Juvenile Justice Evaluation Center Guidebook Series

Evaluation Issues in Mental Health Programming in the Juvenile Justice System

Juvenile Justice Evaluation Center
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JJEC Guidebook Series

Evaluation Issues in Mental Health Programming in the Juvenile Justice System is the first in the Guidebook Series produced by the Juvenile Justice Evaluation Center (JJEC). JJEC, a project of the Justice Research and Statistics Association funded by the Office of Juvenile Justice and Delinquency Prevention, provides evaluation information, training, and technical assistance to enhance juvenile justice evaluation in the states. For more information about JJEC, visit the Web site at www.jrsa.org/jjec or email jjec@jrsa.org.

The intent of the Guidebook Series is twofold: 1) to provide those who work with juvenile justice programs information on topics of special concern, and 2) to report on evaluation issues particular to those topics. The focus of this guidebook is on mental health programming within the juvenile justice system and the particular issues raised when evaluating such programming.

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Introduction

Youth involved with the juvenile justice system have higher rates of mental health problems and psychological disorders than youth in the general population.[1] Some of the same factors that place children and adolescents at risk for delinquency also contribute to the emergence of mental health problems such as depression, posttraumatic stress disorder, and attention deficit hyperactivity disorder. Furthermore, mental health problems have been shown to be a risk factor for delinquency.[2] Delinquent youth who have serious mental health problems present major challenges to juvenile justice systems and their community and institutional programs. Mental health problems and treatment are serious and pressing concerns for the American juvenile justice system.[3] Being educated about these issues will help juvenile justice systems better deal with juveniles with mental health problems. Furthermore, evaluating interventions for this population will help us better understand the circumstances under which a particular approach is effective.

This publication is intended for juvenile justice program administrators or state-level juvenile justice personnel with an interest in the evaluation of mental health programs that serve a juvenile justice population or juvenile justice programs with mental health components. It is not geared toward experts in the mental health or evaluation fields. In light of this target audience, discussions with regard to mental health and evaluation are not exhaustive. Their purpose is to give the reader an overview of mental health issues facing a juvenile justice population, with an emphasis on evaluation issues of particular concern for juvenile programs delivering mental health services.

This guidebook provides fundamental information about the following topics: 1) using information about mental health problems in the development of programs for youths in the juvenile justice system and building evaluation into the program design; 2) designing evaluations of mental health interventions or mental health elements in other juvenile justice interventions; 3) special considerations of confidentiality and protection of human subjects; 4) ethical considerations in conducting evaluations of mental health programming in juvenile justice; 5) systemic issues (sustainability, funding sources, schools, employability); 6) delinquency risk and protective factors ; 7) implementation issues (data collection, fidelity to the model, etc.); and 8) utilization of evaluation results.

Throughout this publication, reference will be made to a seven-step evaluation process developed by the Juvenile Justice Evaluation Center (JJEC).

The steps are:

1. Define the problem.
2. Implement evidence-based programming.
3. Develop program logic.
4. Identify measures.
5. Collect and analyze data.
6. Report findings.
7. Reassess program logic.

This document will discuss evaluation of mental health programming in the juvenile justice system within the context of the steps in this process. We will provide information on how and why to define a problem for a program to address. We will focus on the importance of gathering information about a problem in order to select an appropriate program, and discuss how selecting evidence-based programming helps increase the likelihood that a program will work. Having a well-defined problem and information on what works will help with the next evaluation steps—laying out a logical program design and determining how to measure whether the program achieved the desired results. Once data about program performance are collected, they must be analyzed and reported in a meaningful manner to help determine whether the program was successful. This information can be used in the final step of the process—considering whether the logic of the program should be revised based on the evaluation results. Additional information on this evaluation process can be found in the JJEC publication, *Juvenile Justice Program Evaluation: An Overview, 2nd Ed.*[4]

Mental Health Problems Among Juveniles

In order to successfully complete the first step in the evaluation of a juvenile justice program, "define the problem," it is important to understand the mental health problems and disorders likely to affect juveniles in the justice system, as well as those factors that can precipitate the occurrence of mental health problems or disorders. Adolescents, and particularly youth who are involved in the juvenile justice system, may be at risk of a broad array of mental health problems.

Broadly defined, mental health problems are those conditions of a psychological, emotional, and behavioral nature that interfere with an individual's ability to function or to cope with the demands of everyday living.[5] All of the mental health problems considered in this guidebook correspond to recognized psychological problems in the taxonomy system used by mental health practitioners, the *Diagnostic and Statistical Manual of Mental Disorders*, currently in its fourth edition and commonly known as DSM-IV-TR.[6] This guidebook focuses on frequently occurring mental health problems in a juvenile offender population. They include attention deficit and disruptive behavior disorders (e.g., conduct disorder and *attention deficit hyperactivity disorder* [ADHD]), mood disorders (including depressive disorders and *bipolar disorder*), posttraumatic stress disorder (PTSD) and other anxiety disorders (e.g., phobias, obsessive-compulsive disorder, and acute stress disorder), and psychotic disorders (e.g., schizophrenia).

Although substance abuse is also a type of mental health disorder, it is not discussed in this guidebook because substance abuse issues and treatment require extensive coverage in their own right. Similarly, sexual offending, which is often accompanied by mental health problems, is a special topic beyond the scope of this guidebook. The reader is referred elsewhere for a discussion of juvenile sexual offending and appropriate treatment considerations.[7]

ADHD

A child is considered to have ADHD when he or she displays certain characteristic behaviors, such as inattention, hyperactivity, and impulsivity over a period of time.

Bipolar disorder

A neurobiological brain disorder involving extremes in moods (e.g., depressed mood and manic mood).

Population of Interest

The population of relevance to this guidebook includes two groups. The first consists of youthful offenders, both male and female, who have been adjudicated by the juvenile justice system and may be on probation, in community treatment, in residential placement, or incarcerated. The second group includes children and adolescents who are at elevated risk to commit delinquent acts. Intervention for these youths is typically referred to as prevention.

Mental Health Treatment

The term mental health treatment has a specific meaning in the context of this guidebook, namely, interventions for mental health (psychological or psychiatric) disorders and for identified mental health problems (e.g., suicidal behavior) that may not have resulted in a confirmed diagnosis of disorder. For disorders that youth are most likely to experience, there are known and recommended treatment regimens. These can include specific psychosocial interventions (including individual, group, family, and community strategies and formats), as well as psychopharmacological therapies (medication).

