficient is larger when the base rate is high, however, it does not overestimate the recidivism reduction by as much as the odds ratio and relative risk statistics, making it a more conservative and valid measure of program effect (Lipsey notes, 2007). The phi statistic was computed from the success and failure proportions for the treatment and control groups.

Descriptive variables

The Juvmeta database included descriptive variables, outcome measure variables, and effect size computation variables. The descriptive variables in this database provided items such as the study characteristics, participant characteristics, implementation features, and methodological measures (for a complete listing of these variables please see Juvmeta Codebook in Appendix A). The descriptive variables that describe the study characteristics included but were not limited to: Study type (book, journal article, thesis/dissertation, technical report, conference paper, other), year of publication, country in which study was conducted (USA, Canada, Britain, other Commonwealth/English speaking, other), and program/treatment sponsorship (demonstration program/treatment administered by researchers for one treatment cohort, program/treatment run by researcher – multiple treatment cohorts, independent “private” program with own facility staff, public program, non criminal justice sponsorship, public program, criminal justice sponsorship, cannot tell).

The Juvmeta database also included measures of participant characteristics such as the mean age of the juveniles in the program, percentage

of participants with priors, and participant risk rating. Coded variables that described the general nature of the program implementation in each study included but were not limited to: role of evaluator(s)/author(s)/research team or staff in the program (delivered treatment/therapy, involved in planning, controlling or supervising delivery treatment, influential in service setting but no direct role in delivering, planning, controlling, or supervision, independent of service setting and treatment – research role only), age of program (new or established, operating greater than two years), and intensity of treatment received.

Variables indicating the general methodology used in the study included but were not limited to: participant attrition and comparability of treatment and control groups at time of assignment. The Juvmeta database also included coded variables that described the form of comparison in each study such as the type of treatment and type of control group. Variables that describe the assignment of subjects to the treatment or control groups (randomly after matching, stratification, or blocking, randomly without matching, nonrandom but control group selected to match treatment group with match on pretest measures of some or all variables used later as outcome measures, nonrandom but control group selected to match treatment group – equated groupwise e.g. picking an intact classroom, etc.) were coded. This item was used to identify those evaluation studies with that had a randomized and quasi-random group selection.

Outcome measures

Effect sizes were generated for delinquent outcome measures in each study. Delinquency outcome measures were defined as those measures that indexed the degree of criminal or antisocial behavior. Outcome measures that qualified as delinquency included but were not limited to, self-reports of criminal activity, teacher reports of antisocial behavior (e.g., fighting), and police records. As was noted earlier in this text, Lipsey and Tidd (2007) took these outcomes a step further by creating algorithms that standardized all of the delinquency outcome measures in the Juvmeta database. This standardization essentially turned all the outcomes into the most common outcome measures, an arrest/no arrest dichotomy.

The data necessary to calculate the initial set of unstandardized effect sizes in each study were also coded with great care and detail in the Juvmeta Database. The number of subjects in each comparison group, the mean and type of mean measure used (e.g., arithmetic mean, proportion or rate, median) as well as the variance component and type of variance (e.g., standard deviation, variance, standard error, etc.) were coded in the Juvmeta database. As was stated above, different techniques were used to obtain effect size(s) from each of the studies included in the Juvmeta database. These techniques were also coded in this database, for example, means and standard deviations, t-value or F-values, chi square (assuming $df=1$), frequencies or proportions, etc. The coder's confidence in the effect size value (1-5, with 1= highly estimated and 5=no estimation) as well as the time covered by each effect size was also coded,

for example, the period of time over which the counted delinquency occurs are also coded for each effect size.

CHAPTER IV

RESULTS

The purpose of this dissertation was to examine the connection between modern theories of deviance and programs of juvenile delinquency intervention. This Chapter presents the results of the theoretical coding that was conducted to identify practical applications of prominent deviance theories. The connection between theory and primary program change factors as well as the extent to which the intervention program evaluation studies attributed their own theoretical and/or other causal construct to the program content was also examined. This was followed by a comparison between the stated theoretical attribution in the studies and the final theoretical code assigned to the study. These analyses were followed by the meta-analytic results that incorporated the additional methods, study, participant, and implementation variables found in the full Juvmeta database.

Theory Variables

Based on the eligibility criteria discussed in Chapter 3, 186 studies in the Effects of Intervention on Delinquency (Juvmeta) database were examined for this project. The studies were published between 1961 and 2002 and included programs that were implemented between 1955 and 1999. Of the studies with reported dates of program implementation, the largest percentage of studies

were implemented in the 1970s (52 or 37%). A little over 33% of the studies were funded by some combination of federal, state, and/or local governments, private foundations, nonprofits, and universities while 28% of the studies were funded solely by the federal government. State funding was the second largest sole-source funder, with 28 studies or 15% of the studies funded by the state or province in which the program was implemented.

In terms of the theory codes that were developed and applied through a multi-phase inductive coding process discussed in Chapter 3, nine modern deviance theories were represented among the 186 studies (see Table 5). Of the 186 studies included in this analysis, social bond proved to be the theory of deviance most commonly associated with the program change factors. Bond accounted for the causal assumption in a little over 31% (58) of the studies. Merton's strain⁸ and differential association accounted for 19% (36) and 17% (32) of the studies, respectively. Nine percent (16) of the studies represented social learning theory and almost 9% (16) of the studies represented deterrence theory. Labeling theory was the next lowest, with 6% (11), followed by reintegration at 5% (9) and self-control at approximately 2% (3). Of all the theories represented, subculture showed the least representation, with only one study. Four studies represented purely psychological causality (focusing exclusively on internal mechanisms) and could not be coded with a modern deviance theory. The primary program components that were actually delivered to the participants

⁸ The term "Merton's strain" is used to differentiate Robert K. Merton's version of strain theory from that of Robert Agnew.

consisted of individual interview therapy sessions in which the principles of psychotherapy were exclusively utilized.

Table 5. Frequencies – Deviance Theories

THEORIES		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	deterrence	16	8.6	8.6	8.6
	diff assn	32	17.2	17.2	25.8
	labeling	11	5.9	5.9	31.7
	Merton strain	36	19.4	19.4	51.1
	Internal mechanisms	4	2.2	2.2	53.2
	reintegration	9	4.8	4.8	58.1
	self-control	3	1.6	1.6	59.7
	social learning theory	16	8.6	8.6	68.3
	social bond	58	31.2	31.2	99.5
	subculture	1	.5	.5	100.0
	Total	186	100.0	100.0	

Theory Fit

Theory “fit” was also coded for each of the studies. After the studies were grouped by theory code and evaluated for conceptual consistency, it was clear that the programs varied in their level of theoretical representation. For example, a group of programs share a key causal assumption: to decrease delinquent behavior, the participant needs to re-learn nondelinquent responses through both group process and reinforcement. Because these programs all include programmatic components such as group process (imitation, normative reaction) and reinforcement/conditioning they point to social learning theory. However, there may have been inconsistency in the level of delivery. Some programs in this group may have a weak group process component, a strong reinforcement

component, and include removal from delinquent peers, with an incorporation of family/school as a prominent control factor. Others may not remove participants from delinquent peers but incorporate strong reinforcement and group process components. These examples show different degrees of theoretical application strength. As a result, a code was added to the coding scheme that allowed for the measurement of theory to application strength based on a theory fit matrix (see Table 6) developed by the author.

Table 6. Theory Fit Matrix

Theories*	Good	Moderate	Weak
Cultural Conflict	removal from del peers + increase self concept/esteem + conflict resolution + exposure to conventional values	increase self concept/esteem + conflict resolution + exposure to conventional values	increase self concept/esteem + weak or negligible conflict resolution + exposure to conventional values
Deterrence	specific + well executed general (certainty, severity, & swiftness)	Specific deterrence with no additional emphasis on educating kid abt Certainty/swiftness/severity aside from what is conveyed through specific deterrence itself.	An attempt at general targeting the kid's knowledge/understanding of: certainty, severity, and/or swiftness of punishment
Differential Assn	grp process + removal from del peers + exposure to conventional values/beliefs	grp process + exposure to conventional values/beliefs	weak or negligible grp process + exposure to conventional values/beliefs
Labeling	full nonintervention	only minimal non cj contact (gov't/nonprofit social services - court ordered)	any amount of cj contact and/or high level of non cj (govt/nonprofit social services - ct ordered) contact
Merton's Strain	Increase opportunities for status attainment through skills training and job placement/experience + focus on defining aspirations/goals (e.g., job counseling)	Increase opportunities for status attainment through skills training and job placement/experience	Increase opportunities through education/GED attainment; opportunity awareness without follow up assistance

* includes those theories "left" after last inductive analysis. Some theory categories were subsumed under other theories and others were not viable coding options due to eligibility criteria. Additionally, some theories were not represented by a program within the Juvmeta database.

Table 6. Theory Fit Matrix

Theories*	Good	Moderate	Weak
Reintegration	restitution and/or connection to victim + community involvement (not primarily the CJ system) + community support/resources for kid (NOT just involving community in punishment/restitution process - assisting kid back into community)	weak or negligible restitution and/or connection to victim + community involvement (not primarily the CJ system) + community support/resources for kid (NOT just involving community in punishment/restitution process - assisting kid back into community)	weak to negligible community involvement (not primarily the CJ system) + restitution type component
Self Control	strong impulse control + strong family/parenting component	strong impulse control + moderate to weak family/parenting component	moderate impulse control component + absent or negligible family/parenting component
Social Bond	emphasis on attachment to prosocial others; family bonds/integrity - some incorporation of family; commitment to conventional goals thru school/trad achievement; can have very strong family/kid attachment component with weak c,b,l components.	no family bond component but retains attachment to prosocial others and a focus on school achievement	no attachment component - e.g., conventional goals thru school only or social skills training to assist kid with social interaction; may have weak, indirect family component
Social Learning	grp process + reinforcement (social and nonsocial reinforcers) + removal from del peers and/or family/school as control factor incorporated	grp process + strong reinforcement component	weak or negligible grp process + reinforcement component
Internal Mechanisms (Psych only)	individual, interview therapy - no details given beyond this		

* includes those theories "left" after last inductive analysis. Some theory categories were subsumed under other theories and others were not viable coding options due to eligibility criteria. Additionally, some theories were not represented by a program within the Juvmeta database.

Each of the theories represented by programs in the Juvmeta database was assigned a theory fit code to quantify theory to application strength. Merton's strain showed the highest overall fit or strength. Approximately 92% of the programs coded in this theoretical category showed a good theory to application

fit. Of the programs representing differential association causal constructs, approximately 72% of the studies were coded as good and 28% as a moderate application of the theory. Of the 9 studies considered to be demonstrations of reintegration theory, 5 (56%) were good, 3 (33%) were moderate, and 1 was a weak application of the theory. Fifty percent (29) of the applications of social bond theory were good while the other 50% of the programs in this theoretical category were considered moderate (12 or 21%) or weak (17 or 29%). The majority (73%) of labeling programs were moderate in application strength, with only 18% of the studies showing good strength and one study showing weak application strength. Other theories such as deterrence and subculture had no programs considered to be strong theoretical applications. Deterrence showed only moderate (63%) and weak (38%) programs while the one program that was best represented subculture theory was coded as weak.

Theory Match

The studies were also assessed for the presence or absence of a discussion of criminal or delinquent causality. The notion of some causal aspect of deviance was either directly or indirectly linked to the program design in 55% (103) of the 186 studies examined. Of the 103 studies that included some causal attribution, 33% (34) presented a single, specifically named theory, 19% (20) discussed specific theoretical constructs, but named multiple theories, and 48% (49) mentioned criminal or delinquent causality in only a general sense and did

not cite a specific theoretical construct. The majority (82%) of the latter group of studies cited one key causal element while 18% listed a series of casual factors.

The most common theory attributed to program design, when a specific theory was cited, was labeling theory. Other theories noted in more than one study were Merton's strain, reintegration, deterrence, social ecological theory, and differential association theories. It was no surprise that 80% of the 20 studies that presented a laundry list of deviance theories included the theory that was best represented by the program components. However it should be noted that four of the studies that cited a long list of modern theories related to program components still did not include the one theory that the program best represented.

The 34 Juvmeta studies that presented a single named theoretical construct were then compared to the theoretical codes assigned to them during the multi-phase inductive coding process. The theory code indicated by the program components that were delivered to the participants matched the theory attributed to the program design in 47% (16) of the studies. The remaining 53% (18) of the studies attributed a specific theoretical construct to the program design but the program either failed to represent the named theory or the theory named was not a modern theory of deviance. In one study, labeling theory was cited as the causal construct behind the program design. While the program was seen by the author as an intermediate sanction, which, depending on design may decrease stigma and the probability of secondary deviance, the focus of the program was not minimal intervention. The participants were not treated as

victims of social structure and nonintervention was not the main programmatic goal. The primary thrust of the program, as delivered, was to re-create a prosocial family in a foster care environment. Houseparents and assistants worked to enhance attachments of kids to themselves as well as other prosocial adults outside the residence. The participants received assistance with school which contributed to building belief and commitment to prosocial norms. Participants were also encouraged to engage in after-school activities to further promote prosocial involvement. Based on this information, it is clear that the program components represented social bond theory as opposed to labeling.

Correlations

Using the year of program implementation and publication year variables, theory variables were examined for consistency across time. Relationships were also examined among the theory variables to determine if there were any significant relationships. Due to the nature of the variables, these analyses were conducted using cross tabulations and correlations. Eta statistics were used for the tests involving nominal and integral variables, while Cramer's V was used for the tests on two ordinal variables. Both measures of association range from 0 to 1, with 0 indicating no association and 1 indicating a high degree of association.

The relationships between the nominal-level theory category variable and the two time-period variables, year of program implementation and year of publication, were analyzed using the Eta statistic. Using implementation year as a dependent variable, a moderate Eta of .412 was generated and for publication

year and theory category, a slightly higher Eta of .457 was generated. These findings consistently indicated an association between time of program and the theory associated with the key change factors of the program. For example, the majority (82%) of the labeling programs were implemented in the early to mid 1970s and most were published in the late 1970s and early 1980s. This is not surprising because the primary labeling implementation period coincides with an increased social and political interest in labeling theory and its related applications such as deinstitutionalization and reduction of stigma, especially with regard to juveniles.

On the other hand, a cross tabulation of theory attribution and year of implementation using the Eta statistic revealed a weak association (Eta= .221) with the interval variable, year of implementation, treated as a dependant variable. The relationship between theoretical attribution and year of publication showed a similarly weak association, with an Eta of .264. These relationships indicated that the mention of some causal attribution is not more common in today's literature than it was decades ago despite efforts to increase the rigor of peer review, publishing, and grant requirements; the connection between delinquent or criminal causality and program change factors has not increased.

The relationship between the theory variable and the specific attribution variable was also examined to determine if programs related to certain theories were associated with the instance of an author's specific theory attribution. The Cramer's V statistic for this correlation was significant but at .366, indicated a weak association between the event of an author's causal attribution and the

theory associated with a program. The relationship between the strength or theory fit variable and theory was then examined to determine if programs related to certain theories showed a pattern of application strength or weakness. The Cramer's V statistic in this case was slightly higher at .475 and was also significant. The size of the correlation indicated a moderate level of association between the theory variable and the quality of the theoretical application. These results indicated that in this set of studies examined, the nine theories were differentially associated with a higher quality of application.

Table 7. Juvmeta Study Characteristics

Variable Name	N	%
Country in which study was conducted		
USA	170	92%
Canada	8	4%
UK	4	2%
Other English Speaking	3	2%
Publication Type		
Book	10	5%
Journal Article/Book Chapter	69	37%
Thesis/Dissertation	17	9%
Technical Report	84	45%
Conference Paper	6	3%
Year of Publication		
1960-1970	26	14%
1971-1980	59	32%
1981-1990	56	30%
1991-2000	40	22%
2001+	4	2%
Discipline of Senior Author		
Sociology	17	11%
Psychology	53	35%
Education	13	9%
Criminal Justice	32	21%
Social Work	7	5%
Psychiatry-Medicine	5	3%
Other	25	16%

Table 7, continued

Program Sponsorship		
Demonstration Project, One Treatment Cohort	59	32%
Demonstration Project, Multi Treatment Cohorts	26	14%
Independent, Private Program	11	6%
Public Program, Non Juvenile Justice	27	15%
Public Program, Juvenile Justice	63	34%
Mean Age of Participants		
11-13 yrs	16	9%
14-16 yrs	109	59%
17-19 yrs	42	23%
19-21 yrs	19	10%
Percent Male Participants		
No Males (>95% Female)	2	1%
Some Males (<50%)	20	11%
Mostly Males (= or >50%)	75	43%
All Males	78	45%
Predominant Ethnicity		
Caucasian	58	38%
Black	38	25%
Hispanic	11	7%
Mixed, None >60%	46	30%
Risk Rating of Participants		
Nondelinquent, symptomatic	8	4%
Mixed, Lowend, (Nondelinquent and Predelinquent)	18	10%
Predelinquent	21	11%
Delinquent	86	46%
Mixed, Highend	10	5%
Institutional, Juvenile Justice system	32	17%
Mixed, Full Range	10	5%
Source of Participants		
Sought Treatment Voluntarily	7	4%
Referred by Non-Juvenile Justice Agency	13	7%
Referred by Juvenile Justice Agency, but Voluntary	61	33%
Referred by Juvenile Justice Agency, Mandatory	73	39%
Referred, Multiple Sources	8	4%
Solicited by Researcher	24	13%
Percent of Participants with Prior Offenses		
None	2	1%
Some (<50%)	57	33%
Most (= or >50%)	24	14%
All (>95%)	92	53%
Treatment Administrator		
Juvenile Justice Personnel	34	19%
Mental Health Personnel	41	23%
Other Professional	101	57%

Table 7, continued

Evidence of Implementation Problems		
Yes	91	51%
Possible	23	13%
No	66	37%
Program Age at Time of Research		
Relatively New (<2yrs)	132	72%
Established Program (= or >2yrs)	50	27%
Defunct Program, Evaluated post hoc	1	1%
Role of Evaluator/Author		
Evaluator Delivered Therapy/Treatment	11	6%
Evaluator Involved in Planning/Delivery	63	36%
Evaluator Influential, but No Direct Role	35	20%
Evaluator Independent of Service Setting, Research Role Only	65	37%
Frequency of Treatment/Contact		
Continuous	9	6%
Daily Contact	53	34%
2-4 Times/Week	22	14%
1-2 Times/Week	58	37%
Less Than Weekly	15	10%
Length of Treatment (in weeks)		
< or = 12 weeks	45	26%
12 to 18 weeks	37	21%
19 to 26 weeks	42	24%
27 to 40 weeks	26	15%
Greater than 41 weeks	26	15%
Intensity of Treatment		
Weak	23	13%
Weak – Moderate	46	25%
Moderate	56	31%
Moderate – Strong	28	15%
Strong	28	15%
Percent Attrition from Post-Test		
0%	85	48%
1% - 5%	19	11%
6% - 15%	26	15%
16% - 30%	25	14%
>31%	22	12%
Overall Similarity of Treatment and Control Groups		
Very Similar	92	49%
Similar	37	20%
Somewhat Similar	35	19%
Moderately Similar	12	6%
Somewhat Different	8	4%
Different	1	1%
Very Different	1	1%

Table 7, continued

Overall Confidence in Group Similarity		
Very Low	3	2%
Low	10	5%
Moderate	46	25%
High	85	46%
Very High	42	23%
Comparison of Characteristics of Treatment and Control Groups		
No Comparisons Made	33	20%
No Significant Differences	59	35%
Significant Differences, Unimportant	25	15%
Significant Differences, Uncertain	18	11%
Significant Differences, Important	8	5%
Negligible Differences	17	10%
Some Differences, Uncertain	5	3%
Some Differences, Important	4	2%
Type of Design		
Randomly After Matching	23	12%
Randomly Without Matching	149	80%
Regression Discontinuity	2	1%
Wait-List Control	12	6%

Juvmeta Variables

Study Characteristics

Turning to the items coded in the Effects of Intervention on Delinquency database (Juvmeta database), key characteristics of the 186 studies included in this meta-analysis are displayed in Table 7. While program evaluation studies from all English speaking countries were eligible for the Juvmeta database, most (92%) of the studies included in this analysis reflect programs that were implemented in the United States. Additionally, the studies tended to be either journal articles and book chapters (37%) or technical reports (45%). Eighty-four percent of the studies were published between 1971 and 2000, with 14% of the studies published in the 1960s and only 4% published in or after 2001.