Prevention

In contrast to treatment, which takes place after a disorder or problem has emerged, *prevention* is an intervention prior to the appearance of a particular disorder or adverse outcome. For example, interventions aimed at delinquency prevention focus on youth who have not yet committed delinquent acts or on younger children who might be on a developmental trajectory toward delinquency but whose behavior has not yet become a concern or come to the attention of law enforcement. Preventive interventions ideally would prevent the adverse outcomes from occurring, but a more reasonable goal is risk reduction.

Preventive measures are generally targeted at specific audiences. There are three classes of preventive measures distinguished by their audience: *universal, selected*, and *indicated interventions*. *Universal intervention* refers to prevention strategies that are delivered to an entire population of individuals regardless of risk status. Media messages about the warning signs of depression in young people are an example of this type of intervention. *Selected intervention* refers to prevention strategies delivered to a subset of the population that shares one or more risk factors. An example of this type of intervention is programming for children whose parent has a particular problem (e.g., substance abuse, serious psychological disorder, criminal record). *Indicated intervention* refers to prevention strategies aimed at individuals who are already showing early signs of a disorder or adverse outcome. Programs for parents of first-grade children who are showing elevated rates of aggressive behavior are indicated interventions.

Mental Health Problems and Delinquency

When planning new mental health programs or initiatives, or when designing an evaluation for existing initiatives, it is important to consider how mental health problems/disorders are defined and identified in the justice system. This section reviews a number of issues related to the development of mental health problems/disorders and involvement in delinquency and the juvenile justice system and considers how to identify mental health problems/disorders.

Mental Health Problems/Disorders and the Juvenile Justice System

The distinction between a mental health disorder and a mental health problem is sometimes blurred, but it is important when characterizing prevalence rates and estimating treatment needs. For a disorder, formal diagnostic requirements need to be met. Mental health problems, on the other hand, include symptom patterns that may or may not rise to the level of a formally diagnosed disorder of the DSM-IV-TR. Two common problems, depression and antisocial personality disorder, can be used to illustrate the complexities of this issue with respect to juvenile offenders.

Incarcerated youth, not surprisingly, often experience symptoms of depression. Removed from friends and family, youth commonly feel isolated, sad, cut off from previous sources of reinforcement, and helpless to alter their situation. These feelings are exacerbated in some instances by fear of other incarcerated youth and institutional staff, and by lack of interest or contact from family members. Incarceration taxes the coping skills of all but the most resilient and stable individuals, and for many youth the incarceration experience is the primary cause of depressive symptoms. Most of these youth, however, do not meet the criteria for a formal diagnosis of major depressive disorder, although the stress of incarceration could precipitate a full-blown episode of major depression in some youth, particularly ones who were already predisposed to such a problem. For treatment planning and implementation, it is useful to distinguish between the commonly experienced symptoms associated with incarceration and the rarer diagnosis of major depression. The former might be addressed by short-term therapeutic and institutional strategies administered at a broad level, while the latter would require extensive treatment and follow-up.

Antisocial personality disorder (APD) is another common, yet typically undiagnosed, problem found among incarcerated youth. APD is actually a disorder of adulthood that has antecedent features, such as conduct disorder, in adolescence. Many of the youth who commit antisocial acts in adolescence show some early signs of APD, such as frequent lying, a con artist approach to interpersonal relations, and lack of conscience. However, these characteristics in adolescence, though problematic, are not sufficient to confirm a diagnosis of APD. Like all of the personality disorders, APD is considered a chronic disorder that persists throughout much of adulthood, although early signs in adolescence may desist in adulthood for some individuals. Except in extreme cases, it is difficult to diagnose APD until the chronic features are observed in adulthood. Consequently, while many youth in the juvenile justice system exhibit some of the characteristics associated with APD, most cannot be diagnosed with this personality disorder.

It is important, then, when identifying the scope of mental health issues that are problematic in a juvenile justice system, to consider the range of severity and occurrence for mental health problems versus disorders. Relying solely on diagnosed disorders may underrepresent the extent of mental health concerns in the system. Focusing on mental health problems but ignoring whether actual disorder is confirmed may overrepresent needs in the system and perhaps cause more intensive forms of treatment to be misapplied.

Prevalence of Mental Health Problems/Disorders

Estimates of the prevalence of mental health problems/disorders in the juvenile justice system vary widely depending on factors such as the types of problems considered, the criteria for confirmation, the setting, and gender.[8] If the full range of mental health problems and disorders is considered, then almost all youth who commit delinquent acts and are involved in the juvenile justice system qualify for the diagnosis of at least one mental health disorder. That is, within the disruptive behavior disorders category of the DSM-IV-TR is a set of disorders called *conduct disorders*.[9] The vast majority of youthful offenders meet or have met the requirements for diagnosis of a conduct disorder during adolescence or even in late childhood. For nondelinquent youth who are diagnosed with a conduct disorder, mental health treatment is commonly considered. Once a youth diagnosed with a conduct disorder commits an illegal act, the conduct disorder becomes a legal problem. Nevertheless, mental health treatment is an appropriate intervention for these justice system youth as well. Although delinquency and conduct disorders are serious problems that require comprehensive

Conduct disorders

Children and adolescents with conduct disorders have a repetitive and persistent pattern of behavior in which they violate the rights of others, or violate norms or rules that are appropriate to their age. Their conduct is more serious than the ordinary mischief and pranks of children and adolescents. Examples include setting fires, stealing, truancy, and using weapons.

treatment and rehabilitation, some of the youth in the juvenile justice system have other mental health problems that are potentially more disruptive.

In an extensive review, Wierson et al.[10] found that attention deficit hyperactivity disorder (ADHD), personality disorders, and affective disorders (depressive and bipolar disorders) are the most common mental health problems associated with adolescent offenders. A review by Otto and colleagues[11] found that youth with a history of delinquency were twice as likely to have mental health problems than adolescents in the general population. Youth who enter the juvenile justice system often bring with them a history of mental health problems. For example, an epidemiological study of the Ohio juvenile justice system found that 18.3% of the committed youth had previously received inpatient mental health services, 27% had previously received outpatient mental health services, and many youth had a history of suicidal threats (21.3%) or actual suicide attempts (13.5%).[12] Overall, the problem of mental illness appears to be even greater for girls than boys. For example, studies have reported that depression [13] and PTSD[14] are far more common in girls than boys in the juvenile justice system.

Oppositional-aggressive behavior
A pattern of negativistic, hostile, and defiant behavior. Examples include loss of temper and spitefulness or vindictiveness.