In terms of the discipline of the senior author or evaluator, over half (56%) were in the field of psychology or criminal justice. A little over one-third of the studies were public, juvenile justice programs (34%) and another third were demonstration projects with only one treatment cohort (32%).

Participant Characteristics

In well over half, or 59%, of the study samples, participants fell between 14 and 16 years of age and in 88% of the study samples program participants were mostly (> 95%) or all male. Juvenile participants were Caucasian in 38% of the study samples, 25% of the samples were Black, and only 7% were of Hispanic origin while 30% of the study samples were made up of a mixed group of juveniles, with no one racial category making up greater than 60% of the treatment group.

Almost half of the study samples included delinquents (46%) and in 72% of the study samples, juveniles were referred to the program by the juvenile justice system. It should be noted, however, not all the juvenile justice referrals

Implementation

Well over half of the treatment administrators in this set of studies fell into the other professional category (57%) as opposed to juvenile justice (19%) or mental health (23%) professional administrators and the great majority of the programs had been in place for less than two years (72%) before the evaluation was conducted. The evaluator or author had an independent research role in

only 37% of the studies in this meta-analysis while an almost equal percentage (36%) of evaluators or authors were involved in the planning and delivery of treatment. Half of the studies displayed implementation problems (51%), 37% showed evidence of implementation problems, and the remaining studies (13%) were coded as having possible implementation problems based on the information provided in the study. 56% of the studies were coded as having a moderate or weak to moderate treatment intensity level and frequency of contact was most commonly daily (34%) or one to two times per week (37%).

With regard to treatment length, 71% of the programs lasted less than 27 weeks from first to last treatment event. Twenty-six percent of the programs lasted for less than twelve weeks and 21% while only 15% of the programs lasted for a period of 41 weeks or longer. Almost half (48%) of the studies showed no attrition from post-test and 49% of the initial similarity of the treatment and control groups were coded as “very similar”. Likewise, 69% of the coded studies reported a high or very high confidence in overall treatment and control group similarity. Twenty percent of the studies did not include pre-test comparisons between treatment and control groups, however, of the 136 studies that did make these comparisons, 56% were found to have no significant or only negligible differences. Finally, this meta-analysis only included studies with a random or quasi-random design. For the vast majority of studies (80%) treatment and control group selection was done randomly without matching, while 12% of the studies assigned juveniles to groups randomly after matching and 7% utilized a regression discontinuity method or wait-list control.

Effect Size

As was mentioned in chapter 3, Lipsey and Tidd (2007) developed a set of transformation algorithms to standardize the study effect sizes in the Juvmeta database. As a result, all the effect sizes were transformed into the most common outcome measure, an arrest/no arrest dichotomy. Due to this standardization of outcomes, the phi statistic was chosen as the most appropriate effect size statistic for these analyses. The phi statistic was computed from the success and failure proportions for the treatment and control groups.

Because product-moment correlation coefficients such as the phi statistic present a problematic formulation of standard error, the correlations were transformed with the application of a Fisher's Z transformation (Hedges and Olkin, 1985; Lipsey and Wilson, 2001). An additional correction regarding sample size was applied to the data before any analyses were conducted. The studies included in this meta-analysis represented a variety of sample sizes, which could distort results if not handled properly because the components of an effect size are sensitive to the size of a study sample. According to Lipsey and Wilson (2001), "an effect size based on a large sample contains less sampling error and, hence, is a more precise and reliable estimate than an effect size based on a small sample (106)." Due to the impact of sample size, effect sizes must be weighted to produce valid meta-analytic results. The weight, often referred to as inverse variance weight, allows the effect sizes based on larger samples to be weighted more than those from smaller sample sizes thereby giving weight to an

effect size proportionate to its sampling error and reliability. The inverse variance weight is the equivalent of the inverse of the squared standard error value. An inverse variance weight of $N-3$ (where N is the total sample size) was used in all meta-analysis computation used in this analysis.

Data Preparation

It is impossible to code certain items on some of the studies included in any meta-analysis (Lipsey and Wilson, 2001). Typical of many qualitative and meta-analytic databases, values needed to be imputed for several of the variables in the Juvmeta database. Values were not imputed for any variables with greater than 20% of the values missing but for those variables with a lower percentage of missing values, values were imputed using a Maximum Likelihood technique. Imputation was additionally necessary as the meta-analysis procedures such as the modified weighted regression used for meta-analysis, which will be described later in this chapter, is not capable of handling missing data.

There are, of course, many methods of imputing values, however, the method receiving the most support for use with meta-analysis is maximum likelihood estimation (Pigott, 2001). In this model, missing values for all the relevant variables are replaced using the expectation-maximization (EM) algorithm. The inverse variance weight was applied to the EM algorithm, corresponding to the meta-analysis weights.

Additional data preparation was conducted on select Juvmeta variables. A small number of extreme values of the inverse variance weight and percent attrition variable were winsorized so as not to distort the analysis. The total weeks of treatment variable was logged because its distribution showed a long tail. The winsorized and logged versions of these variables were used in all of the analysis.

Effect Size Mean and Distribution

Using computation techniques outlined in Lipsey and Wilson (2001), the mean effect size, confidence interval and Q-value were calculated. To determine if the weighted mean effect size was homogeneous, or if the effect sizes that made up the mean effect size all estimated the same population effect size, a Q-statistic was generated. The Q-value was equal to 569.67 with 185 degrees of freedom. Based on a chi-square distribution, the Q-value was significant, meaning that the null hypothesis of homogeneity was rejected at $p = .05$ and the variance of the 186 effect sizes was greater would be expected from sampling error alone. Due to the significant Q-value, or apparent heterogeneity of effect sizes, a random effects model was used for subsequent meta-analytic procedures. This analytic approach applied a random effects variance component to estimates of the mean effect size and inverse variance weight. The random effects model assumed the variability beyond sampling error was due to random differences between studies. This approach also assumed that these

differences cannot be modeled, hence the incorporation of a random effect variance component.

The random effects mean effect size for all 186 studies was .032. The z-test value for the random effects mean effect size exceeded the critical value at $p = .05$, indicating the mean effect size for the 186 program evaluation studies was statistically significant and therefore significantly different from zero ($z = 3.22$, $p < .01$). Correspondingly, the 95% confidence interval around the weighted mean effect size did not include zero. While an effect size of .032 indicates a very small program effect, it was significant and positive, meaning that the programs in this set of studies had an overall positive effect (measured as no arrest or re-arrest) on the treatment groups relative to the control groups. In essence, the programs had some program effect that contributed to decreased delinquent or criminal behavior for treated delinquents.

ANOVA Analog

To assess the mean effect size of the studies associated with each deviance theory, an analog to the ANOVA was used (Lipsey and Wilson, 2001). Because the ANOVA analog procedure uses the N of the full sample, it is more powerful than if the mean effect size procedure was used to test each theory group individually using the smaller group Ns. This procedure tested the ability of the theory variable to explain effect size variability beyond sampling error by effectively portioning out the variability explained by the theory variable. The Q_B , or the measure of variability between group means, for the theory variable was

significant ($Q_B=16.22$, $df=8$, $p<.05$), meaning that the group means differed by more than would be expected from sampling error alone. Therefore, the effect sizes across theories showed a statistically significant difference between groups or theory categories. The Q_W , or the statistic representing the pooled within group variance, was not significant at $p <.05$ ($Q_W=202.11$, $df=177$, $p>.05$). This result indicated homogeneous residual variability and showed that the random effects model performed as it should, by accounting for excess variability in the model. Based on the significant Q_B , it was concluded that theory variable accounted for the excess variability in the distribution of effect sizes.

The mean effect sizes generated by the ANOVA analog procedure showed that two of the nine theory categories were significant (see Table 8) and accounted for a significant portion of effect size variance. The mean effect size for studies in the social bond theory category was .043 and was significant at $p<.05$ ($z= 2.36$). The mean effect size for the studies coded as social learning theory programs was considerably higher, at .149 and was significant at $p<.001$ ($z= 4.11$). Both of these significant mean effect sizes were higher than the mean effect size for the entire sample of 186 studies which was .032. For validation purposes, the mean effect size computation techniques outlined in Lipsey and Wilson (2001) were also calculated for each theory category. The procedure produced the same results as the ANOVA analog.

The significant Q-test of heterogeneity of the mean effect size of the full sample and significant mean effect sizes of the social bond and social learning theory groups seen in the ANOVA analog indicated that there may be

some descriptive or theoretical effect that should be further investigated through a modified random effects weighted regression model.

Table 8. Mean Effect Sizes by Theory Category

Theory Group	Mean Effect Size
Social Bond	0.043 *
Differential Association	0.008
Social Learning Theory	0.149 ***
Self Control	0.160
Deterrence	0.000
Labeling	0.036
Merton Strain	0.000
Reintegration	0.040
Internal Mech (Psych)	0.052

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

Modified Weighted Regression

The modified weighted regression is a commonly used tool in meta-analysis and like a weighted least squares regression used with non-meta-analytic data, it can assess the relationship between a dependant variable and/or several independent variables. The modified weighted regression model used in meta-analysis however, adjusts the standard errors used to compute statistical significance for meta-analytic data (Lipsey and Wilson, 2001).

Program effect sizes can be greatly influenced by the methodological characteristics of the evaluation studies themselves. The first step in determining the variables to be included in the modified weighted regression model was to identify the method control variable(s). Zero-order correlations between key

methodological study characteristics coded in the Juvmeta database were examined (see Table 9). Study design was included as it is often a key control variable when analyzing program effects. However, due to the eligibility criteria restriction that included only randomized or quasi-randomized designs, this variable did not include salient variation between randomized and non-randomized designs. In its truncated form, the design variable was not significantly correlated with effect size. Similarly, two method variables that are also commonly included as controls in meta-analysis to determine if they act as method confounds, type of recidivism and recidivism interval, were not included in this analysis due to Lipsey and Tidd's (2007) effect size transformations of the Juvmeta data. As was discussed earlier, the transformations standardized all effect sizes to an arrest dichotomy and to a one-year recidivism interval.

Table 9. Correlations Between Effect Size and Method Variables

Method Variable	Correlation	p-value
Design	0.05	0.49
Percent Attrition (winsorized)	-0.11	0.14
Group Equivalence (composite)	0.07	0.32

Other methodological variables that were not already accounted for were examined as potential control variables, such as percent attrition (percent of initial sample size on which the final effect size is based) and treatment and control group similarity. The Juvmeta database includes several variables that measure initial treatment and control group similarity such as overall confidence regarding group similarity, comparison of characteristics of treatment and control

groups, and an overall group similarity rating. These variables were combined into a single principle components factor called group equivalence. This factor had relatively strong intercorrelations and taken as a composite, was a more effective control for initial group equivalence than any of the individual variables contained within the factor. None of the method variables tested showed a significant relationship with effect size, however a conservative approach was taken to avoid any potential methodological confounds and percent attrition and group equivalence were included as controls in all subsequent analyses.

A modified ordinary least squares inverse variance weighted regression that controlled for percent attrition and initial group equivalence was then used to individually tease out the relationship between the dependant variable, study effect size, and each of the study level features such as study, participant, and program implementation characteristics.

In meta-analysis, it is commonly assumed that if method variables are controlled the program effect, or effect size, is a function of study, participant, and program characteristics. While the treatment type measures will be dealt with later in this chapter in the form of the theoretical causality associated with the program as delivered, independent variables representing study characteristics, participant characteristics, and program implementation features were entered into modified weighted regression models. Relevant measures were included if less than 20% of the values were missing.

An individual regression model was run for each of the descriptive variables with only the method control variables. This series of regression models

was used to identify potential relationships between each descriptive variable and effect size, regardless of the independent variable's relationship to the other descriptive variables. To allow for an even comparison of independent variables, the standardized regression coefficients, or betas, were used for purposes of interpretation. This step in the analysis isolated and examined the unique contribution of each independent variable to explaining effect size variance. Fixed effects models assume that study level variability or between study variation is either zero or attributable to independent variables. Due to the nature of this analysis, a fixed effects, rather than a random effects model was implemented. Table 10 shows the beta and p-value for each of the independent variable models controlling for the methods variables. For ease of analysis, the descriptive variables were organized into three groups: general study characteristics, participant characteristics, and implementation features. Only two of the five variables in the study characteristics set were significant, publication type and publication year. Publication year showed a significant positive relationship ($\beta=.185$, $p<.001$), with book chapters and journal articles being more highly associated with higher effect sizes. Publication year showed a negative significant relationship with effect size ($\beta= -.190$, $p<.001$), indicating that more current studies produced lower effect sizes than previous evaluation literature. The remaining variables in this set: country of program, senior author's discipline, and program sponsorship did not have a significant relationship with effect size.

In terms of participant characteristics, four of the six variables in this set proved to be significant. Mean age of the participants at the time of treatment and percentage of males in the treatment group showed no significant relationship with study effect size. However, ethnicity, coded as (1=nonminority, 2=minority or mixed population) had a negative relationship with effect size (beta= $-.307$, $p < .001$) which indicated that programs with nonminority participants tended to have higher effect sizes than those with minority or mixed (minority and nonminority) participants. Source of the study participants also had a significant negative relationship (beta= $-.171$, $p < .001$) with study effect size, with mandatory participation ordered by a juvenile justice authority producing higher effect sizes than voluntary participants and those with a non-juvenile justice referral. Participant risk rating and percent of subjects with officially recorded priors were positively and significantly related to effect size (beta= $.222$, $p < .001$ and beta= $.309$, $p < .001$). As risk rate and percentage of participants with priors increased, so did study effect sizes. Seven measures of program implementation were also examined. All showed significant relationships with effect size. Treatment administrator was recoded into three dummy variables: juvenile justice, mental health, and other professional. Juvenile justice professional was omitted from the model and other professional was found to be significant while mental health professional was not significant. Based on these results, program administration by juvenile justice professionals should not be considered significantly different from administration by mental health professionals, while interventions administered by other professionals such as school personnel appear to have a

Table 10. Fixed Effects Modified Inverse Variance Weighted Regression

Independent Variables	Beta with % Attrition & Group Equiv Composite Controls	p	Sig/NS
Study Characteristics			
Country (1= USA, 2= Canada, UK, or other English speaking)	0.042	0.325	NS
Publication Type (1= Report/Thesis, 2=Book Chapter/Journal Article)	0.185	0.000	***
Publication Year (1961 - 2002)	-0.190	0.000	***
Senior Author Discipline (1= Sociology and CJ, 2=other discipline)	0.029	0.501	NS
Sponsorship (1= Demonstration, 0= Other)	0.036	0.413	NS
Participant Characteristics			
Age (11 - 21 yrs)	-0.038	0.377	NS
% Male (no males - all males)	-0.069	0.098	NS
Ethnicity (1= NonMinority, 2= Minority or Mixed pop)	-0.307	0.000	***
Risk Rating (1= nondelinquent, normal - 9= institutional, JJ)	0.222	0.000	***
Source of Participants (1= Mandatory (JJ), 2= Voluntary or other ref)	-0.171	0.000	***
% with Priors (None - all)	0.309	0.000	***
Implementation			
Treatment Administrator (1= JJ) - omitted			
Treatment Administrator (1= MH)	0.062	0.158	NS
Treatment Administrator (1= Other Professional)	-0.311	0.000	***
Evidence of Implementation Problems (1= No, 2= Possible, 3= Yes)	-0.263	0.000	***
Age of Program (1= Less than 2 yrs, 2= established, > 2yrs)	0.141	0.001	***
Role of Evaluator/Author (1= Direct Involvement - delivered, planed trt, 2= No direct Involvement)	-0.186	0.000	***
Frequency of Treatment Contact (less than weekly - continuous)	-0.115	0.007	**
Total Weeks of Treatment (logged)	-0.144	0.001	***
Intensity of Treatment (weak - strong)	0.103	0.015	*

Dependent variable = Effect Size

P < .001	***
P < .01	**
P < .05	*

significantly different impact on the administration of the intervention program. A program administered by other professionals showed a negative relationship with effect size relative to programs administered by juvenile justice professionals (beta= $-.311$, $p < .001$). Age of program was found to be positively and significantly related to effect size (beta= $.141$, $p < .001$), indicating that more established programs tended to produce higher effect sizes. Intensity of treatment, which was rated by coders from weak to strong based on the typical program event, showed a significant and positive relationship (beta= $.1028$, $p < .05$) with study effect size.