Mental Health Risk and Protective Factors Related to Delinquency

Risk factors are those characteristics that put one at an elevated likelihood of a negative occurrence or outcome. Protective factors are characteristics that decrease the likelihood of a negative occurrence or outcome. The negative occurrences/outcomes considered here are mental health problems, mental health disorders, and delinquency. A more in-depth discussion of risk and protective factors can be found in Hawkins and Catalano (1992) and in the *Serious, Violent and Chronic Juvenile Offenders: A Comprehensive Strategy* published by the Office of Juvenile Justice and Delinquency Prevention (OJJDP) (1993). They identify the following risk factor domains: school, individual/peer, community, and family. Though the labels used to describe risk and protective factors differ somewhat in this guidebook, they are similar to those used by Hawkins and Catalano and OJJDP. The discussion of risk and protective factors in this guidebook is organized into the following areas: parenting/family management, temperament/social skills, educational, peer, negative life events, and biological factors.

Preschool and Early Elementary School Years

There is overwhelming evidence that parenting difficulties are a significant risk factor for *oppositional-aggressive behavior*[15] and later conduct problems in children's preschool years.[16] These

difficulties most commonly include poor discipline, child noncompliance with discipline, and *insufficient positive teaching*.[17] Children with early temperamental problems may be particularly prone to the adverse effects of parenting difficulties, with the two factors operating together to escalate oppositional behavior with parents and siblings, and aggravate attention problems.[18]

A second set of family-related risk factors centers on family adversity, and includes parental isolation and social disadvantage, parental alcohol and illicit drug abuse, parental criminality and psychopathology, and marital discord.[19] Over time, interactions between child temperament and parenting difficulties, especially in the presence of family adversity, are likely to undermine effective parenting further and escalate child conduct problems, setting the stage for a difficult transition to school. Social support for the family, on the other hand, may offer a protective influence, allowing children to derive a critical amount of support from caring relatives, and enabling parents to be more effective when they receive adequate social support themselves.[20]

Parenting difficulties, family adversity, early temperamental difficulties, and inadequate family social support may be sufficient to account for child behavior problems through the kindergarten years, but by the end of first grade (and beyond), troubled relations with peers, negative classroom experiences, school climate, low reading performance, and poor coping skills at school likely play a greater role. First graders who are aggressive in many situations are at heightened risk for learning difficulties, conduct disorder, delinquency, and adolescent substance abuse.[21] Children who enter first grade already exhibiting high rates of aggressive and oppositional behavior, as well as poor self-control of emotions, are at risk for classroom behavior problems, such as ignoring teacher instructions, hitting classmates, disrupting class, and destroying property.[22]

In addition to difficulties carried over from the preschool period, children with early conduct problems are affected by two new risk factors: negative classroom experiences and troubled relations with peers. Children already showing disruptive and inattentive behaviors in class tend to develop learning difficulties, particularly in reading and language-related skills, that frustrate them and make classroom experiences more hostile. Furthermore, aggressive and disruptive behaviors in the classroom tend to provoke aversive responses from teachers, which in turn strain parent-school relations and further tax parents who are struggling with other sources of family adversity.[23] Finally, child aggressive-disruptive behavior, associated with underdeveloped social skills, often leads to peer rejection and

Insufficient positive teaching
Underutilization of encouragement, positive reinforcement, positively framed instruction, and positive modeling.

social isolation around second grade or even earlier.[24] In short, children who have difficulty dealing with social situations experience the punishing consequences of peer rejection, which further restricts the development of social competency.

In the early elementary school years, coping skills related to self-control and interpersonal dealings continue to be important in terms of antisocial behavior, but school-related coping skills take on increased significance by the middle of elementary school.[25] Reading mastery, often a difficulty for children with conduct problems, is critical to school adjustment and often acts as a protective factor against general school failure and drift towards substance abuse.[26]

Late Childhood and Early Adolescence

Social interactions that occur in late childhood and early adolescence further affect the development of conduct disorder and negative outcomes. Negative experiences in the classroom coupled with disturbed peer relations, including peer rejection, contribute to an escalating spiral of aggressive and negative interactions with teachers, peers, and family.[27] This pattern can easily continue through elementary school and into adolescence if family, peer, and school-related risk factors predominate. The impact of troubled relations with peers and peer rejection, in particular, is magnified around fourth or fifth grade.[28] In late childhood and early adolescence, the most important features of the parental-difficulties risk factor are insufficient parental monitoring and supervision, as well as parental inconsistency and marked family conflict.[29] In school, a history of learning difficulties, classroom misconduct, and rejection by teachers and classmates leads to poor "bonding" to the school context, which is a prelude for future school failure and dropout or expulsion.[30]

Although less well understood, protective factors increase the likelihood that some children break the negative cycle associated with the risk factors. One protective factor, which may offset the impact of risk factors discussed above, is family social support. Even when parents are ineffective at discipline and other parenting skills, children may still derive a critical amount of social support from other family relationships.[31]

Connection Between Delinquency and Mental Health Problems in Childhood and Adolescence

Delinquent behavior and mental illness often coexist in youths in the juvenile justice system. Many of the risk factors for delinquency contribute to the development of mental health problems during childhood and adolescence, and mental health problems increase the risk of delinquency. However, some youths with delinquency risk factors may develop mental health problems, but not get in trouble in the community. Family-related delinquency risk factors, such as problematic parenting, family conflict, child abuse, and exposure to domestic violence, also produce chronic stress and contribute to the development of mental problems such as anxiety disorders (e.g. PTSD), depression, and, of course, conduct disorders. Attention difficulties in early childhood, which increase risk for delinquent outcomes, can also lead

to pronounced mental health problems in adolescence (e.g., ADHD,[32] bipolar disorder,[33] and personality disorders).

As discussed earlier, factors such as gender, race, and age can affect the likelihood of youths in the juvenile justice system having mental health problems or disorders. For girls, physical or sexual abuse is a key pathway to mental health problems/disorders and subsequent delinquency.[34] Physical or sexual abuse may lead to suicidal ideation, depression, or PTSD that may subsequently result in antisocial behavior.[35] Boys with ADHD may be at higher risk for delinquency than boys without ADHD.[36] With regard to age, according to one study of detained youths, youths ages 13 years and younger are among those least likely to have mental health disorders.[37] The same study indicates that white youths are the most likely to have diagnosed mental health disorders.

Identifying Mental Health Problems and Disorders

Given the high incidence rates of mental health problems and disorders among youth in the juvenile justice system, effective screening methods are needed to identify mental health problems of youths early on in their involvement with the justice system. Screening serves as an initial look at a youth's mental health needs, while a diagnostic assessment provides more comprehensive information on which long-term treatment goals are based. All youth in the juvenile justice system should be screened for mental health problems, whereas only a subset of that population requires full diagnostic assessment for psychological and psychiatric disorders. Screening helps identify immediate needs when youth first enter the system, and provides the basis for deciding whether to pursue more in-depth assessment. The screening instruments discussed here can help save resources because they are relatively inexpensive and do not have to be conducted by a mental health professional.