The remainder of the implementation variables were negatively related to effect size. Evidence of implementation was coded as 1=no, 2=possible, 3=yes and its significant relationship with effect size denoted that implementation problems were associated with decreased program effect. The role of the evaluator or author was coded in this analysis as 1= direct involvement, 2=no direct involvement and showed a significant negative relationship with effect size (beta= $-.186$, $p < .001$). Based on this result, it appeared that higher program effects were associated with the evaluator or author's direct involvement in the intervention program. Two dosage measures were also included in this set of independent variables as well. The frequency of treatment contact, measured as an ordinal variable that ranged from less than weekly to continuous contact with a program participant, revealed a negative significant relationship with effect size (beta= $-.115$, $p < .01$) as did the total weeks of treatment variable (measured from

the first to the last treatment event) ($\beta = -.144, p < .001$). For the latter two variables, program effect actually decreased as dosage increased.

Each of the explanatory independent variable groups were then examined for potential within set correlations. Zero order correlations were reviewed for each variable group and while some variables were significantly correlated, none of the correlation coefficients was greater than 0.3. As a result, no composite or factor variables were created and the independent variables were included intact in subsequent modified weighted regression models.

Random Effects Regression

In the next step of analysis, a random effects modified weighted regression model was run with effect size as the dependant variable and all of the independent variables including study, participant, and implementation characteristics as well as the method variables, attrition and initial group equivalence. The Q statistic for this model was significant at 80.03 with $df=21$ ($p < .001$) indicating that the model explained a significant amount of variability in effect size distribution. Table 11 presents the regression coefficients and p-values generated from this modified weighted regression model.

With all of the variables in the model, neither the method or group equivalence variable were significantly related to effect size. Three of the general study characteristics variables were significantly and positively related to effect size. Country of program, coded as 1= USA, 2=Canada/other English speaking nation was not significantly related to effect size in the model that

Table 11. Random Effects
Modified Inverse Variance Weighted Regression

Independent Variables	b	z	P	Beta
Method/Design Characteristics				
% Attrition	-0.015	-0.215	0.830	-0.016
Group Equivalence Factor	-0.001	-0.108	0.914	-0.008
Study Characteristics				
Country (1= USA, 2= Canada, UK, or other English speaking)	-0.072	-1.969	0.049	-0.140
Publication Type (1= Report/Thesis, 2=Book Chapter/Journal Article)	0.058	2.641	0.008	0.196
Publication Year	-0.003	-2.173	0.030	-0.173
Senior Author Discipline (1= Sociology and CJ, 2=other discipline)	0.030	1.321	0.188	0.103
Sponsorship (1= Demonstration, 0= Other)	0.047	1.809	0.071	0.163
Participant Characteristics				
Age	-0.000	-0.028	0.978	-0.002
% Male	-0.021	-1.345	0.179	-0.105
Ethnicity (1= NonMinority, 2= Minority or Mixed pop)	-0.061	-2.681	0.007	-0.204
Risk Rating	0.000	0.063	0.950	0.005
Source of Participants (1= Mandatory (JJ), 2= Voluntary or other ref)	0.012	0.513	0.608	0.040
% with Priors	0.033	2.652	0.008	0.222
Implementation				
Mental Health Treatment Administrator (JJ omitted)	-0.021	-0.856	0.392	-0.060
Other Professional Treatment Administrator (JJ omitted)	-0.059	-2.162	0.031	-0.167
Evidence of Implementation Problems (1= No, 2= Possible, 3= Yes)				
Age of Program (1= Less than 2 yrs, 2= established, > 2yrs)	-0.031	-2.655	0.008	-0.197
Role of Evaluator/Author (1= Direct Involvement - delivered, planed trt, 2= No direct Involvement)	0.017	0.647	0.518	0.055
Frequency of Treatment Contact	0.005	0.192	0.848	0.015
Total Weeks of Treatment (logged)	0.003	0.276	0.783	0.023
Intensity of Treatment	0.008	0.794	0.427	0.054
	-0.001	-0.059	0.953	-0.004

Model Q = 80.026, df=21, p=.000

included only this variable and the method controls but in the full model became significant at $p < .05$ ($b = -.072$). Publication type and publication year were both significantly related to effect size, with publication type being positively related and publication year being negatively related ($b = .058$, $p < .01$ and $b = -.003$, $p < .05$).

These results mirror the variables' relationship with effect size in the individual regression models with method controls presented in Table 10.

In the set of participant characteristics variables, predominant ethnicity of the treatment juveniles was significant and negatively related to effect size ($b = -.061$, $p < .01$) in the full model as it was in the individual model with method controls. Additionally, percent of subjects with priors was positively and significantly related to effect size ($b = .033$, $p < .01$) in the full model with all the independent variables. Two variables within the program implementation variable group remained significant and showed the same direction of relationship in the full model as they did in the individual model with method controls. Evidence of implementation problems was significant and negatively related to effect size ($b = -.031$, $p < .01$), while the category representing other professional program administrators was significantly and negatively related to effect size ($b = -.059$, $p < .05$) relative to juvenile justice program administrators.

Another random effects modified weighted regression model was then run with effect size as the dependant variable and all of the independent variables including study, participant, and implementation characteristics as well as the method variables. However, in this model the theory variables were included (see Table 12). The theory variables were recoded as a set of dummy variables, with the psychological/internal mechanisms, non-social theory category omitted. The model Q statistic for this model was significant at 96.45 with $df = 29$ ($p < .001$) indicating that the model explained a significant amount of effect size variability.

Table 12. Random Effects Modified Inverse Variance Weighted Regression with Theory Variable

Independent Variables	b	z	p	Beta
Method/Design Characteristics				
% Attrition	-0.051	-0.716	0.474	-0.052
Group Equivalence Factor	-0.006	-0.445	0.656	-0.036
Study Characteristics				
Country	-0.083	-2.271	0.023	-0.163
Publication Type	0.061	2.632	0.009	0.204
Publication Year	-0.003	-2.565	0.010	-0.217
Senior Author Discipline	0.023	0.988	0.323	0.077
Sponsorship	0.042	1.589	0.112	0.145
Participant Characteristics				
Age	0.001	0.188	0.851	0.016
% Male	-0.022	-1.375	0.169	-0.109
Ethnicity	-0.070	-2.896	0.004	-0.233
Risk Rating	0.006	0.890	0.374	0.076
Source of Participants	0.007	0.281	0.779	0.022
% with Priors	0.034	2.739	0.006	0.234
Implementation				
Mental Health Treatment Administrator	-0.016	-0.587	0.557	-0.045
Other Professional Treatment Administrator	-0.055	-2.015	0.044	-0.156
Evidence of Implementation Problems	-0.032	-2.610	0.009	-0.203
Age of Program	0.008	0.293	0.769	0.026
Role of Evaluator/Author	0.028	1.111	0.267	0.096
Frequency of Treatment Contact	0.006	0.506	0.613	0.050
Total Weeks of Treatment (logged)	0.009	0.849	0.396	0.059
Intensity of Treatment	0.0015	0.189	0.850	0.014
Theory Variable Set				
Social Bond	0.1204	1.479	0.139	0.383
Social Learning Theory	0.1769	1.958	0.050	0.321
Self Control	0.1810	1.226	0.220	0.095
Deterrence	0.0556	0.656	0.512	0.113
Labeling	0.0997	1.106	0.269	0.172
Merton's Strain	0.1069	1.291	0.197	0.312
Reintegration	0.1137	1.263	0.206	0.180
Differential Association	0.0481	0.590	0.555	0.127

Model Q = 96.446, df=29, p=.000

The independent variables that were significant in the previous model that did not include the set of theory variables remained significantly related to effect size in a consistent direction despite the inclusion of the additional variables. In terms of the theory variables none were significantly related to effect size at

$p < .05$ however, social learning theory was positively and significantly related to effect size at $p < .10$ relative to the internal mechanism/psychological program category ($b = .177$, $p = .050$). This is one of the two theory categories that showed a significant mean effect size in the ANOVA analog model without controls (described in an earlier stage of the analysis).

For the purposes of this dissertation, one of the most salient tests involved the comparison of the Q model statistic of the two modified weighted regression models. Because Q model statistics are additive based on the number of variables in the model, the difference between the Q statistic for the model that did include the theory variables and the model that did not include the theory variables was used to determine the impact, or lack thereof, of the additional variables included in the model. The modified weighted regression model without theory variables produced a $Q = 80.03$, $df = 21$ and the model with the set of theory variables produced a $Q = 96.45$, $df = 29$. The difference between the Q statistics was 16.42 , $df = 8$. Using the chi square distribution, the critical value for $p < .05$ at 8 degrees of freedom is 15.41 . This number was lower than the difference between model Q statistics, making the Q difference significant. Significance for this test indicated that the theory variables account for variance effect size distribution beyond that which was explained by the method, study, participant, implementation variables.

Adjusted Effect Size

To examine the effect size means by theory category while controlling for all of the method and study level variables, a weighted regression was run using the standard SPSS weighted regression procedure. The unstandardized residuals were saved from that process and were added to the overall mean effect size, or grand effect size mean for all 186 studies. The grand mean was produced with no controls and once the residuals were added to this dependant variable, an effect size that was adjusted for all possible method and study controls was created.

Table 13. Adjusted and Unadjusted Mean Effect Sizes by Theory Category

Theory Group	Mean Effect Size		Adjusted Mean Effect Size ¹	
Social Bond	0.043	*	0.057	***
Differential Association	0.008		0.013	
Social Learning Theory	0.149	***	0.123	***
Self Control	0.160		0.124	
Deterrence	0.000		0.002	
Labeling	0.036		0.332	
Merton Strain	0.000		0.043	*
Reintegration	0.040		0.048	
Internal Mechanism/Psych	0.052		-0.015	

*** p<.001

** p<.05

* p<.01

¹ Includes controls for method, study, participant, and program implementation factors.

To produce the control adjusted effect size means by theory category, the adjusted effect sizes were used in a random effects ANOVA analog procedure in which the theory variable was chosen as the grouping variable. The random effects adjusted mean effect size for all 186 studies was significant at .043 (z=

5.14, $p < .001$). Correspondingly, the 95% confidence interval around the weighted mean effect size did not include zero. Table 13 presents the adjusted mean effect sizes by theory category as well as the mean effect by theory category without any controls. Interestingly, social bond and social learning theory effect size means remained significant controlling for all of the method, study, participant, and implementation characteristics. The adjusted mean effect size for the Merton's strain theory category was significant while the mean effect size without controls was not.

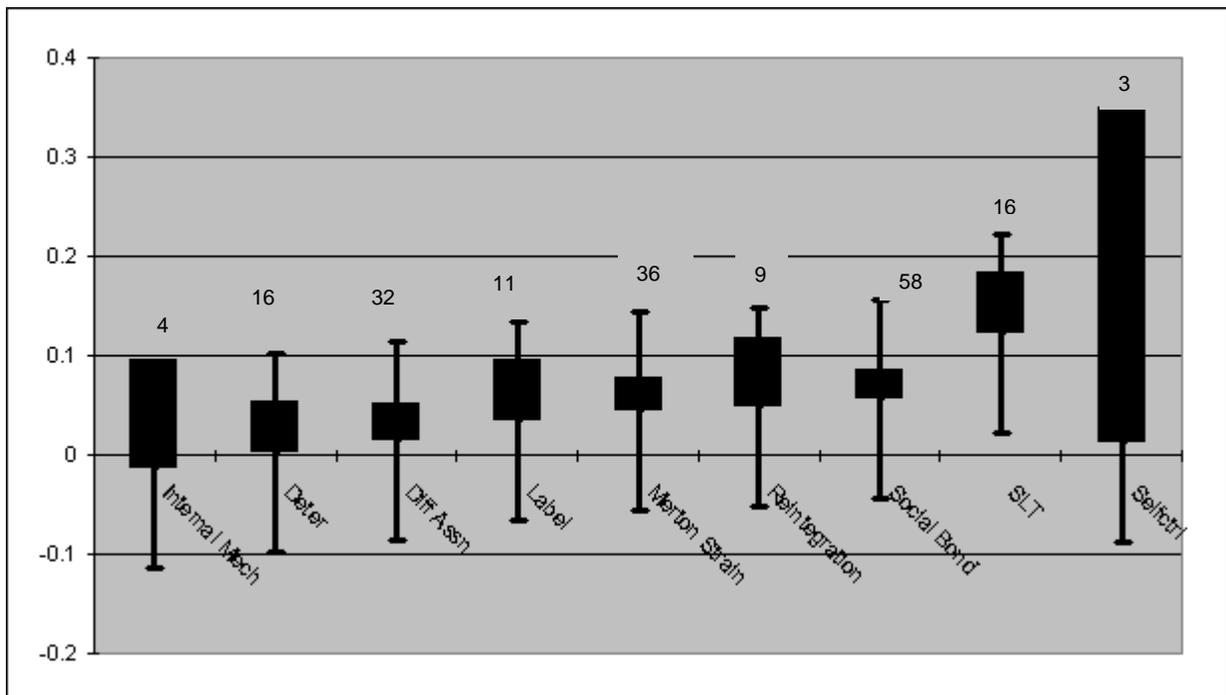


Figure 3. Adjusted Effect Sizes by Theory Group

The adjusted effect size means by theory category are also graphically represented in Figure 3. The stock plot displays the adjusted means relative to

each other and uses the 95% confidence intervals surrounding the adjusted effect size mean to create the vertical bars. The number above each of the vertical bars represents the total number of studies in each theory category. Of the three significant adjusted mean effect sizes in Table 13 and Figure 3, social learning theory shows the highest mean program effect at .123 followed by social bond at .057 and Merton's strain theory at .043. While these are modest program effects, they are all positive, meaning that the treatment group performed better post treatment (in terms of the outcome measure, recidivism) than the control groups. Put more plainly, treatment subjects in programs associated with social learning, social bond, and Merton's strain theories performed better (were less likely to be arrested or re-arrested) post treatment than the control group subjects.

CHAPTER V

DISCUSSION

Two key sets of literature were combined in this dissertation.

Sociologically based modern theories of deviance were mapped onto juvenile delinquency intervention and evaluation research. The first purpose of this dissertation was to facilitate this connection. The second goal was to examine the connection once it was clarified and the third, or final goal, was to translate the connection between theory and intervention programs into measures appropriate for empirical testing so that the relationship could be scientifically studied and evaluated using meta-analytic procedures.

Summary of Results

Analytic Stages One and Two

The first two stages of analysis met two of the project goals, facilitation, and examination of the connection between deviance theory and intervention programs. Using a multi-phase inductive coding process, theories of deviance were mapped onto intervention programs. Nine modern deviance theories: social bond, differential association, social learning theory, self-control, deterrence, labeling, Merton's strain, subculture, and reintegration were represented among the set of juvenile delinquency intervention studies analyzed for this project.

Social bond accounted for the causal assumption in just over one-third of the studies included in this project and was the most commonly represented theory of deviance. Its theoretical popularity may be because this theoretical approach involves many commonly accepted reasons for not engaging in criminal activity: the deterrent power of family, school, and community relationships. As an example of the commonality of this approach, one study in the Juvmeta database (Byles and Maurice, 1979) stated that the program being evaluated was not designed with any specific cause of criminality in mind, however, "it was presumed that regardless of cause, the family was still the most salient social system available to aid in the prevention of further antisocial behavior (158)." In this case and in others, the tenets of social bond were not the stated guiding principles for program design; rather an atheoretical "assumption" of the importance of family attachments guided the program treatment targets. None of the 58 programs with social bond components showed any indication that they were actually designed with the specific theory in mind. In this way social bond programs were not developed in direct recognition of the rich sociological theory testing tradition, but the primary change factors of the programs still managed to focus on attachment to pro-social others, belief and commitment to prosocial goals, and involvement in prosocial activities. It is especially interesting that even without direct acknowledgement of a link between program components and social bond theory, 50% of the social bond programs were considered good applications of the theory. Two rationales may best explain this occurrence. First, due to the nature of meta-analysis, one is limited to

the information present in the study. Social bond theory may have actually been the basis of the program design, but the particular theoretical underpinning of the program was simply not mentioned in the study text. Another option is that, as one of the more testable and tested theories of deviance, the causal constructs of the social bond theory may have permeated general knowledge about criminality and deviance and was therefore treated as a common “assumption” about behavior rather than cited as a specific theoretical perspective.

In terms of the viability of certain criminological theories, well over half of the Merton strain theory programs (72%) were considered good applications of the theory. Merton's strain was by far the most successfully applied theory of those represented in the set of Juvmeta studies. This is probably because Merton's causal construct is the most straight forward of the theories represented and is most easily translated into practice. Increasing persons access to legitimate means to success can be put into practice with vocational programs, vocational skill classes, GED classes, etc. and these elements require much less volunteer time, planning, and funding than a social learning theory-based program that often involves intense, supervised peer group interaction and a token economy to reinforce prosocial values and definitions. Additionally, a program using vocational training requires less specialized training to implement.

Being theory driven was one of the nine characteristics of effective juvenile intervention programs identified Nation et. al. (2003). Simon (1998) also wrote of the importance of using a theoretical framework to “dictate the goals of intervention, (139)” and establish program design. Despite the lack of theoretical

attribution in the set of Juvmeta studies examined, this issue is not new. Gendreau and Ross (1979) discussed the potential consequence of the connection between theory and intervention programming in Crime and Delinquency decades before Nation et. al. and Simon's work. Regardless of this scholarship, only a little over half of the studies linked some notion of deviant causality with program design and components. Even fewer studies, 18% (34) of the 186 studies examined, actually named a specific theory, and linked it to the design of the target program. One study, mentioned earlier, actually stated that the authors made "no assumptions were made regarding the 'cause' of the delinquent behavior (Byles and Maurice, 1979:158)." That said, it should be noted the relatively weak relationship between theory attribution and year of publication indicate that the changes in publishing, degree, and grant requirements have not resulted in an increased and acknowledged connection between deviance theory and intervention program design.

One of the most interesting findings in this project involved the theory match variable. This variable measured the consistency between the theory code and the theory attributed to the program in the study. In an evaluation of a delinquency intervention Denise Gottfredson (1986) remarked, "the educators that designed and implemented the project were not criminologists and had little if any prior exposure to academic theories of delinquency. Nevertheless, the correspondence of the project rationale to leading academic theories is striking (708)." Based on results of this project however, what Gottfredson described was the exception rather than the rule. As was mentioned earlier, only 34 of the 186

studies named one theory or specific causal construct and in less than half of these studies, the specific theory named matched the final theory code. This indicates a misinterpretation of the modern deviance theory cited and/or a secondary misapplication of the theory. Regardless, there appears to be disconnect between deviance theory and design of juvenile delinquency programs in the vast majority of juvenile delinquency intervention studies examined for this project.

Analytic Stage Three

As was mentioned earlier in this chapter, the goal of the third and last analytic stage was to translate the connection between theory and intervention programs into measures appropriate for empirical testing so that the relationship could be scientifically studied and evaluated using meta-analytic procedures. Cullen et. al. (2003) wrote that meta-analytic findings “have implications for the viability of extant criminological theories (348).” The results of this analytical stage lend some support to this statement. One of the theories of deviance, social learning theory, represented in the set of studies was significantly related to program effect ($p < .10$) after all methodological and study level characteristics were included in the random effect inverse variance weighted regression model. While this is a higher threshold of significance than commonly utilized, the result is somewhat supported by the results of a comparison between the Q-statistic for a modified weighted regression model with theories and the Q-statistic for the model without the set of theory variables. This test is quite salient as the

significant difference between these model Q-statistics indicates that deviance theory *does* make a difference and the difference it makes is sufficiently different from zero.

This concurs with criminological literature on theory testing, as social learning theory is also the most tested *and supported* of all the modern deviance theories. This finding also agrees with Cullen et. al.'s (2003) review of correctional treatment programs. Cullen et. al. found no support for deterrence theory and strong support for theories that focus on criminal associations and antisocial values such as social learning theory. Pratt and Cullen (2000) also found support for social learning theory in their examination of Gottfredson and Hirschi's self-control theory. Additionally, previous meta-analyses have identified two key aspects of the application of social learning theory, changing anti-social values and peer interaction, as successful programmatic elements (Andrews and Bonta, 1998; Andrews et. al., 1990; Lipsey and Wilson, 1998).

Implications

A primary question posed during the last analytical stage was - Does the theory matter in delinquency intervention programming? Recent work in meta-analysis in this area has suggested that it does (Cullen et. al., 2003; Pratt, 2001; Pratt and Cullen, 2000) and it is clear from the results of this project that, indeed, theory does matter. However, its impact is not consistent across theories; for example, with and without control variables included in a model, different theory

categories had different mean effect sizes, some were significant and most were not.

Intervention Programs

While social bond theory was the most common theory of deviance associated with intervention programs reviewed for this project, social learning theory was the only theoretical category to maintain a significant relationship with effect size once all method, study, participant, and implementation variables were controlled. The implication of this finding for intervention programming lies in the program components associated with social learning theory. The programs associated with this theoretical approach incorporated the key assumption that juveniles could learn nondelinquent responses through group processes (i.e., imitation, role-play, modeling, scripted and/or moderated normative interaction, etc.). Additionally and what separates these programs from differential association programs, is the inclusion of a reinforcement or conditioning component (both social and nonsocial). Based on meta-analyses focused on “what works” the group process component, broadly defined, has been associated with larger effect sizes, however, a closer examination of the presence of both components as well as a more specific coding of component content may be warranted in future analyses⁹.

⁹ The Center for Research and Evaluation Methodology, lead by Mark Lipsey created a more detailed coding of program components and the work based on these coding results is greatly anticipated by the evaluation community.

Additionally, because deviance theory appears to matter in terms of program effect, another implication of the results applies to the funding sources used to support the implementation of juvenile delinquency intervention programming. Many of the programs that target juvenile delinquency are funded by governments, foundations, universities, or some combination thereof. While the requirements for such funds are increasingly more robust in terms of documentation, stated performance goals, and evaluation based on key outcome measures, the requirements are still relatively silent on theoretically directed program design. The results of this project indicate that designers of intervention programs would benefit if the combinations of program components as well as the rationale for their inclusion were grounded in deviance theory and tested theoretical constructs.

Theories of Deviance

While Cullen et. al. (2003) qualified that rehabilitation program effect "is *not* a litmus test for theories (339) [emphasis in original]," he went on to say, "to the extent that theories can or cannot account for [program effect], they gain or lose scientific credibility (340)." Based on this statement, social learning theory was the only modern theory of deviance to gain some amount of scientific credibility. The theories included as a set did collectively contribute some explanation of effect size variance beyond that of the methodological and study level characteristics. These results confirm that theory does matter at least a

moderate amount and in this regard does lend some level credibility to the impact of theory on program effect.

But what do these findings say about the other theories of deviance? Focusing on the mean effect sizes by theory, adjusted for methodological and study level characteristics, some level of credibility and viability as a basis for program design can be attributed to three theories. Social bond, social learning theory, and Merton's strain theory all showed significant adjusted mean effect sizes while the other theories did not. While it is not appropriate to say that the programs associated with the other theories did not work, it can be posited that the other theories did not have an impact beyond that which is accounted for by methodological features and study characteristics. That said, one must be mindful of the distinction between the onset and desistance of deviant behavior (Cullen et. al., 2003). This project focuses on the viability of applications of theories of deviance to impact deviant outcome measures (e.g., arrest or re-arrest). The findings of this project are not as applicable to a theory's ability to explain the onset of deviance in juveniles. While the two aspects of behavior are related, the ability to predict one does not necessarily guarantee success in the other.

Overall, the results of this project call for theorists and sociologists with expertise in theories of deviance to turn some attention to practical application. Correspondingly, persons designing intervention programs would benefit from incorporating what is known about juvenile criminal causality.

Limitations

An unfortunate characteristic of meta-analysis is that the coder is only able to base coding decisions on the information contained in a study, which may be limited (Lipsey and Wilson, 2001). While this author often had the advantage of supplementary program documents, information was not always as complete as one would prefer. This effected the theoretical coding to a lesser degree than the coding of the participant characteristics because studies often reported more about the program components than the demographic makeup of the subjects. Variables of sociological interest such as the prior delinquency history, gender, and ethnicity of treatment subjects were coded in general terms due to the information available in the studies. For example, sex of treated subjects was coded as no males - < 95%, some males - <50%, mostly males - = or> 50%, all males – 100%, some – cannot estimate. These categories, while appropriate for the information available in the studies, is not specific enough for use in more complex analyses of theoretical impact with regard to gender of subjects. Additionally, due to the nature of meta-analytic coding, it is not possible to code all the items of sociological scientific interest. Information such as family structure, education level of parents, income level of household, etc. were not included in the studies and could therefore not be included in this analysis. As Lipsey and Wilson (2001) acknowledged, “meta-analysis can only work with what is reported regularly in research studies (88)”. The authors go on to say that, “information judged important and relevant simply cannot always be coded from

what is reported in the studies. (88)” This poses an even more frustrating problem to sociologists because representatives from our discipline do not conduct most of the studies in this area. Indeed, sociologists or criminal justice professionals authored only 34% of the 186 studies.

A limitation of meta-analysis noted by Cullen et. al. (2003) also pertains to this project. Because intervention programs target proximal or micro level causes of crime and delinquency, this form of analysis is not as useful for macro-level theories of crime, such as social disorganization and conflict theory. In this regard, the form of meta-analysis used in this dissertation can tell us very little about the structural factors associated with criminal and/or delinquent activity.

For the purposes of this project, the theories were coded based on the primary program component administered to the study participants. While this approach allowed for the most replicable and valid coding decisions, many of the programs included secondary and even tertiary program components that may have indicated an additional theoretical approach. Information regarding these components would not change the outcome of this project; however, an examination of the theoretical consistency of all the program components would be of interest.

Recommendations for Future Research

This study developed and measured the connection between theories of deviance and programs of juvenile intervention. Now that the foundation for the connection is complete, many more questions based on this study and others need to be formulated and investigated.

The next step for this project is to disentangle theory and program components. Indeed, it can be hypothesized that components associated with one theory may enhance the tenets of another theory (Cullen et. al., 2003). Using social learning theory as an example, program components associated with social bond theory, such as improving parent-child communication and building attachments to pro-social adult role models may enhance a juvenile's ability to learn prosocial attitudes. The pro-social attachments and communication skills could build a solid structure upon which a juvenile can more easily learn and internalize pro-social values and could create an environment conducive to consistent reinforcement.

Another suggestion for future work related to this project would include the coding of all Juvmeta studies regardless of design. Based on project goals and scope, the studies included in this project utilized a random or quasi random design. While the type of design would be included as a control in any meta-analysis, it may be of interest to determine the association between theory and the full range of study designs. Indeed, studies of programs associated with certain theories may employ less rigorous designs than programs associated with other theories.

The work presented in this research is novel in ways that go beyond the average dissertation project. Not just the research questions asked, but also the process of answering and the method by which the answers were examined were novel to both sociology and program evaluation literature. The neoteric level of this work was necessary because even though the two approaches study the same phenomena, connecting two literatures makes for difficult work and uncharted territory. This project proves that the connection can be made and with that comes the responsibility to continue to buttress the connection or as Cullen et. al. (2003) put it, continue the “cross-fertilization of ideas (346)”. It is this authors hope that future work will build on this connection and continue to strengthen it, not only in terms of furthering the operationalization of theory with regard to applied intervention programs but also in terms of broadening the reach of sociological literature and theories of deviance. Barlow wrote that criminology “has more to say about the causes of crime than it does about solutions (1995:xi)” and this project can be considered a step in the direction of encouraging sociologically grounded dialogue on the topic of crime solutions.

Appendix A
Juvmeta Coding Manual

Meta-analysis of Juvenile Delinquency Interventions

Coding Manual

September 18, 2002

Juvenile Delinquency Meta-Analysis Coding Manual

ELIGIBILITY CRITERIA FOR INCLUSION OF A STUDY IN THE DELINQUENCY META-ANALYSIS

1. The study must investigate the effects of an intervention or treatment, broadly defined. In addition to therapeutic treatments, eligible interventions can include such modalities as incarceration, probation, systems interventions (e.g., processing juveniles in adult court), and the like. Note that the intervention need not explicitly aim to reduce or prevent delinquency. For example, a program to teach delinquents to read would qualify if it met all other criteria even though it was presented as an academic improvement program rather than a delinquency reduction program. The following interventions, however, are specifically excluded: (a) treatments targeted exclusively on substance abuse without attention to any other components of antisocial behavior or outcome variables representing delinquency other than substance use violations; (b) pharmaceutical or medical treatments without significant psychosocial components, e.g., drugs, diet, cosmetic surgery, and the like.
2. The intervention must be applied to a sample that includes juvenile offenders. A juvenile offender is defined as a person apprehended by the police, involved with the juvenile or criminal justice system, or identified as having engaged in behavior chargeable under applicable laws, whether or not apprehended or charged. Chargeable offenses include "status" offenses (runaway, truancy, curfew violations, incorrigible, out of parental control) and actions in school and other such contexts that are interpretable as chargeable offenses even if not presented as delinquent behavior, e.g., fighting (assault), damaging school property (vandalism), and the like. A juvenile is defined as anyone under the age of 21 (i.e., age 20 and under). If both juveniles and adults are included in the treatment sample, the study is acceptable if the study reports the juvenile results separately or juveniles constitute a majority of the subjects for whom results are reported.
 - a. Note that if there are any clearly identified juvenile offenders under these definitions in the treatment sample (even one), this eligibility criterion is met. That is, only one juvenile in the sample has to be an offender for the study to be considered eligible.
3. The study must measure at least one quantitative delinquency outcome variable. In addition, it must report results on at least one such variable in a form that, at minimum, allows the direction of the effect to be determined (whether the outcome was more favorable for the treatment or control group). If a delinquency outcome is measured but the reported results fall short of this standard, the study will still be acceptable if the required results can be obtained from the author or other sources. A delinquency outcome variable is one that represents, at least in part, the subject's involvement in behavior that constitutes chargeable offenses as defined in 2 above.
4. The study design must involve a comparison that contrasts one or more identifiable focal treatments with one or more control conditions. Control conditions can be "no treatment," "treatment as usual," "placebo treatment," and

so forth as long as they do not represent a concerted effort to produce change. Thus, treatment-treatment comparisons are not eligible unless one of the "treatments" is explicitly presented as a form of control condition, e.g., a "straw man" treatment not expected to be effective. When different naturally occurring facilities or groups (e.g., court or probation dispositions) are compared, the study will be eligible only if the different groups are presented as a contrast between a program or intervention of special interest and a control (e.g., "treatment as usual"). For example, a comparison of the pre and post arrest rates for juveniles in each of several probation camps would not be eligible unless it was explicitly presented as a contrast between camps with distinctive programming, e.g., "milieu therapy," and others that followed relatively indistinctive routine and customary practices.

5. Random assignment designs that meet the above conditions are always eligible; one-group pretest-posttest studies are never eligible (studies in which the effects of treatment are examined by comparing measures taken before treatment with measures taken after treatment on a single subject sample). Non-equivalent comparison group designs may be eligible (studies in which treatment and control groups are compared even though the research subjects were not randomly assigned to those groups). To be eligible, however, such comparisons must at least one of the following:
 - a. matching of the treatment and control groups prior to treatment on at least one recognized risk variable for delinquency such as prior delinquency history, sex, age, ethnicity, or socioeconomic status;
 - b. a pre-intervention measure (pretest) for at least one delinquency outcome variable on which the treatment and control groups can be compared; OR
 - c. a pre-intervention measure on at least one recognized risk variable for delinquency (as above) on which the treatment and control groups can be compared. Note that the pre-intervention measures need not show that the treatment and control groups are actually similar, only be capable of showing their degree of similarity (or dissimilarity).
6. The study must be set in the U.S. or a predominately English-speaking country and use juveniles resident to that country. Note that the juveniles need not be English-speaking or "Anglo." A study conducted in the U.S. or Canada with resident Hispanic juveniles, for example, would qualify. In addition, the study must be reported in English; studies reported in another language will be excluded irrespective of where they were conducted or the nationality of the juveniles.
7. The date of publication or reporting of the study must be 1950 or later even though the research itself might have been conducted prior to 1950. If, however, there is evidence in the report that the intervention under study was applied to the research sample prior to 1945 (i.e., more than five years before the 1950 cutoff date), then the study should be excluded.

ELIGIBILITY CHECKLIST

<u>No</u>	<u>Yes</u>	
___	___	Involves a "treatment," broadly defined, that can be viewed as potentially having some practical benefit for juvenile or society; not restricted to a treatment of solely theoretical interest.
___	___	Involves a comparison that contrasts one or more identifiable focal treatments with one or more control conditions.
___	___	Subjects assigned randomly, matched, or pre-treatment group equivalence available?
___	___	Quantitative outcome data or direction of effect available on at least one delinquency outcome measure.
___	___	Involves juvenile delinquents or subjects committing acts which constitute chargeable offenses.
___	___	Subjects are under the age of 21.
___	___	Study is set in an English-speaking country and reported in English.
___	___	Date of publication is 1950 or later.

STUDY HEADER AND EXPERIMENTAL COMPARISONS

Definition of a study. The "unit" to be coded consists of a study, i.e., one research investigation of defined subject samples compared to each other and the treatments, measures, and statistical analyses applied to them. Sometimes there are several different reports of a single study. In such cases, the coding should be done from the set of relevant reports, using whichever is best for each item to be coded; be sure you have the full set of relevant reports before beginning to code. Sometimes a single report describes more than one study, e.g., a series of similar studies done at different sites. In these cases, each study should be coded separately as if each had been described in a separate report.

Study and Coder Identification Note: Variable names for SPSS in brackets.

_____ Identification number of study [ID].
____ / ____ / ____ Date coded [CodeDate]
_____ Coder's initials (3 letters) [Coder]

STUDY CONTEXT

Type of publication [SH2] (if multiple, code highest in list; e.g., if dissertation and journal article, code study as journal article).

- 1 book
- 2 journal article/book chapter
- 3 thesis/dissertation
- 4 technical report
- 5 conference paper
- 6 other: _____

Year of publication [SH3] (two digits; estimate if necessary). If you have multiple reports enter year that corresponds to the report you selected under 'type of publication' above. If there are multiple reports of the same type, use the earliest date. [Eligibility issue- not before 1950]

Senior author's discipline [SH5] (check best one): Note that this question asks about the senior author - thus, if more than one author, use discipline of first author.

- 01 psychology
- 02 sociology
- 03 education
- 04 criminal justice; criminology
- 05 social work
- 06 psychiatry; medicine
- 07 political science
- 08 anthropology
- 09 other:
- 10 cannot tell

Country in which study conducted [SH6]

- 1 USA
- 2 Canada
- 3 Britain
- 4 other Commonwealth/English speaking
- 5 other
- 6 cannot tell

Role of evaluator/author in the program [SH9] (if more than one, check the highest on the list): [Note: This item focuses on the role of the research team working on the evaluation regardless of whether they are all listed as authors.]

- 1 Evaluator delivered therapy/treatment
- 2 Evaluator involved in planning, controlling, or supervising delivery treatment or Evaluator is designer of program
- 3 Evaluator influential in service setting but no direct role in delivering, controlling, or supervision
- 4 Evaluator independent of service setting and treatment; research role only
- 5 cannot tell

Program age at time of research [SH10] (check best judgment): [Note: If several treatments of different sorts, answer in terms of the treatment to be used in the aggregate experimental comparison, next section. If organization predates treatment, respond in terms of how new treatment is if can assess; if not, indicate how new organization is if can assess. This item is attempting to distinguish between inexperienced, formative, immature programs and those that have been refined and are more mature.]

- 1 relatively new, e.g., less than two years old or first of relatively few client cohorts
- 2 established program, in place two years or more, or many client cohorts
- 3 defunct program, evaluated post hoc
- 4 cannot tell

Program sponsorship [SH11] (check best one): [Note: Who administers and "owns" the program irrespective of where housed. This is a question of who makes decisions like staffing, changing the program, etc. The first two categories are basically for research and demonstration programs organized by researchers primarily for research purposes. Usually the last three categories are the appropriate choices if the work is done in a service agency even if for research purposes.]

- 1 demonstration program/treatment administered by researchers for one treatment cohort only
- 2 demonstration program/treatment run by researchers for multiple treatment cohorts
- 3 independent "private" program with own facility, staff, etc. (e.g., YMCA, private agency, university clinic)
- 4 public program, non criminal justice sponsorship (e.g., school sponsored, community mental health, department of social services)
- 5 public program, criminal justice sponsorship (e.g., police, probation, courts)
- 6 cannot tell

IDENTIFICATION OF TREATMENT AND COMPARISON GROUPS

Experimental Comparisons Worksheet

Step 1: Identify all group comparisons in the study. A comparison consists of a configuration in which group differences are or could be tested with t-tests, F-tests, Chi-squares, etc. applied to various dependent measures. Your concern now is with the group comparisons, not the number or nature of dependent measures on which they may be compared (that comes later). For example, one treatment group compared with one control group on six dependent measures is one experimental comparison. The aggregate treatment and control groups are the largest subject groupings on which contrasts between experimental conditions can be made. Often there is only one aggregate treatment group and one aggregate control group, but it is possible to have a design with numerous treatment variations (e.g., different levels) and control variations (e.g., placebos) all compared (e.g., in ANOVA format).