Screening can occur in at least four settings:

(a) intake within probation departments;

(b) when a youth enters an emergency or pretrial juvenile detention center;

(c) upon entry to an assessment/evaluation and reception center;

(d) at the beginning of placement in a community program or in a juvenile justice residential or secure facility.

The second version of the Massachusetts Youth Screening Instrument (MAYSI-2), developed by Grisso and Barnum,[38] and the Child Behavior Checklist-Youth Self Report (CBCL-YSR)[39] are two well-validated screening instruments. The MAYSI-2, a 52-item youth self-report instrument, is written at a fifth-grade reading level and takes about 15 minutes to complete. The instrument covers a broad range of mental health-related problems including alcohol and drug use, problems associated with anger and irritability, depressed and anxious symptoms, somatic complaints (physical distress possibly associated with stress reactions), suicidal thoughts and intentions, thought disturbance (unusual beliefs and perceptions; possible risk for serious thought disorder), and traumatic experiences. It was designed primarily for 12- to 17-year olds in the juvenile justice system, is easy to administer, and does not require a mental health professional for scoring and interpretation.

The CBCL-YSR is an adolescent self-report instrument with 129 items assessing a wide range of problem areas. The instrument has corresponding parent/caregiver and teacher report forms, which can be useful in some systems in which corroboration across informants (providers of information) is desired. The CBCL-YSR was not designed specifically for juvenile justice populations, but is intended for use with any adolescent who might be experiencing a mental health problem. Compared with the MAYSI-2, the CBCL-YSR takes longer to administer (30 to 40 minutes) and does not cover traumatic experiences (see resource page for information on obtaining these instruments).

It is preferable for the screening process to overidentify rather than underidentify problem areas because there could be serious and imminent consequences for missing a real problem. Those youths for whom problems are identified in screening should then be subject to a mental health assessment by a professional in order to confirm a problem or diagnosis. Some youth will deny symptoms or adverse experiences even when they are truly having problems. Consequently, screening based on youth self-report should be supplemented by information based on other relevant sources, such as staff observations, police reports, and concerns expressed by family members.

Program Evaluation Step 1: Defining Mental Health Problems/Disorders

Before conducting an evaluation of a program for juveniles, or before implementing a new mental health component within an existing program, it is essential that the problem the program is designed to address is clearly identified and defined. It is important for an evaluator to understand why an intervention was selected. This step, defining the problem, is the first in the seven-step program evaluation process discussed earlier. It will help ensure the selection of appropriate programming as well as establish how the problems faced by the program compare with those of other programs, communities, or juvenile justice systems. Information from the previous discussion on the nexus between mental health problems and delinquency can be used to help identify the problem in a specific jurisdiction or program. Trying to answer the following questions when identifying and defining mental health problems/disorders may also be helpful:

- What are the mental health problems of the youths in your program/those of the youths that you plan to serve? Do they differ from those of youths in other programs? How?
- Does the existence of problems differ for particular subpopulations of youth?
- How extensive is the problem?
- What capacity exists for collecting baseline data on the mental health problems of youth to understand whether a change(s) occurred after program implementation?
- If you focus on the entire juvenile justice system or a particular locality, are there some stages in the system where mental health problems/disorders are more or less of a problem?
- When is an appropriate time to assess and/or diagnose problems?
- What are the implications of this evaluation for decision- or policymaking?
- What factors are putting youths at risk for mental health problems? What factors are protecting them?

Defining the Problem: An Example

A program administrator hears an increasing number of complaints about the youths at his residential program for weapon offenders: they are becoming harder to deal with, they are taking more staff time, they seem to be more depressed and be talking about suicide, and some of them do not seem to be adapting well to the program. The administrator thinks that these reports may signify an increase in mental health problems among youths in the program. Currently the program offers mental health services only to youths identified by the court as having a mental health disorder. These youths receive counseling from an off-site psychologist. The program administrator wants to change the mental health services offered by the program, but is not sure what the problems really are, how to provide the proper services, or how to determine whether the services provided are effective.

Although the program administrator has some information about the problem from his staff, it is not systematic. He is not sure whether the change in behavior represents simply one or two isolated incidents that will

not require a change to the program or whether the change is symptomatic of a more serious increase in mental health problems. To get a handle on the problem, he decides to take the following steps: 1) administer the MAYSI-2 to all youths currently in the program; 2) ask program staff to identify youths they think have mental health problems and state what they think the problem is; and 3) consult the most recent juvenile court trends report. By asking the youths to take the MAYSI-2, he will be able to identify the scope of the problem with a well-validated screening tool. Asking the program staff to identify youths with mental health problems will help determine whether the youths that the staff believe have problems coincide with those identified as having problems by the MAYSI-2. The juvenile court trends report is useful for identifying whether there is an increase in the number of juveniles with a history of mental health problems being processed by the court. This may explain why staff have only been complaining recently about the youths.

As a result of this process, the administrator learns the following information about mental health problems in his program:

- According to the MAYSI-2, 25% of girls in the program have thought about hurting themselves (Depressed-Anxious dimension). Staff indicated that 15% of girls in the program seemed depressed. Of the 15% identified by staff, 90% had thought of hurting themselves.
- The MAYSI-2 identified that 33% of all youths in the program report feeling frustrated and angry with others (Angry-Irritable dimension). However, staff reported that 45% of youth in the program are hard to deal with because of anger control problems.
- On the other dimensions of the MAYSI-2, fewer than 10% of the youths had potential for other mental or behavioral problems. Staff reported few youths with other problems.
- In the past 3 years, the number of youths adjudicated who have a history of documented mental health problems has risen by 10%.

Based on these statistics, the program administrator made a number of conclusions about mental health problems of the youths in the program. Depression and anger appear to be the most serious problems at the program and a substantial proportion of the population likely suffers from these problems. Though there is a discrepancy in the numbers between the staff and the MAYSI-2, the complaints of the staff are similar to the problems identified by the MAYSI-2. The recent reports of problems by staff likely occurred because of the increase in the proportion of adjudicated youths with mental health problems. The program administrator decides that he must adapt the program to address the mental health problems of youths.

Evidence-Based Treatment

Positive resolution of mental health problems among youth usually requires the careful implementation of some type of well-chosen intervention. Programming that has been demonstrated by research to work for particular problems or for particular classes of youths should be considered if it fits with the problems of youths in the jurisdiction of interest. Furthermore, implementing and evaluating research-based programming will serve as another test of program effectiveness.

Program Evaluation Step 2: Implement Evidence-Based Programming

Implementing evidence-based programming is step two of the program evaluation process. This section will describe various evidence-based treatments and will consider how to move from the problem identification stage to the selection of research-based programming.

It is important to keep in mind that the treatment needs of delinquent youth with mental health problems are quite similar to those of youth who enter the mental health care system rather than the juvenile justice system. For example, depression or PTSD causes distress for all affected youth regardless of whether they have also committed delinquent acts.

Two different intervention modalities are considered here. The first is treatment—that is, intervention after a youth has already developed the mental health problem or disorder that needs attention. Specific issues arise regarding how to deliver good treatment and what kinds of evidence-based treatments are needed for specific problems or populations.

The second intervention modality is prevention—that is, stepping in before a child or adolescent has developed the mental health problems and delinquent conduct that would warrant treatment. While there are some overlapping issues pertaining to treatment and prevention, for the most part prevention has its own distinctive features and requirements for success.

Treatment for Mental Health Problems or Disorders

Most of the mental health disorders experienced in adolescence can be addressed by treatments that are evidence-based. Viable treatments for this age group have been developed and tested in the general population rather than only or specifically with youth who are in the juvenile justice system.

As recently as a few decades ago, many of the mental health treatments being delivered in various settings (hospitals, clinics, private practice, institutional settings) had little empirical basis for efficacy. That is, mental health providers were using treatments they thought would work, but too often these treatment methods had not been scientifically examined for effectiveness and appropriateness. More and more, however, consumers, stakeholders, policymakers, professional training programs, and the mental health providers themselves are demanding accountability for the field and insisting on evidence for treatment methods. The concern for accountability and evidence-based treatment has led to the development of resources such as The Center for the Promotion of Mental Health in Juvenile Justice.[40] Therefore, the programming selected should, where appropriate, be evidence-based and be evaluated to contribute to the growing body of knowledge regarding effective mental health interventions for juveniles.

Mental health treatment is only as good as the staff delivering that treatment. To produce favorable outcomes, juvenile justice systems need to invest in well-trained mental health professionals supported by competent supervision, ongoing continuing education, and additional resources, such as referral services and biomedical labs, to assist pharmacological treatment. Ideally, systems should have interdisciplinary teams that include a range of professionals such as psychologists, social workers, physicians (psychiatrists, primary care physicians), and psychiatric nurses. Regardless of discipline, the treatment providers should have experience and training in working with adolescents and their families, in implementing evidence-based treatments, and in understanding how to incorporate ecological/environmental factors into treatment strategies.

Individual-Level Treatment

The prevalence of mental illness among youths involved with the juvenile justice system is high. Evidence-based individual treatment can be effective in treating the many forms of mental illness seen in this population, including mood disorders, anxiety disorders, and psychotic disorders.

Mood Disorders. Mood disorders include major depression and other less pronounced forms of depression, as well as bipolar disorder (previously called manic-depressive disorder). To reach the level of a disorder, *mood regulation problems*[41] must

Mood regulation problems

An inability to exercise self-control over moods. For example, a child with mood regulation problems may have trouble controlling his/her reaction after a disappointment, with feelings of anger or sadness overwhelming him/her and resulting in extreme behavior. While everyone has bouts with challenging moods (sadness, anger, anxiety, etc.), people with mood regulation problems are not able to manage or cope with these moods and prevent them from taking over or escalating into something more problematic.

be associated with significant impairment of psychological functioning and interpersonal relations. Depressed youth frequently experience negative thoughts (e.g., beliefs of worthlessness), disruption of sleep and appetite, sustained sadness or depressed mood, fearfulness, difficulty concentrating, aggressive behavior, and possibly thoughts of suicide. Depression often goes untreated in children and adolescents.[42] Failure to diagnose the problem, insufficient insurance or funds to pay for treatment, and resistance to labeling youths as mentally ill are common reasons for a lack of treatment for youth in the general population. In the juvenile justice system, juveniles face these problems as well as a system that is not equipped to provide mental health treatment to juveniles or diagnose juveniles with depression.

A number of treatment strategies can be used to treat mood disorders in adolescents. Cognitive-behavioral therapies that focus on thought processes and promote self-regulation of mood and other psychosocial treatments aimed at altering youth-environment interactions have had some success.[43] Cognitive-behavioral therapies help individuals learn ways to change the thought patterns that lead to depressed and hopeless feelings and to cope with difficult circumstances. This type of therapy is particularly useful with youth whose depressive symptoms vary over time or whose depression becomes problematic in that it affects their interactions with others. Other psychosocial treatments focus on increasing the activity levels of depressed youth under the assumption that depression partly reflects low activity and lack of positive reinforcement from the environment.[44]

Medication is often a useful mode of treatment, particularly for major depression and bipolar disorder.[45] Antidepressant medications can alleviate some of the physical symptoms of depression, including lethargy. There are also specific medications for controlling bipolar disorder (e.g., lithium). When psychoactive medication is prescribed, two recommendations are in order. First, the medication treatment should be professionally supervised on a regular basis (e.g., weekly) to adjust dosage, monitor potential side effects, and assess impact. Second, medication alone is rarely sufficient to address all of the core and associated mental problems that a youth is experiencing; consequently, psychosocial treatment (structured therapy) should usually be administered as well.

Anxiety Disorders. Posttraumatic stress disorder (PTSD) is a serious anxiety disorder that is associated with exposure to trauma, such as witnessing violence (e.g., domestic violence, a shooting, rape, or other assault of another person, terrorist attack), being victimized by violence or other crime (e.g., child abuse, sexual or physical assault, kidnapping), experiencing severe threat or destruction (e.g., war, natural disasters, life-threatening illness), or living through some other shock-filled event (e.g., automobile accident, plane crash). When the trauma (or traumas) is interpersonal in

origin, such as with child abuse or witnessing domestic violence, more severe and long-lasting symptoms result. Typically PTSD manifests itself in terms of: (1) intrusive reexperiencing of the trauma(s) via recollections, dreams, and unwanted images; (2) psychic numbing or persistent avoidance of the features or stimuli associated with the trauma (e.g., closed-in spaces, automobiles, home residence); and (3) nagging symptoms of increased physiological arousal or discomfort.