Step 2: Write in the name/description of each aggregate treatment group and each aggregate control group in the appropriate boxes and, underneath, the number (count) of such groups.

[SH24]: Total number of treatment groups from this study.

[SH25]: Total number of control groups from this study.

Step 3: You will code only one aggregate treatment vs. control comparison plus selected breakouts (i.e., results presented on different subgroups of youth) and post-treatment follow-ups. If there is more than one aggregate treatment group and/or more than one aggregate control group, a selection of which pairing to code must be made as follows:

(a) More than one aggregate treatment group. First, determine if the various treatments are sufficiently similar to combine. This requires that treatment be virtually the same, at least by generic label, for each group, e.g., groups with the same treatment but implemented at different sites or stratified into subgroups that can be recombined into a sensible whole. In such cases, combine the treatment groups into a composite whole if appropriate statistics are available (note: an Excel calculator called "group combo" is available to do the required computations for this in some cases). If statistics for combination are unavailable, select one treatment group to code, as indicated below, and drop the others. Note that if each treatment group has its own distinct control group, separate studies are constituted requiring that each treatment-control pair be coded as independent studies. If the treatments are distinct, e.g., deliberate experimental variations, and cannot be combined into a relatively uniform composite, then one must be selected as follows:

- If one treatment is clearly the focal concern of the study, with others serving as examples of more conventional approaches, etc., then select the focal treatment.
- If the treatments are parametric variations, e.g., counseling with and without advocacy, then select the most complete or extensive treatment, e.g., the counseling with advocacy. Extensive refers to breadth of services not number of hours of service. This is a subset/superset issue. If one treatment is a subset of another, in the sense of having some but not all of the treatment elements of the other take the superset as the treatment group of interest.

- If the treatments are different, of equal interest to the study, and of equal completeness, then select the one with the largest N. If equal N, select the one that is least unusual and if equal in that regard, make a random choice (coin toss).

(b) More than one aggregate control group, e.g., attention placebo, no control, etc. Select the best control group available to code from the rank order listing below (best listed first):

1. "no treatment" control (control gets no treatment, left alone)
2. placebo control (controls get some attention or sham treatment)
3. treatment as usual control (controls get "usual," handling instead of special treatment, e.g., regular probation or school)
4. "straw man" alternate treatment control not expected to be effective but used as contrast for treatment group of primary interest

If there are multiple groups in any of these categories, combine them if possible and sensible; otherwise, choose the one aimed at the group most similar to the group receiving the treatment of interest. If you still can't choose on this basis, randomly select one group as the control.

If there are no control groups in these categories, i.e., an uncontrolled study or one comparing alternate treatments to each other but not to a control, the study is ineligible for coding. Be careful, however, not to confuse "treatment as usual" controls, which are eligible, with "treatment-treatment" comparisons, which are not eligible. If a treatment is a deliberately designed as an "add on" to the conditions the juveniles otherwise experience, then it cannot be considered a control. Treatment as usual is the normal or usual condition of the juveniles at issue. For example, in a study of treatment of probationers, the "usual" treatment is normal probation. Comparison of juveniles on normal probation with those receiving special intensive supervision, extra counseling, or the like would be an eligible study. Also, do not confuse a placebo treatment, which is eligible, with an "alternate treatment" comparison. A placebo treatment is deliberately set up for the purpose of making a particular contrast with treatment, i.e., it has certain characteristics of treatment but lacks the presumed critical ingredient. Alternate treatments, by contrast, are legitimate treatments in their own right, not defined in terms of their role as a contrast for the focal treatment of interest. Sometimes an alternate treatment is used for comparison with no expectation that it will be effective, i.e., it is a "straw man" treatment perceived ineffective and included for contrast with an identifiable focal treatment of primary interest. In such cases, the alternate treatment control would be eligible-it is virtually a placebo condition.

Reminder: If there are multiple treatments, each paired with its own control group(s), these are coded as separate studies. The above applies only to cases where multiple treatments and/or multiple controls are compared altogether in a single multi-group study.

Step 4: Finally, write the names of the aggregate treatment and aggregate control group chosen in the designated places at the bottom of the GROUPS screen. Note: At this point, the one aggregate experimental comparison to be coded has been identified (i.e., one aggregate treatment group compared with one aggregate control group). Only that one aggregate comparison should be considered in completing the remainder of the coding.

GROUP EQUIVALENCE

The unit on which assignment to groups was based [SH26] (check best one):

- 1 ___ individual juvenile, i.e., some juveniles assigned to treatment, some to comparison group (this is the most common case)
- 2 ___ classroom, facility, etc., i.e., whole classrooms, etc. assigned to treatment, comparison groups
- 3 ___ program area, regions, etc., i.e., region assigned as an intact unit
- 4 ___ cannot tell

How subjects assigned to treatment and control groups [SH27]:

Random or quasi-random:

- 01 ___ randomly after matching, yoking, stratification, blocking, etc. (This means matched or blocked first then randomly assigned within each pair or block. This does not refer to blocking after treatment for the data analysis.)
- 02 ___ randomly without matching, etc. (includes also cases such as when every other person goes to the control group)
- 03 ___ regression discontinuity; quantitative cutting point defines groups on some continuum (this is rare)
- 04 ___ wait list control or other such quasi-random procedures presumed to produce comparable groups (no obvious differences). [This applies to groups which have individuals apparently randomly assigned by some naturally occurring process, e.g. first person to walk in the door.]

Nonrandom, but matched (control group selected to match treatment group):

- 05 ___ matched on pretest measures of some or all variables used later as outcome measures (individual level)
- 06 ___ matched on demographics: big sociological variables like age, sex, ethnicity, SES, (individual level) [Note: If matched on both personal characteristics and demographics call it the former not the latter]
- 07 ___ matched on personal characteristics, delinquency history, introversion-level, self-esteem, etc. other than dependent variables used later as outcome measures (individual level)
- 08 ___ equated groupwise; e.g., picking intact classroom of similar characteristics to treatment classroom e.g. mean age of groups are equal.

Nonrandom, no matching (descriptive data regarding the nature of the group differences before treatment must be available for study with this design to be eligible; if initially nonequivalent groups, posttest only, with no information about group similarity, then study is not eligible for coding):

- 09 ___ originally random or quasi-random but with refusals, exclusions, selections, or other degradations after assignment and before treatment starts amounting to 10 to 15 percent of group or more. [Note: This does not refer to attrition after treatment begins, only between point of assignment and onset of treatment, e.g. groups selected randomly from school roster but many refuse to participate in offered treatment. Treatment drop-out issues are coded elsewhere.]
- 10 ___ individual selection on basis of need, volunteering, convenience, or some other such factor

- 11 convenience comparison groupwise, i.e., other available group such as a classroom taken w/o matching or equating (like individual selection but done groupwise)
- 12 other: _____
- 13 cannot tell

Confidence of judgment on how subjects were assigned [SH28]:

Very Low 1 (Guess)	Low 2 (Informed Guess)	Moderate 3 (Weak Inference)	High 4 (Strong Inference)	Very High 5 (Explicitly Stated)
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Identify all the variables for which comparisons were made between the treatment and control group prior to application of the treatment. These are comparisons that would indicate how similar the treatment and control groups were on some variable(s) after assignment to the respective groups but before treatment was given to the treatment group. Divide these comparisons into two categories:

(a) *statistical comparisons* – variables on which the groups are compared in terms of statistics such as means or proportions, or for which the results of statistical significance testing is reported; and, (b) *descriptive comparisons* – variables for which it is reported that there is or is not a difference but no statistics are provided nor any indication of the results of statistical significance testing.

Number of variables statistically compared prior to intervention [SH30]:

Number of variables descriptively compared prior to intervention [SH31]:

General Results of Equivalence Comparisons. [SH29] Select ONE (if both, use statistical).

[Note: For the ratings below, an "important" difference means a difference on most of the variables, or on a major variable, or large differences; major variables are those likely to be related to delinquency, e.g., history of delinquency or other antisocial behavior (chargeable offenses), delinquency risk or prediction, sex, age, ethnicity, SES, family circumstances, temperament.]

Note also that this item is best answered after you make your group equivalence effect sizes (described below) so that you can incorporate the magnitude of the effect sizes into your decision about their importance.

- 1 no comparisons made
- Results of statistical comparison(s):
- 2 no apparent differences
- 3 differences exist, but judged unimportant by coder
- 4 differences exist, judged of uncertain importance by coder
- 5 differences exist, and judged important by coder
- Results of descriptive comparison(s) [if no statistical comparisons made]:
- 6 negligible differences, judged unimportant by coder
- 7 some differences judged of uncertain importance by coder
- 8 some differences, judged important by coder

STATISTICAL COMPARISON WORKSHEET

For each variable identified below on which the treatment and control group were compared prior to treatment (other than pretests on outcome variables) OR on which you can tell equivalence (e.g., if matched on age, etc.) AND for which sufficient data exists, determine the direction of difference and if possible, calculate an effect size. NOTE: you only have to make one effect size for each comparison type (e.g., if you have two measures of age, like average age in years and average grade, you need only make one group equivalence effect size.)

In the case of all male samples, there is no need to make a group equivalence effect size for sex, although you would use this information in judging group similarity and within group heterogeneity below.

[Note from Sandra to future analysts: Although I realize that creating a 0.0 group equivalence effect size in cases where both the treatment and comparison samples are 100% male would be nice, this has not been done consistently. Therefore, to save time, I have instructed coders that making these effect sizes is not necessary.]

Do not include here any comparisons on pretest variables, that is, measures of an outcome (dependent) variable taken prior to treatment (e.g., prior number of arrests in six-month period when number of arrests in six months subsequent to treatment is used as an outcome measure). In such cases the pretreatment ES is coded later as pretest information, not here as group equivalence information. Prior delinquency is a pretest for a delinquency outcome measure if it is in the same form as the posttest (e.g. both court records or both self report but not one of each), measures the same thing, and covers the same time interval (e.g., whether arrested in six-month period). If the prior delinquency IS a pretest, DO NOT code it here. One rule is that it is a pretest if you could compare this with the posttest and get something meaningful.

- (a) A variable is only a pretest if it is operationalized exactly like the posttest in all regards except time of measurement. Note especially that for delinquency measures the time period covered must be identical for a pre and post measure to qualify; total prior arrests before treatment is not a pretest for arrests over the six months after treatment.
- (b) See codebook for instructions on calculating effect sizes. Be sure the sign of the ES is correct- positive ES favors treatment group, negative ES favors control group.
- (c) If there is more than one eligible variable in any of these categories, report on the one that has the most complete information or, in the case of prior delinquency history and typology, the one most relevant to overall delinquency risk.
- (d) The variables considered here are the same ones that are eligible for coding in the section on breakouts and should be coded there if available.

Type of Comparison [SC4]

- 1 ___ Sex
- 2 ___ Age
- 3 ___ Ethnicity
- 4 ___ Prior Delinquency History
- 5 ___ Delinquency Typology or Risk Level (e.g., type of offender, patterns of propensity to commit crime, etc.)

If you have two measures of prior history (like severity and type of offense) use severity as prior history and type as typology if you have no other typology information. If you have all three either throw out type or aggregate it with severity, by averaging the ES values.

Direction Favors [SC5]

(Direction of the raw difference on the statistics or description provided):

- 1 ___ favors treatment group (Tx has fewer males, is younger, has fewer minorities, less delinquency history, or less delinquency risk)
- 2 ___ favors control group (Control has fewer males, is younger, has fewer minorities, etc.)
- 3 ___ favors neither (exactly the same, reported as no difference, matched)
- 4 ___ cannot tell

Groups matched on this variable? [SC6] Yes or No

|__|__|__| treatment group sample size for ES calculation [SC1]
|__|__|__| control group sample size for ES calculation [SC2]
|__|__|. |__|__| effect size (two decimals with an algebraic sign in front: plus if favors treatment, minus if favors control) [SC21]

[pagenum] Report ID and page number where group equivalence information is located.

Once you've coded the group equivalence effect sizes, return to the Header file and complete the group equivalence coding.

Similarity rating [SH52]:

Using all the available information, including method of assignment to groups (whether random, matched, etc.), rate the overall similarity of the treatment group and the comparison group, prior to treatment, on factors likely to have to do with delinquency and responsiveness to treatment (ignore differences on any irrelevant factors).

[Note: Greatest equivalence from "clean randomization" with prior blocking on relevant characteristics and no subsequent degradation; least equivalence with some differential selection of one "type" of individual vs. another on some variable likely to be relevant to delinquency, e.g., police referrals for treatment compared with "normal" high school sample.]

[Guidelines: The bottom 3 points are for good randomizations and matchings, e.g., 1=clean random, 2=nice matched. The top three points are for selection with no matching or randomization. Within this bracket, the question is whether the selection bias is pertinent. Were subjects selected explicitly or implicitly on a variable that makes a big difference in delinquency? The middle three points are for sloppy matching designs, degradations, bad wait list designs, and the like. If the data indicate equivalence but the assignment procedure was not random give it a 4 or thereabouts since not all possible variables were measured for equivalence between groups.]

Very similar equivalent							Very different not equivalent
1	2	3	4	5	6	7	

Confidence rating [SH53]:

Very Low 1 (Guess)	Low 2 (Informed Guess)	Moderate 3 (Weak Inference)	High 4 (Strong Inference)	Very High 5 (Explicitly Stated)
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___ NA for cannot tell

CHARACTERISTICS OF SUBJECTS IN TREATMENT GROUP

[Note: LE=law enforcement; JJ=juvenile justice]

Note: the offense that results in the juvenile entering treatment "counts" as an offense for purposes of this question and the following questions about the juveniles' prior histories.

Predominant level of reoffense risk of treated subjects [SH81] at onset of treatment (check best one):

- 01 ___ nondelinquents, normal (no evidence of LE or JJ contact or illegal behavior; no identified symptoms or risk factors; regular kids)
- 02 ___ nondelinquents, symptomatic (no evidence of LE or JJ contact or illegal behavior, but risk factors such as poverty, family problems, school behavior problems, Glueck scale scores, teacher referrals, etc.)
- 03 ___ predelinquents, minor police contact (no formal probation or court contact or minor self-reported delinquency minor drug infractions, traffic and status offenses, counseled and released, etc.)
- 04 ___ delinquents (formal probation and/or court adjudication but noncustodial or significant self-reported delinquency, e.g., burglary, property crimes, auto theft; any juvenile who went to court
- 05 ___ institutionalized, non JJ setting (e.g., mental health in-patient; not just detained pending hearing)
- 06 ___ institutionalized, JJ setting (e.g., in group home, camp, reform/training school, etc. under court order)

These first six constitute our risk scale; the remaining items are for mixed groups in which no single "type" predominates.

- 07 ___ mixed, mostly low end of range (nondelinquent & predelinquent)
- 08 ___ mixed, mostly moderate to high end of range (predelinquent & delinquent/sometimes institutionalized) [Note: This is appropriate if there are offenses for all of the kids.]
- 09 ___ mixed, full range (nondelinquent through delinquent/institutionalized)
- 10 ___ cannot tell

Confidence in judgment of level of delinquency (or crime) risk [SH82]:

Very Low 1 (Guess)	Low 2 (Informed Guess)	Moderate 3 (Weak Inference)	High 4 (Strong Inference)	Very High 5 (Explicitly Stated)
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___ NA for cannot tell

Number of treated subjects w/ officially recorded priors [SH83]:

Approximately how many of the treatment juveniles have prior offense records (check best one):

- 1 ___ none
- 2 ___ some (<50%)
- 3 ___ most (= or >50%)
- 4 ___ all (>95%)
- 5 ___ some, but cannot estimate proportion
- 6 ___ cannot tell

Predominant type of prior offense reported for treatment subjects [SH84]

- 1 ___ no priors
- 2 ___ mixed or undifferentiated offenses (you know there are offenses but you do not know what types or the percentage of subjects with each)
- 3 ___ person crimes (assault, sexual)
- 4 ___ property crimes (burglary, theft, vandalism)
- 5 ___ drug/alcohol (possession, sale, public intoxication)
- 6 ___ status offenses (runaway, truancy, incorrigible)
- 7 ___ other specific:
- 8 ___ cannot tell

Number of treated subjects w/ aggressive histories [SH85]: Does the history of the treated juveniles include any suggestion of aggression, violence, assaultive behavior against persons, etc. whether officially recorded or not (check best one):

- 1 ___ no
- 2 ___ yes, some juveniles (<50%)
- 3 ___ yes, most juveniles (= or >50%)
- 4 ___ yes, all juveniles (>95%)
- 5 ___ some, but cannot estimate proportion
- 6 ___ cannot tell

Sex of treated subjects [SH86] or best guess (check best one):

- 1 ___ no males (>95% female)
- 2 ___ some males (<50%)
- 3 ___ mostly males (= or >50%)
- 4 ___ all males (>95%)
- 5 ___ some males, but cannot estimate proportion
- 6 ___ cannot tell

Approximate mean age of treated subjects at time of treatment [SH87](one decimal; 99.9 if cannot tell) [Code information available even if must estimate]

How reported? [SH88]How reported/determined (check one used): [Note: Listed in order of preference; if have choice, take higher form in list]

- 1 ___ median
- 2 ___ mean
- 3 ___ mode
- 4 ___ midpoint of range
- 5 ___ inference from school grade or other such information
- 6 ___ not applicable

Predominant ethnicity of treatment subjects: [SH89] more than 60% of juveniles

- 1 ___ Anglo
- 2 ___ Black
- 3 ___ Hispanic
- 4 ___ other minority
- 5 ___ mixed (several, but none more than 60%)
- 6 ___ mixed, but cannot estimate proportions
- 7 ___ cannot tell

Using above information, how heterogeneous is the treatment group? [SH90] Overall heterogeneity rating: Based on all the evidence available, how diverse or heterogeneous is the treatment group with regard to delinquency history, demographics, personal characteristics, and conditions relevant to delinquency? [Note: The issue is one of within group heterogeneity. A highly selective group would rate 1 or 2 and a program that takes all comers would rate a 6 or 7.]