Evidence-based treatments for PTSD involve *sensitive interviewing*, pursuit of a contextual understanding of the trauma(s) within the life situation of the youth and family, strategies for counteracting the traumatic hindrances to normal functioning, understanding and addressing how the youth is continuing to process the past traumatic events, addressing issues associated with helplessness and self-blame, bringing about mastery over the intrusive phenomena, monitoring the youth's reactions to traumatic reminders, helping address aggressive reactions to trauma recollections, restoring the capacity for normal interaction, and addressing secondary sources of stress.[46] PTSD is a complex and not completely understood disorder. Left untreated, PTSD can result in seemingly unprovoked violence, misery for the youth, and potentially suicide.

Sensitive interviewing
Special interview techniques that are used when interviewing someone about an intensely personal, and perhaps traumatic, experience.

Anxiety-related disorders other than PTSD can take a number of different forms including panic disorder, phobias such as agoraphobia (fear of panic), generalized anxiety disorder, and obsessive-compulsive disorder. Anxiety disorders (including PTSD) are the most common of childhood disorders, affecting 8 to 10 of every 100 children.[47] Generally speaking, anxiety refers to a response to situations or stimuli perceived as threatening. Anxiety responses may include avoidance behavior, thoughts of impending harm or danger, uncomfortable physiological arousal, and feelings of terror or dread. An anxiety disorder impairs the youth's daily functioning because the response is extreme and out of proportion to the actual threat posed by the feared situation. Panic attacks, which can occur in panic disorder and other anxiety disorders, are sudden episodes of intense fear that typically involve racing heart, sweating, shortness of breath, trembling, possibly chest pain, nausea or dizziness, and perhaps fear of losing control or dying.

Evidence-based treatments for the various anxiety-related disorders are well established and include several strategies: *systematic desensitization*[48]

Systematic desensitization
Reducing sensitivity to certain stimuli in a given anxiety-producing situation by exposing the affected person to the stimuli in very small, controlled steps.

Individual-Level Treatment

Problem	Intervention Description
Mood Disorder	Cognitive-behavioral therapy helps individuals learn ways to change thought patterns that lead to depressed and hopeless feelings, and to cope with difficult circumstances. Medication is often useful, particularly for major depression and bipolar disorder.
Posttraumatic Stress Disorder (PTSD)	Treatment for PTSD helps individuals feel less helpless, more in control, and reduces anxiety related to the trauma. It restores the capacity of the individual for normal interaction.
Anxiety Disorder (other than PTSD)	Treatment includes systematic desensitization for agoraphobia; flooding and response prevention for obsessive-compulsive disorder; and contingency man agement, modeling, and cognitive-behavior procedures to help youth modify the unhealthy perception of an event. Supplemental medication is sometimes helpful.
Psychotic Disorder	Psychosocial and pharmacological treatment conducted in neutral and supportive environments is the evidence-based treatment for psychotic disorders.

and graduated exposure, *flooding and response prevention*,[49] *contingency management*,[50] modeling, cognitive-behavior procedures to help youth modify inappropriate or dangerous thoughts, and family-based methods, where relevant.[51] In some cases, psychoactive medication is a useful supplement to psychosocial treatment.[52]

Psychotic Disorders. In the general youth population, schizophrenia occurs in about one out of every 1,000 adolescents.[53] Psychotic disorders in their purest forms, such as with schizophrenia, rarely occur in youth who are involved with the juvenile justice system. Adolescents who are

Flooding and response prevention

Exposing a person to an anxiety-provoking (but physically harmless) stimulus in excessive proportions without giving the person a chance to escape the situation in order to allow the anxiety to subside by itself. For example, if a person is anxious in a room where items are not put away and engages in compulsive behavior to put everything away and straighten up in order to lower the anxiety, a flooding approach would involve having him or her sit in a very messy room and not put anything away—over several minutes until anxiety naturally subsides. Over time this flooding exposure tends to weaken anxiety, which in turn lessens the drive for compulsive behavior.

Contingency management

Arranging the environment predictably so that specific desired behaviors are reinforced, and the absence of these behaviors and the occurrence of undesired behaviors are not reinforced.

clearly suffering from a psychotic disorder are usually funneled into the mental health system. More than likely, adolescent offenders who show some psychotic symptoms (such as reports of delusions or hallucinations, incoherent speech, disrupted orientation toward time and space) may be showing warning signs of a disorder that might not emerge for a few years. Alternatively, such youth could be misdiagnosed and may actually be experiencing a different disorder, such as PTSD or a severe substance-abuse reaction. In cases of psychotic symptomatology or disorder, pharmacological treatment is often recommended, coupled with counseling for the youth and his/her family.

Youth who are exhibiting psychotic symptoms typically do not fare well in interpersonal situations where there is excessive taunting or other stressful interactions. Youth with psychotic disorders typically need to be placed in neutral or supportive environments for treatment and stabilization. Sound psychosocial treatment, in conjunction with pharmacological treatment, should focus on management of disturbing thought processes, coping with stress, interpersonal skills training, and family relations. Treatment should include the family whenever possible to provide additional support for the youth and to alter any dysfunctional family interaction patterns that may have developed in reaction to, or as a part of, the psychotic problems.

Family Treatment

Family-based treatments are useful strategies for a broad range of the mental health problems previously discussed, as well as for conduct disorder, delinquency, and substance abuse. When family members are accessible and willing to participate, family-based treatment is an important part of effective programming in both institutional and community settings. Three family approaches that have shown some success are Functional Family Therapy, Brief Strategic Family Therapy, and Multidimensional Family Therapy.

Functional Family Therapy (FFT) focuses primarily on understanding how the interrelationships among an adolescent's family members promote or maintain maladaptive behavior.[54] Using a multisystemic perspective, FFT targets both adolescent and family functioning, with an emphasis on how various problematic behaviors function within the family context. FFT moves through three phases of treatment: (1) engagement and motivation, (2) behavior change, and (3) generalization. Each phase includes both assessment and treatment facets. During the engagement and motivation phase, the goals are to develop an alliance, reduce negative communication, and enhance engagement and optimism. In the behavior change phase, the goals are to implement individualized change plans, alter delinquent behavior, and build relational skills. The third phase focuses on generalization of changes, relapse prevention, and utilizing community support. All family members attend

the sessions together. Treatment is typically completed in 8 to12 hours, but can extend to 26 to 30 hours for particular cases. FFT can be delivered in home, clinic, and school settings.

Brief Strategic Family Therapy (BSFT) grew out of a need for a culturally appropriate and acceptable treatment for Hispanic youth exhibiting antisocial behavior problems such as conduct disorder and substance abuse.[55] BSFT draws from the structural and strategic approaches of traditional family therapy. The approach assumes that the behaviors of individual family members affect each other greatly and that treatments that fail to take the family structure into account are doomed to limited success.