1	2	3	4	5	6	7
Homogeneous (Juveniles quite similar to each other other)			Heterogeneous (Juveniles quite different from each other)			
___ cannot tell						

Confidence in homogeneity rating: [SH91]

Very Low 1 (Guess)	Low 2 (Informed Guess)	Moderate 3 (Weak Inference)	High 4 (Strong Inference)	Very High 5 (Explicitly Stated)
___ NA for cannot tell				

WHAT'S DONE TO CONTROL GROUP

What the control group receives [SH54] (select best one): [Note: The difference between 'receives nothing' and 'treatment as usual' hinges on whether or not the two groups have an institutional framework or experience in common, e.g., probation supervision, institutionalization, school.]

- 01 ___ receives nothing; no evidence of any treatment or attention; may still be in school or on probation etc., but that is incidental to the treatment strategy or client population as defined
- 02 ___ wait list, delayed treatment control, etc.; contact limited to application, screening, pretest, posttest, etc.
- 03 ___ minimal contact; instructions, intake interview, etc. ; but not wait listed
- 04 ___ parole-treatment as usual
- 05 ___ school-treatment as usual (if treatment delivered in a school setting)
- 06 ___ probation-treatment as usual(if treatment delivered in a juvenile justice setting)
- 07 ___ institutionalization-treatment as usual
- 08 ___ other-treatment as usual

- 09 ___ attention placebo, e.g., control receives discussion, attention, or dilute version of treatment
- 10 ___ treatment element placebo; control receives target treatment except for defined element presumed to be the crucial ingredient
- 11 ___ alternate treatment; control is not really a "control," but another treatment (other than "usual" treatment) being compared with the focal treatment [Such comparisons are not eligible for coding unless the alternate treatment is designed as a contrast to a focal treatment, e.g., a very dilute dose or a "straw man" not expected to perform well.]
- 12 ___ cannot tell

Overall confidence of judgment on what control group receives: [SH55]

Very Low 1 (Guess)	Low 2 (Informed Guess)	Moderate 3 (Weak Inference)	High 4 (Strong Inference)	Very High 5 (Explicitly Stated)
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Describe the character of the control group briefly with particular attention to any experiences they have in common with the treatment group (e.g., "also on probation") and what part of their experience is distinctly different from that of the treatment group (e.g., "in regular institution rather than cottages and doesn't participate in the guided group program").

WHAT'S DONE TO TREATMENT GROUP

Source of clients for treatment [SH56] (check best one): [Note: The issue here is who took the initiative in identifying or choosing subjects for the treatment, e.g., were they identified by teachers or by researchers using the teachers' records?]

- 1 ___ sought treatment voluntarily ("self-referral," "walk-in")
- 2 ___ referred/identified by parents, friends
- 3 ___ referred/identified by non CJ community agency (schools, teachers, mental health, etc.)
- 4 ___ referred/identified by CJ agency, but "voluntary" (e.g., via police, probation, court, etc.)
- 5 ___ referred/identified by CJ agency, but participation mandated (e.g., by court, terms of probation, institution). [Assume it is mandatory if it is a CJ agency unless there is specific information that it is voluntary. Don't override a specific statement that it's voluntary even if you presume, there is some coercion.]
- 6 ___ referred/identified by multiple sources, none predominates
- 7 ___ solicited or arranged by researcher
- 8 ___ other _____
- 9 ___ cannot tell

Who administers treatment [SH61](check best one):

- 1 ___ criminal justice or juvenile justice personnel (e.g., police, probation officer, judge, etc.)
- 2 ___ school personnel (e.g., teachers, principals)
- 3 ___ mental health personnel (public agency)
- 4 ___ mental health personnel (private agency, counselors, etc.)

- 5 non mental health professionals, counselors, consultants, etc. ; e.g., vocational counselors
- 6 laypersons, e.g., volunteers, college students, ex-delinquents
- 7 researcher/research team
- 8 other: _____
- 10 mixed, multiple personnel (subjects in contact with more than one treatment delivery person & none of them is clearly focal). Do not use this option when different subjects are seeing different types of personnel. In those cases, please try to select a focal personnel type.
- 9 cannot tell

Format of treatment sessions [SH62] (The primary emphasis of this question is on who was present with the juvenile during treatment, emphasis on number of providers present is secondary.)

- 1 juvenile alone (self-administered treatment) [This refers to a treatment in which nobody else is present. Restitution performed in a group does not belong here; juveniles sent out to get a job go here.]
- 2 juvenile and provider, one on one
- 3 juvenile group, one or more providers
- 4 juvenile with family/parents, one or more providers
- 5 parents only, juvenile not present
- 6 teachers, probation officers etc. only; juvenile not present
- 7 mixed; no single format predominates
- 8 other: _____
- 9 cannot tell

Nature of treatment site: [SH63] site on which treatment generally delivered (check best one in each set): [Note: Customary treatment location irrespective of who administers treatment. If restitution is the treatment, the site will be mixed, none predominates.]

- 1 Public facility (i.e., owned and operated by city, county, state, federal government body), JUSTICE-ORIENTED, e.g., probation dept, police station, reform school
- 2 Public facility (i.e., owned and operated by city, county, state, federal government body), NOT JUSTICE-ORIENTED, e.g., school, dept. mental health
- 3 Private facility, e.g., YMCA, private counseling agency, university (even if state university)
- 4 mixed, none predominates
- 5 other: _____
- 6 cannot tell

Custodial/residential facility? [SH64] e.g., camp, reformatory, Psychiatric hospital, halfway house, foster home, etc.

- 1 yes
- 2 no
- 3 mixed, neither predominates
- 4 cannot tell

Formal setting? [SH65] (e.g., office, classroom, institution, laboratory, etc.)

- 1 ___ yes
- 2 ___ no, informal, e.g., outdoors, streets, juvenile's home, etc.
- 3 ___ mixed, neither predominates
- 4 ___ other: _____
- 5 ___ cannot tell

SERVICE CODING & TREATMENT DESCRIPTION

Treatment description [SH100txt]

Relationship of Juveniles in Treatment to the Juvenile Justice System [SH100]

The purpose of this item is to capture the status of the juvenile at the time treatment was actually received. Juvenile justice supervision means that they are officially supervised while on probation, in a residential/custodial facility, or on parole/aftercare and can be sanctioned by the JJ authorities if they fail to comply with the terms of that supervision. A juvenile is not under the authority of the JJ system if they are not being monitored on an on-going basis by JJ authorities. Non-JJ supervision can include juveniles that were routed to services via the JJ system (diversion), but are participating in the services without official JJ supervision.

Yes, juveniles under JJ supervision (under the authority of the JJ system) when they received the treatment

On probation (under probation supervision but not in custodial institution nor aftercare/parole after a term in a custodial institution).

- 01 ___ on probation, in community (or no indication that not). Describe:
- 02 ___ on probation but in a residential or partially residential setting, e.g., day treatment, probation camp. Describe:

In a juvenile justice custodial institution, e.g., training/reform school, borstal, detention center, juvenile correctional institution.

- 03 ___ "regular" juvenile correctional institution (or no indication that not). Describe:

- 04 ___ alternative or special form of custodial institution, e.g., cottage format, psychiatric correctional ward. Describe:

On JJ supervised parole of aftercare after a term in a custodial institution (after incarceration).

- 05 ___ nonresidential JJ parole or post-custodial aftercare. Describe:
- 06 ___ partial residential JJ parole or post-custodial aftercare, e.g., day treatment program. Describe:
- 07 ___ fully residential JJ parole or post-custodial aftercare, e.g., group home, halfway house. Describe:

Any other form of JJ supervision or under JJ authority but cannot tell which of above is applicable.

- 08 ___ other JJ supervision. Describe:

No, juveniles not under JJ supervision when treatment received (through some route such as diversion by law enforcement or juvenile justice personnel, and are not under JJ supervision while in treatment.)

Note: If juveniles initially involved with police or juvenile justice system but then diverted away from official JJ processing and released or sent to a community program, note this in the write-in space for description for the option to which it applies. Such a situation may involve the threat of JJ processing if treatment is not completed but the juvenile will not actually be under JJ supervision at the time of treatment following the diversion.

09 ___ in the community with no apparent constraints or residential program arrangement. Describe:

10 ___ in a non-JJ partially residential setting, e.g., non JJ day treatment program, alternative school. Describe:

11 ___ in a non-JJ fully residential setting, e.g., group home, foster care. Describe:

12 ___ other non JJ situation. Describe:

All other or cannot tell which of the above apply.

13 ___ Cannot tell. Describe:

Treatment Components

Identify all the treatment components, elements, activities, experiences, etc. reported as part of the intervention. Note that to qualify, a component should be something the treatment group receives that the control group does not receive. At least one component must be rated for every intervention but as many components can be rated as needed to describe every distinct element reported.

Some items are listed multiple times and are indicated with a similar superscript. Although an item may be listed under several categories, it should only be rated one time for each intervention. Items that are in bold type are considered "brand name" interventions. These should only be chosen if mentioned specifically by name within the study report(s). If the treatment description sounds like it has all or most of the components of a particular "brand name" intervention, but it is not specifically called by that name, place it in the "similar to" category.

It is important to assign a code to all treatment components mentioned for each intervention using the numerical scheme below. Initially you should assume that each such component will receive a rating of "1," like "1" was a checkmark to check off every item present. However, if there is any indication in the study report(s) that one or more components are of lesser scope or importance than others, then those secondary items should be coded "2." A component might be identified as secondary in this sense because:

- (a) it is clearly a subcomponent of something else (e.g., role-playing as one of several parts of an attitude change session) or there is a broad program type to be coded "1" (e.g., interpersonal skills building) and the component is only one aspect of that (e.g., anger management exercises);
- (b) it is provided to only a subset of juveniles or only occasionally in contrast to other components provided to all juveniles or on all occasions (e.g., a service that some juveniles are referred to only if they need it while others are provided to all)
- (c) some other distinction is made that shows that the component is not of equal importance, stature, or scope as others that are coded "1."

If there is no basis for distinguishing any components as having less importance, scope, stature, etc. than any other, code all as "1." If you have some reason to doubt that all the

components are at the same level, but a clear determination cannot be made about which should be coded "1" and which "2," then code all the uncertain components as a "9."

- 1 treatment component with no indication that it is a subcomponent, of less scope, provided to fewer juveniles, etc. than any other component
- 2 a treatment component that is a subcomponent, of less scope, provided to fewer juveniles, etc. than some other component
- 8 one of a set of components that may be at different levels ("1" vs "2" above) but it is uncertain which is which (i.e. cannot clearly and comfortably determine if a component is a "1" or "2")

JJ or CJ-type Treatment Elements

- [tc1] probation, regular (compared to no probation supervision), describe:
- [tc3] parole/aftercare, regular (compared to no parole/aftercare supervision), describe:
- [tc5] institutionalization, regular (jail, detention center, prison, etc. compared to no institutionalization), describe:
- [tc7] early release from institution, probation/, or parole (shortened sentence) describe:
- [tc8] furloughs from custody (e.g., family visits, field trips without JJ staff members), describe:
- [tc123] work release program (e.g., work in the community while still incarcerated), describe:
- [tc124] work program (work in the institution while still incarcerated), describe:
- [tc9] intensive supervision or monitoring, reduced caseload, smaller units, more frequent drug screens, etc., describe:
- [tc10] community monitoring (e.g., sex offender registry, electronic bracelet), describe:
- [tc11] drug court (e.g., more lenient sentencing to substance abuse treatment in closed facility), describe:
- [tc12] prison visit, not overnight (e.g., scared straight, etc.), describe:
- [tc13] short term "shock" incarceration (juvenile stays overnight at least 1 night), describe:
- [tc14] deterrence threat (e.g., straight talk with police officers who emphasize seriousness of situation, "lecture and release"), describe:
- [tc137] Teen Court, type of alt. sentencing & peer review/sentencing format
- [tc15] military style "boot camp" (relatively short term), describe:
- [tc16] restitution, fines or payment/service to victim or victim's family, describe:
- [tc17] restitution, community service (e.g., landscaping, hospital, nursing homes, etc.), describe:
- [tc138] restitution, contact with victim (e.g., apology letters, apology in person)
- [tc18] diversion specifically stated as a descriptor of the program, describe:
- [tc2] alternative to probation (would be on probation but something else instead), describe:
- [tc4] alternative to institutionalization (would be institutionalized but something else instead), describe:
- [tc6] alternative to parole/aftercare (would be on parole/aftercare but something else instead), describe:
- [tc122] receives treatment/service program instead of JJ supervision; describe:
- [tc125] receives probation instead of greater supervision, e.g., institutionalization; describe:
- [tc136] receives informal probation instead of greater supervision, e.g., regular probation, institutionalization; describe:
- [tc19] other, describe:

Residential Components

- [tc20] psychiatric facility, describe:
- [tc21] teaching family home, describe:
- [tc21s] similar to teaching family home, describe:
- [tc139] emergency shelter/shelter house
- [tc22] group home; foster parents, describe:
- [tc23] wilderness camp, short term- two weeks or less in camp (e.g. Outward Bound); describe:
- [tc118] wilderness camp, not short term- more than two weeks; describe:
- [tc15] boot camp; describe:
- [tc25] other camp; describe:
- [tc26] residential drug treatment, describe:
- [tc27] boarding school / residential training school, (cottage model, small scale/disaggregated), describe:

- [tc28] guided group interaction, in a residential setting (e.g., offenders determine rules & punishment for infractions), describe:
- [tc28s] similar to guided group interaction, describe:
- [tc111] positive peer culture, in a residential setting (e.g., members are responsible for themselves as well as others and serve as catalysts for helping others and advancing the group), describe:
- [tc111s] similar to positive peer culture, describe:
- [tc29] therapeutic community, describe:
- [tc29s] similar to therapeutic community, describe:
- [tc30] milieu therapy, describe:
- [tc30s] similar to milieu therapy, describe:
- [tc31] other, describe:

Educational Components

- [tc135] school-based: program provided in regular school setting; describe:
- [tc32] special classes or educational field trips, describe:
- [tc33] continuation/additional school, (not employment related), describe:
- [tc34] tutoring, or current level of education (not employment related), describe: by whom?
- [tc35] remedial education, (not employment related), describe:
- [tc120] alternative school, as alternative for regular (e.g., public) school, describe:
- [tc160] educational testing, describe:
- [tc140] assigning homework, describe:
- [tc141] teaching juveniles study techniques, describe:
- [tc142] academic monitoring (e.g., monitoring homework, academic performance, attendance, etc.), describe:
- [tc161] computer classes (academic-separate from vocational), describe:
- [tc36] other, describe:

Counseling Components

- [tc37] individual counseling, therapy, psychotherapy, guidance describe: by whom?
- [tc38] group counseling, therapy, psychotherapy describe: by whom?
- [tc127] group counseling, led by a facilitator but not necessarily "talk therapy" (e.g., facilitated discussions), describe:
- [tc112] guided group interaction, (nonresidential), describe:
- [tc112s] similar to guided group interaction(nonresidential), describe:
- [tc113] positive peer culture (nonresidential), describe:
- [tc113s] similar to positive peer culture (nonresidential), describe:
- [tc114] multi-systemic therapy, describe:
- [tc114s] similar to multi-systemic therapy, describe:
- [tc143] client-centered therapy
- [tc40] family counseling, family systems, functional family therapy, etc. (work w/whole family or at least juv and parent), describe:
- [tc144] multi-family groups, (e.g., "family group" participates in counseling as a whole along with other families, describe:
- [tc41] parent counseling without juvenile, individual, describe:
- [tc42] parent counseling without juvenile, parent groups, describe:
- [tc43] drug/alcohol counseling (see also Drug and Alcohol Components), describe:
- [tc44] casework: support/services provided by caseworker (not case manager) interceding with others, helping juvenile, etc. ("all-purpose"); describe:
- [tc145] in home counseling, counseling takes place in the home of the juvenile or family
- [tc45] mediation (counselor mediates/arbitrates between parties in conflict or victim and offender), describe:
- [tc46] recreational therapy, (see also Recreational Components), describe
- [tc47] reality therapy; describe:
- [tc146] sex offender counseling
- [tc48] crisis counseling, response (e.g., come out to house to intervene), describe:
- [tc119] non-specific counseling (not otherwise identified), describe:
- [tc49] other, describe:

Recreational Components

- [tc46] recreational therapy, describe:

- [tc121] recreation (non-specific), describe:
- [tc51] fitness programs (e.g., weights, sports--not for competition, increased exercise), describe:
- [tc52] sports, athletics, or athletic events, describe:
- [tc53] parties, games, recreational outings, field trips (other than educational), describe:
- [tc147] adventure-based activities, ropes course, canoeing, etc.
- [tc54] arts & crafts, drama, music, dance activities, games, etc. (groups and individually), describe:
- [tc55] other, describe:

Interpersonal/Personal Skill Components

- [tc56] interpersonal skills building (e.g., communication skills, role playing, assertion training), describe:
- [tc57] resisting group pressure, responding to persuasion, describe:
- [tc58] peer/group interaction (meetings, discussions, activities), describe:
- [tc59] mentor provided for juvenile (peer, volunteer, layperson, "big brother"), describe:
- [tc60] juvenile served as mentor as part of tx, describe:
- [tc61] moral education, training; religious or spiritual program, describe:
- [tc62] interpersonal problem solving, conflict resolution, decision making, describe:
- [tc148] personal/self development training (e.g., self esteem building, focusing on indiv. strengths, self-awareness, leadership, goal setting, etc.)
- [tc63] anger management (other than cognitive behavioral); stress management, (see also cog anger management), describe:
- [tc64] other, describe:

Cognitive Skills/Cognitive Restructuring Components

- [tc115] cognitive/behavioral intervention (overall focus on altering irrational thinking and behavior), describe:
- [tc115s] similar to cognitive/behavioral intervention, describe:
- [tc65] cognitive restructuring (monitoring automatic thoughts, correcting distortions/thinking errors/biases, etc.), describe:
- [tc66] cognitive anger management (hassle logs, identify triggers, use self-statements and anger reducers, etc.), describe:
- [tc67] moral reasoning; empathy & victim impact (moral dilemmas; perspective taking; empathy for victim), describe:
- [tc68] attitude change, accepting authority & rules, new attitude towards law, court, police, peers, etc., describe:
- [tc69] relapse prevention plan; interventions for lapses; high-risk situation planning, describe:
- [tc70] other, describe