BSFT therapists are particularly interested in the repetitive interaction patterns that characterize the family. A key assumption is that a maladaptive family structure can help maintain problematic behaviors. BSFT attempts to change the repetitive interactions within the family system, and between the family system and other systems that affect the youth, particularly interactions that are unsuccessful in achieving the goals of the family or its members. BSFT operates by: (1) emphasizing practicality, for example, by focusing on the family's perception of reality by reframing how events are perceived; (2) staying problem-focused, for example, by targeting family interaction patterns that relate

Family Treatment

Problem	Intervention Description
Youth exhibiting behavior that places them at risk of delinquency *or* youth who have displayed delinquent, violent, drug abusing, or related behaviors	Functional Family Therapy (FFT) focuses on understanding how interrelations in the adolescent's family promote maladaptive behavior. Using a multisystemic perspective, FFT targets both adolescent and family functioning.
Youth displaying *or* at risk for developing behavior problems, including substance abuse	Brief Strategic Family Therapy (BSFT) is a short-term, problem-oriented intervention that focuses on modifying maladaptive patterns of interactions.
Youth with drug *and* behavior problems, or substance abuse prevention for early adolescents	Multidimensional Family Therapy (MFT) is a multicomponent family intervention that targets four main areas: • Intrapersonal and interpersonal functioning of the adolescent • Intrapersonal and interpersonal functioning of the parent • Parent-adolescent interactions • Interactions between family members and influences outside the family system

most directly to the identified problem behaviors; and, (3) acting in a deliberate manner, for example, by having the therapist determine which unhealthy patterns of interaction need to be changed to achieve healthy behavior. Several variations and extensions of BSFT exist, such as: Bicultural Effectiveness Training, which addresses stressors related to acculturation across generations; Strategic Structural Systems Engagement, which is a set of procedures developed to better engage adolescents in their family relationships; and Structural Ecosystems Therapy, which places a major emphasis on cultural issues in applying BSFT principles. Although developed for adolescents, BSFT has also been conducted with 6- to 11-year-old youth.[56] BSFT typically involves 12 to 24 hours of therapy during weekly sessions over the course of a 4- to 6-month period.

Multidimensional Family Therapy (MDFT) is a multicomponent family intervention designed to treat or prevent adolescent substance abuse and problem behaviors.[57] MDFT targets four main areas for intervention: the intrapersonal and interpersonal functioning of the adolescent; the intrapersonal and interpersonal functioning of the parent; parent-adolescent interactions; and interactions between family members and influences outside the family system. Individual symptoms are addressed in context, and changes in the individual, such as decreasing maladaptive behaviors and increasing prosocial functioning, are assumed to result from changes in the family system. Treatment tends to last 14 to 16 sessions over 6 months.

Other Evidence-Based Treatment

Multisystemic Therapy (MST) is another form of evidence-based therapy. MST uses a social-ecological approach to intervention that takes into account the network of interconnected systems that encompass adolescent, family, and extra-familial (peer, school, neighborhood) factors.[58] With a focus on parental and youth empowerment, MST is a highly individualized and comprehensive treatment that seeks to build upon identified adolescent and family strengths in order to protect against operating risk factors. The main goals are to reduce youth delinquent activity, reduce other types of antisocial behavior, such as substance abuse, and decrease rates of incarceration and out-of-home placements. Service is provided in the home to reduce barriers to treatment, prevent dropout, allow the therapist to provide intensive services, and maintain treatment gains. Typically MST lasts for 60 hours over a four-month period, although youth and family needs dictate frequency and duration of sessions.

Adapting Interventions

Adapting interventions developed for a mental health setting to a juvenile justice setting may affect the outcomes of the intervention. A number of the evidence-based interventions discussed previously have been presented as stand-alone interventions or interventions that do not occur in a juvenile justice setting. This is of concern because

youths in the juvenile justice system often receive mental health interventions when residing in a juvenile justice facility. These interventions may not work as well in a juvenile justice setting as they do in a mental health setting. For example, juvenile justice facilities often have policies or procedures in place that make it more difficult for youths with mental health problem to adapt to life in the facility than other youths.[59] Behavior management strategies such as token economies may not work well with youths who have certain mental health problems. In addition, youths with untreated mental health problems/disorders may appear to be unmanageable or unwilling to follow rules when, in fact, their behavior may be a sign of a mental health problem/disorder. Finally, youths with diagnosed mental health disorders may be embarrassed or feel stigmatized by treatment. All of these factors may affect the outcome of the mental health intervention. Though facility staff can take measures to deal with these issues in a positive way,[60] it is important to consider the implications of such policies or procedures on the evaluation of a program even if the intervention itself has been shown to work in another situation.

Prevention of Mental Health Problems/Disorders

Prevention programs for children and adolescents at risk for delinquency can take several forms, including school programming (classroom-based and schoolwide), community interventions, and family-based interventions. Of these modalities, family-based preventive interventions have great relevance to mental health problems and delinquency. The family-related risk factors, discussed earlier, often contribute to either the development or exacerbation of mental health problems in youth.

Family-Based Preventive Interventions

Family-based preventive interventions cluster roughly into three groups according to the age of the child: families with (1) infants; (2) toddlers, preschoolers, and elementary school children; and (3) adolescents.

For families with infants, home-visiting interventions have shown promise. The most researched and successful one is the Nurse Home Visitation Program developed by Olds and colleagues.[61] The program is aimed at young, low socioeconomic status, unmarried mothers, although the model is sufficiently flexible to apply to other family constellations and circumstances. This program provides support, parenting education, and follow-up in an attempt to improve the health and adjustment of parent and infant and prevent child abuse, learning and antisocial problems, and other mental health-related difficulties.

For families with children in the 2- to 11-year-old age range, the approach that has shown the most success centers on parenting education, also called parent training. A number of such programs have shown promise. Two noteworthy examples are the Incredible Years program and the Triple P-Positive Parenting Program. The core intervention for the Incredible Years program, developed by Webster-Stratton and colleagues,[62] is a 12- to14-week facilitator-led group parent training program. The program focuses on enhancing appropriate parenting, strengthening positive child behavior, and improving parent-child relations. The Triple P-Positive Parenting Program, developed by Sanders and colleagues, is really a multilevel system of programs.[63] Triple P uses a tiered system of interventions of increasing strength, ranging from media- and information-based strategies, to a brief consultation format, to more intensive levels of parent training and behavioral family intervention. It targets parenting skills and other family adversity factors such as marital conflict, depression, and high levels of parenting stress. Triple P is multidisciplinary and has been used in primary care, mental health, educational, and social services settings. The focus is on expanding the positive parenting options available to parents and strengthening children's development of self-regulation and positive socialization.