Behavioral Components

- [tc71] behavioral contracting, contingency management, describe:___behavior modification; (e.g., rewards; shaping of specific behaviors; reinforcement for desired behaviors), describe:
- [tc72] behavior modification (e.g., rewards, shaping, reinforcement of behaviors, etc.)
- [tc73] punishment, discipline (e.g., segregation, privileges taken away, denial of family visits), describe:
- [tc74] token economy - tokens earned, redeemable for privileges, goods, etc., describe:
- [tc75] learning by modeling, describe:
- [tc76] desensitization, exposure+response prevention, flooding, describe:
- [tc77] relaxation training (e.g., deep breathing, counting backward, imaging of peaceful scenes), describe:
- [tc78] meditation (mindfulness therapy, living in the moment, yoga, transcendental meditation), describe:
- [tc149] role playing (non-specific or a general activity, not a technique used with another component), describe:
- [tc79] anger reducing techniques (e.g., push-ups, time-outs, walking around) -(see also cognitive anger management), describe:
- [tc80] other, describe:

Employment Components

- [tc81] remedial education, employment related; any functional education (literacy, GED, arithmetic), describe:

- [tc82] tutoring (one on one), teaching machine, help to achieve academic success (employment related), describe:
- [tc116] continuing education (employment related) such as special or advanced classes, describe:
- [tc83] employment; supervised group work program, describe:
- [tc128] employment; job placement for individual juveniles, describe:
- [tc84] career counseling, (career exploration, job readiness, job searching skills, interview skills), describe:
- [tc85] job training -- learning new job content, trade, specific skills (e.g., welding, construction, computer), describe:
- [tc150] vocational field trip (separate from educational or recreational field trip), describe:
- [tc151] non-paid work service (e.g., community service not in conjunction with restitution, etc.), describe:
- [tc162] computer classes (vocational-separate from academic), describe:
- [tc186] other, describe:

Life Skills/Needs Components

- [tc88] managing daily life problems (problem solving, social/moral reasoning, balancing responsibilities), describe:
- [tc87] personal management (attendance, housing issues, time/money management skills), describe:
- [tc89] challenge programs, short term (e.g. survival training, outward bound), describe:
- [tc90] parenting / family skills for parent of target juvenile; (parent effectiveness training alone or with juvenile), describe:
- [tc152] provides necessities (e.g., clothes, transportation, food, etc.), describe:
- [tc91] health-related prevention (pregnancy, STD), describe:
- [tc153] health education (e.g., personal hygiene, nutrition, etc.), describe:
- [tc154] legal education (juveniles learn about the judicial system and judicial processes), describe:
- [tc92] other, describe:

System-Oriented Components

- [tc93] advocacy on behalf of youth (must be clearly identified as all or part of the treatment program), describe:
- [tc94] consultation, assistance to schools/agencies responsible for juveniles' welfare, describe:
- [tc95] special training for service providers, (school staff, counselors, probation officers), describe:
- [tc96] facilitative assistance for service providers, other than training (group discussions, information sharing), describe:
- [tc97] parents of juvenile offender receive skill building intervention other than parenting skills (e.g., w/o juvenile offender), describe: (Should this field be moved to a more appropriate section? Life Skills, etc.)
- [tc155] regular contact with parents (parental involvement), describe:
- [tc98] outreach workers, streetworkers (service personnel working with gangs, schools, etc. to solve problems, prevent conflict, etc.); describe
- [tc99] other, describe:

Drug and Alcohol Components

- [tc100] drug, alcohol education, describe:
- [tc43] drug, alcohol counseling/therapy, (AA or NA), describe:
- [tc156] drug testing (conducted either on a regular or random basis), describe:
- [tc102] other, (see also Behavioral Components), describe:

Pharmacological, Medical, Biological Components

- [tc103] psychiatric intervention (e.g., access to psychiatrist for evaluations & prescriptions), describe:
- [tc157] medical/emergency service, describe:
- [tc104] change in behaviors, diet, medication, sleep, etc., describe:
- [tc105] physical examination and necessary treatment (medicine), describe:
- [tc106] other, describe:

Multimodal Components

- [tc107] service brokerage: evaluation/assessment of service need, referral to treatment; provided by an agency, describe:
- [tc158] psychological assessment (separate from assessment for service brokerage), describe:

- [tc159] individualized treatment plans provided for juveniles, describe:
- [tc108] multimodal service - program is tailored specifically to most or all juveniles receiving multiple tx components, (not simply having multiple components), describe:
- [tc109] case management (case manager identifies needs, oversees services by multiple agencies, etc. but doesn't provide services themselves, describe:
- [tc110] other, describe:

All Other

[tc117 & tc129-tc134]

any other treatment component, element, technique, etc. identified in study report(s) and not coded above. Describe with at least moderate detail if possible:

Overall confidence in judgment about type of treatment: [SH59]

Very Low	Low	Moderate	High	Very High
1	2	3	4	5
(Guess)	(Informed Guess)	(Weak Inference)	(Strong Inference)	(Explicitly Stated)

___ NA for cannot tell

TREATMENT IMPLEMENTATION/STRENGTH/INTEGRITY

Approximate duration of treatment in WEEKS [SH68] from first treatment event to last treatment event. Include treatment received by treatment subjects up to the time of posttest measurement. Divide days by 7 and round; multiply months by 4.3 and round. Code 999 if cannot tell. Estimate for this item if necessary and if you can come up with a reasonable order of magnitude number. If no other information is provided in the study, you can assume that probation lasts 6 months and crisis counseling lasts 2 weeks.

[Note: For this item and the next three use "facts" if available, otherwise "format". Make an informed guess about the amount and frequency of contact whenever possible. Even if the guess is inaccurate, it will help give an order of magnitude estimate for the analyses' Assume that a counseling session and a school period are probably each an hour long.]

Determined by [SH69] (select one):

- 1 ___ facts (data about how long Ss in treatment, e.g., average S attended 7.3 weeks)
- 2 ___ format (standard package info only, e.g., a ten-week program)
- 3 ___ other estimate (e.g., coder's best guess)

Frequency of treatment event/contact [SH70] (check best one) [Note: This refers only to the element of treatment that is different from what the control group receives. Estimate for this item if necessary and if you can come up with a reasonable order of magnitude number.]

- 1 ___ continuous (e.g., milieu therapy, residential program, pharmaceutical therapy, parent effectiveness training)
- 2 ___ daily contact (not 24 hours of contact per day but some treatment during each day, perhaps excluding weekends)
- 3 ___ 2-4 times a week
- 4 ___ 1-2 times a week
- 5 ___ less than weekly
- 6 ___ cannot tell

Determined by [SH71] (select one): (for continuous treatments assume format unless have specific information about discrepancies from the prescribed format)

- 1 ___ facts (data)
- 2 ___ format (standard package/plan) [code continuous treatments here]
- 3 ___ other estimate (e.g., coder's best guess)

Approximate mean HOURS of contact per WEEK [SH72] (888 if institutional): actual contact time between juvenile and provider or treatment activity per week per juvenile if reported or calculable (Round to one decimal place. Code 888 for institutional residential, or around the clock program; code 999 if not available) [Note: Estimate for this item if necessary and if you can come up with a reasonable order of magnitude number.]

Determined by [SH73](select one):

- 1 ___ facts (data)
- 2 ___ format (standard package/plan) [code continuous treatments here]
- 3 ___ other estimate (e.g., coder's best guess)

Approximate mean HOURS of TOTAL contact [SH74] over full duration of tx: contact between juvenile and provider or treatment activity over full duration of treatment per juvenile if reported or calculable (Round to whole number. Code 8888 for institutional, residential, or around the clock program; code 9999 if not available) [Note: Estimate for this item if necessary and if you can come up with a reasonable order of magnitude number. No decimals here, whole numbers only.]

Determined by [SH75](select one):

- 1 ___ facts (data)
- 2 ___ format (standard package/plan)
- 3 ___ other estimate (e.g., coder's best guess)

Overall confidence in estimates of treatment contact: [SH76]

Very Low	Low	Moderate	High	Very High
1	2	3	4	5
(Guess)	(Informed Guess)	(Weak Inference)	(Strong Inference)	(Explicitly Stated)

___ NA for cannot tell

Evidence of uncontrolled variation in implementation? [SH77]

Based on evidence or author acknowledgment, was there any uncontrolled variation or degradation in implementation or delivery of treatment, e.g., high dropouts, erratic attendance, treatment not delivered as intended, wide differences between settings or individual providers, etc. (check best one): [Note: This question has to do with variation in treatment delivery not research contact. E.g., there is no "dropout" if all juveniles complete treatment even if some fail to complete the outcome measures; degradation does not mean attrition per se. Implementation and delivery of treatment to the treatment group partly overlaps the research methodology attrition issue but also includes other aspects involving the treatment itself. Assume that there is no problem if one is not specified and the format seems reasonably structured.]

- 1 ___ yes (describe: _____)
- 2 ___ possible (describe: _____)
- 3 ___ no, apparently implemented as intended
- 4 ___ cannot tell

Taking all evidence into consideration, rate the intensity of the treatment along the two dimensions below:

Rate amount of meaningful contact [SH78] between subject and treatment (frequency, duration). Amount of meaningful contact between juvenile and treatment (frequency, duration): [Note: Use the number of hours of contact to determine whether the treatment falls into the bottom, middle, or high end of the scale and then adjust the rating according to the meaningfulness of the contact. Try to reflect any slippage between format of treatment and actual amount of contact. Fifteen hours of basketball would rate lower than fifteen hours of counseling because there is less contact with the change agent. A total institution experienced for a long time would rate a "7", a two week wilderness program or a 10 week, once a week crisis intervention program would rate about a "4", high slippage and low participation would yield a rating of "1" or "2". A 2 hour per day program would be about a 6 which would be moved down if there is lots of slack time. Fifteen minutes per week would be about a 1; an hour per week or less would be a 2 or 3.

Trivial 1 2 3 4 5 6 7 Substantial

___ cannot tell

Rate intensity of typical treatment event [SH79] (involving, emotional, etc.)
 Intensity of typical treatment event; how involving, emotional, memorable, etc. per contact irrespective of amount of contact: [Note: Intensity relates to the likelihood that this treatment will cause a psychological change or emotional reaction in the juvenile whether therapeutic or not. Scared straight or a wilderness program would rate a "6" or "7", standard counseling would rate somewhere between "3" and "5", and a boy's club after-school basketball program or informal probation would rate somewhere between "1" and "3".]

Weak 1 2 3 4 5 6 7 Strong

___ cannot tell

Overall confidence in treatment ratings: [SH80]

Very Low 1 (Guess)	Low 2 (Informed Guess)	Moderate 3 (Weak Inference)	High 4 (Strong Inference)	Very High 5 (Explicitly Stated)
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___ NA for cannot tell

DEPENDENT VARIABLES CODING

For the aggregate experimental comparison, identify all of the dependent (outcome) variables on which treatment vs. control group comparisons can be made (whether actually made or not) distinguishing delinquency vs. nondelinquency measures. If it is hard to decide whether a measure reflects delinquency or not, err on the side of calling it a nondelinquency measure so that the delinquency measures used in the analyses will be fairly unambiguous. Each dependent variable represents a contrast between two groups often reported as a test of significance.

Exclude variables that reflect only the degree of implementation of the intervention. Exclude variables that do not apply to the entire aggregate comparison, e.g., measures that subdivide categories of another measure such as single vs. multiple offenses only for those that recidivate. Also exclude variables that do not represent the status (behavior, attitudes, etc.) of the juveniles in the treatment and control groups but rather the status of others, e.g., teachers, parents, juveniles outside the experiment. Note that it is okay for teachers, parents, etc. to be the primary treatment recipients (e.g., parent effectiveness training) but dependent variables are nonetheless only coded for the subsequent status of the juveniles involved (e.g., children of those parents). Note also that it is okay for a dependent variable to represent the observations, opinions, etc. of someone other than the juvenile so long as it is something about the juvenile on which they are reporting (e.g., parent opinion about whether the juvenile has improved).

If the same variable is used repeatedly for follow-up, etc. count it only once. Otherwise, list every dependent variable that can be identified as having been used in the study irrespective of how much information is available on it. Write in a brief label for each below:

DELINQUENT BEHAVIOR OUTCOME MEASURES (LIST ALL):

Definition: Delinquency outcome measures are those that index the degree of criminal or delinquent behavior (constituting at least one chargeable offense). Direct reports of criminal/ delinquent behavior are always included here whether self-report from the delinquent or records from police, probation, courts, etc. Also included here are other reports of delinquent behavior such as some school or teacher reports, e.g., having to do with disciplinary actions related to (chargeable offenses). The key factor in the delinquency vs. nondelinquency decision are (a) the measure has to do with behavior; non-behavioral constructs, e.g., attitudes, personality trait measures, etc., should be classified as nondelinquency; (b) the activity involved is officially defined delinquency, or related, or else is antisocial behavior in the sense of causing clear harm to persons, property, or self. For status offenses (those that are only offenses because the perpetrators are minors, e.g., runaway, truancy, curfew, incorrigible) it is a delinquent behavior if it is presented as an offense in a law enforcement framework (e.g., police or court records), but is a non-delinquent behavior if it is presented in a non-law enforcement framework (e.g., school records). Fighting or other clearly antisocial behaviors (chargeable offenses) (extorting money, beating up fellow students, etc.) are delinquent regardless of the framework in which they are presented. Indicate the appropriate numbers below:

Verbal tags: _____

Code each of the above variables for which some treatment group vs. control group comparison can be made, even if only a statement of nonsignificance, no difference, or direction of effects. Code only those DVs for which there is a statement of the direction of the effect even if that statement is that there was no significant difference. [Note: There will be four types of dependent measures: those that were measured but not mentioned (lost), those that were mentioned with no statement of results, those that were mentioned with a statement of significance or direction, and those that provide enough information to calculate an effect size. All but the first category should be listed here; all in the third and fourth categories should be coded.]

|__|__| Number of delinquency variables selected for coding [SH92]

|__|__| Number of delinquency variables omitted [SH93]

NONDELINQUENCY OUTCOME MEASURES (LIST ALL):

Verbal tags: _____

Code each of the above nondelinquency variables for which some treatment group vs. control group comparison can be made, even if only a statement of nonsignificance, no difference, or direction of effects. Code only measures representing the behavior, attitudes, perceptions, etc. of juveniles, not measures of the behavior, etc. of others, e.g., teachers, parents, etc. even if they are the recipients of the treatment. Place a checkmark on the list above beside each variable selected for coding. Indicate the appropriate numbers below:

|__|__| Number of nondelinquency variables selected for coding [SH94]

|__|__| Number of nondelinquency variables omitted [SH95]

Delinquency Variables

Code the following items for each delinquency variable selected for coding.

Type of delinquency/recidivism represented [D1] by this measure (what's counted, irrespective of source of information and authors' label or description of the measure) (check best one):

- 01 ___ antisocial behavior, not specifically restricted to criminally delinquent acts
- 02 ___ unofficial delinquent behavior, e.g., from self or observer's report
- 03 ___ school disciplinary actions relating to delinquent/antisocial behavior
- 04 ___ arrests or police contacts
- 05 ___ probation contact, violations, actions, etc.
- 06 ___ court contact, actions, petitions, convictions, appearances, etc., excluding institutionalization
- 07 ___ parole contact, violations, action, etc., excluding reinstitutionalization
- 08 ___ institutional disciplinary actions (relating to delinquent/antisocial activity)
- 09 ___ institutionalization or reinstitutionalization
- 10 ___ catchment area crime/arrest rates (Treatment for entire area)
- 11 ___ catchment area JJ indicators, e.g., probation, court, parole events
- 12 ___ other: _____

13 ___ cannot tell

Definitional boundaries for measure [D2] (check best one):

01 ___ all "offenses" included (except, perhaps, traffic offenses)

Restricted by type

02 ___ substance abuse only

03 ___ property crime only

04 ___ person crimes only

05 ___ status offenses only

06 ___ criminal offenses only, i.e., all but status offenses

07 ___ other

Restricted by severity

08 ___ only major/felony

09 ___ only minor/misdemeanor

10 ___ other severity restriction

11 ___ other type of restriction: _____

12 ___ cannot tell

Elements reported in measure: [D3] Elements reported in this delinquency measure irrespective of type incident and reporting source (check best one):

01 ___ global dichotomy or polychotomy (e. g., offended or recidivated, yes/no)

02 ___ summed dichotomous (e.g., sum of yes/no on list of specific offenses)

03 ___ frequency or rate, (count of incident; incidents per 1000 persons)

04 ___ severity (seriousness rating or index)

05 ___ event timing (e.g., days without recidivism; time to first offense)

06 ___ proportion or amount of time in custody, under supervision, etc.

07 ___ rating of amount of delinquency, severity, change, etc. (e.g., therapist rating of extent delinquent behavior improved)

08 ___ more than one of above elements combined in composite measure

09 ___ other: _____

10 ___ cannot tell

Source of delinquency data [D4] (check best one):

Self report

01 ___ paper & pencil

02 ___ personal interview

03 ___ telephone interview

04 ___ other: _____

05 ___ cannot tell

Other reports

06 ___ family

07 ___ peers

08 ___ teacher(s)

09 ___ therapist/service provider

10 ___ other: _____

11 ___ cannot tell

Records

12 ___ school

13 ___ police

14 ___ probation

- 15 ___ court
- 16 ___ custodial institution
- 17 ___ regional crime statistics
- 18 ___ other: _____
- 19 ___ cannot tell
- 20 ___ any other: _____
- 21 ___ cannot tell which of above categories

NonDelinquency Variables

Code the following items for each nondelinquency variable selected for coding.

Type of construct represented: [N1] Construct represented by this measure (check best one): [Note: Some categories, like "attitudes" occur in various sets below. Approach this item by first identifying the most appropriate molar category, e.g., psychological adjustment, interpersonal, etc., then finding the best item within that category for the particular measure at issue.]

Psychological adjustment

- 01 ___ attitudes about delinquency, personal conduct, police, etc.
- 02 ___ self-esteem, self concept
- 03 ___ other personality trait
- 04 ___ behavioral problems checklist, etc.
- 05 ___ knowledge about drugs, ethics, moral dilemmas, law, etc.
- 06 ___ mood, anxiety, depression, emotionality, etc.
- 07 ___ other: _____

Interpersonal adjustment

- 08 ___ attitudes about interpersonal issues, family, peers, etc.
- 09 ___ family functioning, communication, household chores, etc.
- 10 ___ peer relations, etc.
- 11 ___ social skills
- 12 ___ other: _____

Community adjustment

- 13 ___ attitudes about community, citizenship, etc.
- 14 ___ perceptions by merchants, community officials etc.
- 15 ___ other: _____

School adjustment

- 16 ___ attitudes about school, teachers, etc.
- 17 ___ noncriminal/non-delinquent disciplinary
- 18 ___ attendance; tardiness
- 19 ___ dropping out; graduating
- 20 ___ other: _____

Academic improvement

- 21 ___ achievement (content mastery in topic area)
- 22 ___ grades
- 23 ___ cognitive, general (e.g. IQ)
- 24 ___ other: _____

Vocational adjustment

- 25 ___ attitudes toward work, employment, careers, etc.
- 26 ___ Job attendance, tardiness
- 27 ___ employment status (gets/keeps job)
- 28 ___ employment learning (job content, skills)

- 29 ___ vocational learning (job finding, interview, skills, simulations)
 30 ___ other: _____

Adjustment to treatment

- 31 ___ attitudes about treatment, therapist, program, etc.
 32 ___ attendance, participation in treatment
 33 ___ treatment progress, e.g., rating
 34 ___ status at termination of treatment
 35 ___ post-treatment prognosis
 36 ___ other: _____

Institutional adjustment

- 37 ___ attitudes re institution, staff, etc.
 38 ___ program behavior, general
 39 ___ rule compliance (non criminal)
 40 ___ getting along with staff, peers
 41 ___ post release prognosis
 42 ___ other: _____
 43 ___ global adjustment/improvement; individualized criteria (e.g., global rating)
 44 ___ all other: _____

Confidence in construct: [N2] Confidence in identification of construct represented by measure:

Very Low	Low	Moderate	High	Very High
1	2	3	4	5
(Guess)	(Informed Guess)	(Weak Inference)	(Strong Inference)	(Explicitly Stated)

Type of measure [N3] (check best one):

- 1 ___ psychometric, standardized, multi-item (e.g., achievement, attitude, personality)
 2 ___ criterion referenced or goal setting; mastery; behavioral objectives
 3 ___ behavioral observation; behavioral report; behavioral record or charts
 4 ___ survey type items, questionnaire, self report form
 5 ___ judgment ratings; judgment coding from observation by other(s)
 6 ___ archival report (e.g., school, agency records)
 7 ___ projective test (e.g., TAT, Rorschach)
 8 ___ other: _____
 9 ___ cannot tell

Origin of measure [N4] (check best one):

- 1 ___ "off the shelf" named measure or scale
 2 ___ taken intact from other research, not in general use
 3 ___ adapted or modified from other source
 4 ___ pre-existing records or archives
 5 ___ new instrument apparently developed for this evaluation
 6 ___ other: _____
 7 ___ cannot tell

Source of information: [N5] Primary source of information for measure (check best one): [Note: Issue here is who is forming the content recorded in the measure. E.g., if a person fills out a form or responds to an interview, that person is the information source.]

If an observer rates or judges another person, however, it is the observer not the person observed, who is the source.]

- 1 juveniles themselves (e.g., self report, survey)
- 2 front line service provider; therapist; caseworker
- 3 program manager, administrator, agency staff, etc. (not front line)
- 4 researchers acting directly as observers, raters, etc.
- 5 other observers or participants (e.g., client families, employers)
- 6 records, archives
- 7 other: _____
- 8 cannot tell

All Dependent Variables. Code the following items for ALL delinquency and nondelinquency variables.

Properties demonstrated, validity: [DN1]

- 1 yes
- 9 no, cannot tell

Properties demonstrated, reliability: [DN2]

- 1 yes
- 9 no, cannot tell

Reliability coefficient: [DN2R] enter reliability coefficient, if given (-99 if missing)

Properties demonstrated, sensitivity: [DN3]

sensitivity/responsiveness/discriminant ability [i.e., indication that measure capable of responding to treatment effect]

- 1 yes
- 9 no, cannot tell

Treatment-test overlap: [DN5] Rate the extent to which the treatment content overlaps or resembles the content of this measure, e.g., as in "teaching the test." At one end of the continuum are measures that are virtual duplicates of the treatment, e.g., a behavioral treatment that reinforces a specific list of behaviors and an outcome measure that counts how often those same behaviors are performed. At the other end of the continuum are measures that have virtually no content similarity to the treatment, e.g., a treatment of insight-oriented counseling about family relations and an outcome measure of math grades in school. This is not a question about the extent to which the treatment caused the dependent variable. The question concerns the content of the treatment not the plausibility of the hypothesized causal relationship. The topic area of the treatment in relation to the topic area of the measure determines the general category. Use the 1-3 range for treatments and measures of generally different content and involving different activities; use 3-5 for those situations like general counseling and delinquency measures where discussion of delinquency may well have been part of the treatment content, giving topic overlap, but the activities of treatment (talking about delinquency) are different from those in the measure (committing delinquency). Use the 5-7 range for fairly clear overlap in both topic area and activity, e.g. substance abuse treatment involving role playing resistance to peer pressure and actual substance abuse incidents as an outcome measure. Within these ranges, adjust for the degree of overlap according to the specifics of the individual case.

BREAKOUTS

Breakouts are treatment vs. control comparisons for subgroups of the aggregate treatment and control groups, for example, a treatment compared with a control for males and females separately. Each variable by which the aggregate treatment/control comparisons are crossed constitutes one breakout; each value of that variable defines one subgroup; e.g., a males vs. females stratification is one breakout with two subgroups, one male and one female. If only the male subgroup is reported, there is still one breakout, but only one subgroup. Note that a simple report of the number of males and females in the treatment and control groups does not constitute a breakout (though it is relevant to group equivalence issues). A comparison of the differences between males and females in a treatment group is also not a breakout. To be a breakout, outcome data must be reported for the treatment-control comparison for at least one subgroup of the breakout variable.

Identify each breakout of the aggregate experimental comparison for which a treatment vs. control group comparison is made on any outcome measures that have been coded. A breakout consists of a set of mutually exclusive subgroups for which treatment vs. control comparisons can be made on the outcome measure of interest. Under each breakout variable, note the relevant subgroups, e.g., male, female; age 12-14, 14-16, 16-18; etc. Note that each subject should appear in only one subgroup. Although the study authors may report breakouts on variables other than those listed below, only code breakouts on the following variables:

Breakout number [Break]. ID number for breakout. Number each breakout consecutively. For example, if you have a gender breakout and an ethnicity breakout, number the gender breakout 1 and the ethnicity breakout 2.

Subgroup number [Subgrp]. ID number for subgroup. Number each subgroup consecutively *within* a breakout. For example, if you have a gender breakout, the males would be a 1 and the females would be a 2.

Note that your breakout and subgroup numbers are arbitrary. You can put them in any order (males first, females first, etc.) as long as each breakout and each subgroup within a breakout has a unique number.

Breakout variable type [B1]

- 1 ___ sex
- 2 ___ age
- 3 ___ ethnicity
- 4 ___ prior offense history
- 5 ___ delinquency typology or risk level, e.g., I-level, amenability, delinquency prediction

[Note: For double breakouts, e.g., results broken down by sex within age subgroups, you will need to collapse the categories to code each breakout variable separately, i.e., combine the ages for the females and combine the ages for the males for the male vs. female breakout and combine the males and females for each age level for the age breakout. If this is not possible, do not code the double breakouts.

Subgroup category (check best one) [B2]

sex

- 1 male
- 2 female

age [note: pick category that comes closest to mean of subgroup]

- 3 under 12
- 4 12-14
- 5 14-16
- 6 16-18
- 7 18-21

ethnicity

- 8 Anglo
- 9 Black
- 10 Hispanic
- 11 Other

prior offense history, severity

- 12 no prior offenses
- 13 status offenses only
- 14 criminal offenses only
- 15 minor offenses, misdemeanors
- 16 major offenses, felonies
- 17 property crimes
- 18 person crimes
- 19 other:

prior offense history, frequency

- 20 no prior offenses
- 21 one prior offense
- 22 one or more prior offense
- 23 two or more
- 24 three or more
- 25 other priors:

delinquency typology or risk level

_____ breakout
_____ subgroup

EFFECT SIZES

Although this is the final section of coding, it is a good idea to identify at least one codable effect size (or direction of effect) before you start coding a study, because studies that appear eligible can sometimes end up presenting data that cannot be coded into an effect size.

There are 3 types of effect sizes that can be coded: pretest, posttest, and follow-up effect sizes. They are defined as follows:

- Pretest effect size. This effect size measures the difference between a treatment and comparison group before treatment (or at the beginning of treatment) on the same variable used as an outcome measure, e.g., criminal acts measured before the treatment begins are used as a “pretest” for criminal acts measured after the treatment ends. [NOTE: for a delinquency measure to be considered a pretest, it must be measured over the *same amount of time* as the posttest; that is, delinquency counted over the 6 months before treatment cannot be a pretest for delinquency measured over 3 months after treatment.]
- Posttest effect size. This effect size measures the difference between a treatment and comparison group after treatment on some outcome variable. A posttest can occur right after treatment ends or after some delay, but it is distinguished from a follow-up (see below) because it is the first measure taken after treatment ends, regardless of the time period between the end of treatment and posttest measurement.
- Follow-up effect size. Follow-up effect sizes measure the differences between a treatment and comparison group after treatment (as with the posttest effect sizes above), but they involve later measurement waves. That is, some studies may measure the differences between treatment and comparison groups directly after treatment and then 6 months later. The measurement taken at 6 months would be coded as a follow-up effect size.

This is very important!!!! These three types of effect sizes are different from the multiple breakouts and multiple dependent variables that you might have in a study. For example, you might have a study that measures the treatment and comparison groups at pretest, posttest, and at 6 months after treatment on 3 different dependent variables. The results might be presented for the entire sample and broken down by gender. In this case you would have 9 group comparison effect sizes for the entire sample – three for the pretest, 3 for the posttest, and 3 for the follow-up (one for each of your three dependent variables). In addition to these 9 aggregate effect sizes, you will have 9 more for the girls (the same as for the aggregate groups but just for the subgroup of girls) and 9 for the boys (also the same as for the aggregate groups but just for the subgroup of boys).

Step 1: Select Dependent Variable for this effect size.

Type of effect size [ES24]

- 1 ___ pretest
- 2 ___ posttest
- 3 ___ follow-up

Follow-up number [follow]

_____ Code 0 for pretest, 1 for posttest, and 2 and up for each follow-up.

Weeks Delinquency Counted [ES20] (leave blank if nondelinquency variable).

Approximate (or exact) time period covered by delinquency measure, i.e., period over which counted delinquency occurs, e.g., whether arrested during last six months. (Code number of weeks, rounded to nearest whole number; divide days by 7 and round; multiply months by 4.3 and round; code 999 if cannot tell or NA, but try to make an estimate if possible.)

Weeks Post-Treatment Measured [Time1]. Approximate (or exact) weeks after end of treatment when measure taken, i.e., what was the interval from the end of the treatment to the time when this outcome measure was taken. Use 0 for pretests. (Code whole number, no decimals; divide days by 7 and round to whole number; multiply months by 4.3 and round; code 999 if cannot tell, but try to make an estimate if possible). [NOTE: If measure was taken more or less immediately at the end of treatment, code this as one week.]

Effect Size Data

Original N. Number of subjects originally assigned/selected for the treatment and control groups before any attrition, dropouts, refusals to participate, etc. (missing=9999). [Note: The issue here is attrition between assignment/selection for treatment and measurement. If attrition after pretest and after group assignment conflict, code the latter. The three common ways to get information on the original group size are from assignment to treatment groups, the actual pretest data for measures (if there are differences in n between the various pretests, use the largest one) and demographics at pretest. The largest number claimed for each group by any of these sources should be considered the n at assignment.]

treatment group n [ES36]

control group n [ES37]

effect size total N (if treatment or control N's not known) [ES3 by hand]

Effect Size N. Number of subjects whose data is actually represented in the statistics you are using to calculate this effect size (missing=9999).

treatment group n [ES1]

control group n [ES2]

Enter values as appropriate and available. Note: if you have, or can determine, the proportion or frequency who "failed" or "succeeded" be sure to enter that information.

treatment group mean [ES9]

control group mean [ES10]

treatment group variance [ES12]

control group variance [ES13]

SD (standard deviation) – treatment and control: [ES25] [ES26]

SE (standard error) – treatment and control: [ES27] [ES28]

t-value [ES33]

F-value (df=1) [ES34]

Chi-square (df=1) [ES35]

Proportion failed/successful – treatment and control: [ES29b/ES29] [ES30b/ES30]
N failed/successful – treatment and control [ES31b/ES31] [ES32b/ES32]:

NOTE: Use the raw values for "N Successful" if they are provided. Do not calculate "N successful" from the effect size N and the proportion. Only enter N successful if it is given explicitly.

Effect size (by FileMaker or by hand) [ES21]

Which group is favored [ES17]: Numerically comparing treatment group scores to control group scores on this measure, the raw treatment vs. control group difference favors (i.e., shows more "success" for) which group (check best one)?

- 1 ___ treatment
- 2 ___ control
- 3 ___ neither (exactly equal)
- 4 ___ cannot tell or statistically insignificant report only

Note: Report this information if available even if the numerical values on the variables are not reported; e.g., author may indicate whether there is a difference or report significance without giving means, etc. for the groups.

The treatment group is favored when it does "better" than the control group. The control group is favored when it does "better" than the treatment group.

Remember that you cannot rely on simple numerical values to determine which group is better off. For example, a researcher might assess the amount of violent behavior, and report this violent behavior in terms of the number of violent acts per subject per day. Less violent behavior is better than more, so in this case a lower number, rather than a higher one, indicates a more favorable outcome.

Sometimes it may be difficult to tell which group is better off, because some studies use surveys or paper-and-pencil measures in which it is unclear whether a high score or a low score is more favorable. In these situations, a thorough reading of the text from the results and discussions sections usually can bring to light the direction of effect – e.g., the authors will often state verbally which group did better on the measure you are coding, even when its not clear in the data table. In addition, the Measures database in FileMaker may provide information about the measure in question.

Note that if you cannot determine which group has done better, you cannot code this effect size. Remember to add this noncodeable variable to your count of the variables NOT coded.

Type of means [ES15], If ES based on % or N successful, code as proportion mean.

- 1 ___ arithmetic mean of scores
- 2 ___ median of scores
- 3 ___ proportion or rate
- 4 ___ other: _____
- 5 ___ cannot tell

Type of variances [ES16]. If ES based on % or N successful, code as proportion variance whether an actual variance is reported (rare) or not.]

- 1 ___ standard deviation
- 2 ___ variance
- 3 ___ standard error
- 4 ___ proportion
- 5 ___ other: _____
- 6 ___ cannot tell

Effect Size Confidence [ES22] (Confidence in effect size value)

Highly Estimated	Moderately Estimation	Some Estimation	Slight Estimation	No Estimation
1	2	3	4	5

Confidence guidelines:

- 5 No Estimation--have descriptive data: means, sds, frequencies, proportions, etc.; can calculate ES directly.
- 4 Slight Estimation--must use significance testing statistics rather than descriptive statistics, but have complete stat conventional sort.
- 3 Some Estimation--have unconventional statistics and must convert to equivalent t-values or have conventional statistics but incomplete, e.g., exact p level only.
- 2 Moderate Estimation--have complex but relatively complete stats, e.g., multiple regression, LISREL, multifactor ANOVA etc. as basis for estimation.
- 1 Highly Estimated--have N and crude p value only, e.g., $p < .10$, and must reconstruct via rough t-test equivalence.]

Statistical Significance Difference [ES19]. If the study authors performed a statistical test that compared the treatment and comparison groups on this variable, was it significant or not? Report what the author claims at whatever alpha level, etc. used; if only p-values provided with no statement of what is judged statistically significant, code anything with $p < .05$ as significant.

- 1 ___ significant
- 2 ___ not significant
- 3 ___ not reported

Type of Statistical Test [ES18]

- 1 ___ no test done
- 2 ___ kind of test not reported
- 3 ___ t, F, Z, or r (parametric, no partialling or variance adjustment)
- 4 ___ Chi-square test
- 5 ___ other nonparametric test, e.g., Mann-Whitney U
- 6 ___ test adjusts for covariate, not pretest (e.g., ANCOVA, covariate blocking, covariate partialled from r)
- 7 ___ test adjusts for PRETEST (e.g., ANCOVA with pretest as covariate, repeated measures design, t-test using gain scores)
- 8 ___ other
- 9 ___ missing

Page Number Where ES found: _____

Report in which ES found: _____

Appendix B
Bibliography of Studies in the Meta-Analysis

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Appendix C
Phase II Coding Screen

Phase II Coding Screen (FileMaker Pro)

The screenshot displays a FileMaker Pro window titled "FileMaker Pro - [inductive theoretical review_phaseII]". The main content area is a form titled "The Application of Theory to Intervention: The Intersection of Theories of Deviance and Juvenile Delinquency Intervention Programs". The form is organized into several sections:

- Header:** "The Application of Theory to Intervention: The Intersection of Theories of Deviance and Juvenile Delinquency Intervention Programs"
- Form Fields:**
 - study number
 - date of last update
 - author(s)
 - title
 - program name
 - general program descriptor
 - specific program components
 - change factor(s)
 - causal constructs (implied or stated)
 - notes on components/change factors/causalities
 - notes on theoretical connections to components/causalities
 - comments on STUDY
 - comments on PROJECT

The form is displayed in a window with a menu bar (File, Edit, View, Insert, Format, Records, Scripts, Window, Help) and a toolbar. The status bar at the bottom shows the system tray with icons for Start, Internet Explorer, Online Pop Radio Station, Norton, and the system clock (5:13 PM).

Appendix D
Phase III Coding Screen

Phase III Coding Screen (FileMaker Pro)

The screenshot shows a FileMaker Pro window titled "inductive theoretical review_phaseIII". The main window title is "The Application of Theory to Intervention: The Intersection of Theories of Deviance and Juvenile Delinquency Intervention Programs". A "random assign" button is in the top right.

On the left, a sidebar shows "main" and "Records: 0 Unsorted".

The form fields include:

- study number
- date of last update
- author(s) title
- yr of program implementation
- prog descriptor
- program Name
- Funding source
- program compenents
- change factor(s)
- Theoretical causal process associated with program change factor DIALOG BOX

On the right side, there are several sections:

- Theoretical/Causal attribution?** with radio buttons for yes, no, and und.
- A text area: "If YES - what is the theory(s)? If NO or UND what's the causal attribution (unnamed theory/explan.)"
- comments on study, coding** with a large green text area.
- confidence in theoretical/program link** with radio buttons for:
 - 1 very confident
 - 2 somewhat confident
 - 3 not very confident
 - 4 guess
 - 5 can't even guess
- additional info needed yes
- recode may be needed yes
- cite/quote text indiss yes

The bottom of the window shows a taskbar with various open applications and a system tray with the time 5:15 PM.

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