For families with adolescents, the family-based treatments discussed previously (FFT, MST, BSFT, and MDFT) may also provide intensive strategies for secondary prevention programming to reduce risk for subsequent mental health problems. Other, less-intensive approaches to prevention include two promising evidence-based programs called the Strengthening Families Program and the Adolescent Transitions Program.[64] The Strengthening Families Program consists of seven weekly group sessions for parents and parallel group sessions for young adolescents. The sessions focus on parental expectations about behavior and youth development, appropriate disciplinary practices, management of emotions, family communication and conflict resolution, and youth involvement in the family. The Adolescent Transitions Program consists of 12 group sessions with parents (and separate group sessions with the adolescents), and focuses on enhancing parenting skills, empowering youth to better manage their lives, building youth self-esteem, improving family communication, and reducing behavior problems and depression.

Selecting Evidence-Based Treatment: An Example

Having identified the problems of the population served by a program, the program administrator must now move to selecting treatment to address them. One of the major problems appears to be depression in 25% of the girls. Evidence-based treatments for depression include: cognitive-behavioral therapy and antidepressive medications in conjunction with structured therapy. The program administrator searched the literature to identify evidence-based treatment for depression and has decided that he would like to introduce cognitive-behavioral therapy for girls diagnosed with depression. He approached his funding agency to request additional funds to provide the therapy and medication. Using the information obtained from his assessment of the problem, he was able to provide his funders with a budget that would be required to offer the new services as well as evaluate the impact of the new services on addressing the problem. The next step is to think about how to evaluate whether this approach will be successful in dealing with the problem of depression among girls.

Evaluation Planning

Evaluation of a program and its effectiveness works best when it is routine, planned in advance, understood by all concerned, and meaningfully incorporated into the workings of the institution or organization. The planning process for implementation and evaluation of mental health services should include a broad range of stakeholders, including: service system representatives (e.g., juvenile justice, mental health, family and social services, alcohol and drug treatment), youth and their families, school district personnel, community and child advocates, law enforcement, judicial representatives, lawmakers and policymakers, and research/evaluation professionals.

The same stakeholders involved in the planning process need to be kept informed on a regular basis (e.g., every six months) regarding progress and obstacles in the evaluation of mental health treatment and prevention efforts. Adopting a standard summary format and mechanism makes it easier for stakeholders to assimilate results. For example, the information disseminated can focus on screening data, numbers of youth receiving specific kinds of mental health services, trends for indicators, and outcome assessment for specific targeted problems.

Measuring the Performance of Mental Health Programs

Outcome Evaluation Strategies

The key question of an evaluation that measures the outcome of a program is, "Did the program/intervention do what it proposed to do?" The ability to provide an answer to this question is directly related to the design and implementation of the evaluation. A rigorous evaluation is one that is able to ensure that it was the program rather than some other factor that caused something to occur (or not occur). In general, this means that it is important to understand how factors both internal and external to the program may have affected the clients of a program.

There are a number of different evaluation designs from which to choose, and each of them answers different questions. For example, let's say an evaluator must determine whether the behavior of juveniles diagnosed with oppositional-defiant disorder who received Functional Family Therapy (FFT) has changed and, if the behavior has changed, whether the change is attributable to FFT. How can the evaluator determine whether a change in their behavior was a result of FFT or something else that occurred during the course of the program?

Posttest-Only Design. If juvenile behavior is assessed at the end of the program (a posttest-only design), the evaluator only learns about the behavior of the juveniles at the time they leave the program. This design will not indicate whether there was a change in behavior over the course of the program.

Pretest/Posttest Design. To identify whether change occurred, one can assess behavior at the beginning and at the end of the program—a pre-post design. Although it is quite a useful means of examining the effectiveness of a program, a pre-post design will not provide information on whether FFT caused the change. To be able to attribute change to a specific program (or control for how factors external to the program may have affected its outcomes), one must compare juveniles who attended the program to similar juveniles who did not.

Experimental Design. The best way to do this is to select a group of juveniles who would be appropriate for the program and randomly assign them to either FFT (treatment group) or no treatment (control group). One can then measure behavior at the beginning and end of the program for both the FFT youths and the non-FFT youths. This approach uses an experimental design, the most rigorous of all the types of evaluation designs. If the results indicate either that more FFT youths than non-FFT youths had a positive behavior change or that the behavior change was greater for FFT youths than non-FFT youths, the change can reasonably be attributed to the FFT program.

While experimental designs are the most desirable for use in evaluating mental health programs, there are several factors that limit their utility. Decisionmakers who must select juveniles for treatment may be reluctant to use this design for ethical reasons. These are discussed below in the section called Collecting and Analyzing Data for Evaluation.

Other Evaluation Decisions. In addition to selecting the evaluation design, a program manager must make a number of other decisions when preparing for an evaluation. These include decisions about how to collect evaluation data and what data to collect, as well as whether to select a method to determine why or how the program caused the change(s).

Time is an important element of an evaluation. In assessing program effects, should follow up be short-term, perhaps six months, or long-term, perhaps five years? Key considerations in making this decision should be how long you are willing to wait for data, how long you expect treatment effects to last, and the resources available for conducting the evaluation.

Sometimes programs affect such a large number of people that it does not seem either reasonable or necessary to collect data on everyone affected by the program. In this situation, one may choose to include only a sample of cases in the evaluation. One needs to be cautious, however, about how the sample is selected to ensure that it is representative of the population served by the program.

Finally, some program participants may be more or less likely to have successful outcomes. By controlling for differences among participants, one can test for the differential effects of the program. If, for example, you have reason to believe that age will affect the likelihood of completing the program successfully, then you can look at program outcomes by age of participants.

Process Evaluation Strategies

Although measuring program effectiveness is the key concern in an evaluation, measuring the implementation of the program is often a concern as well. A process evaluation, one that looks at how well a program was implemented, is useful in combination with an outcome evaluation when one wants to ensure replication of a particular program or when one wants to attribute outcomes to particular program components. Measures for a process evaluation are discussed below in the section called Identifying Measures.

A critical decisionmaking factor in selecting an evaluation design will, of course, be the feasibility of implementing it. Thinking about these various evaluation strategies will help in the next two steps of the evaluation process: developing program logic and developing measures.

Program Evaluation Step 3: Developing Program Logic

In preparation for the evaluation of a program, it is useful to understand how the design of the program relates to what the program is trying to achieve. Laying out the rationale of the program by describing the connections that exist between what the program is trying to achieve (the program goal and objectives) and the activities of the program will help do this. More specifically, a **goal** is a broad statement about what a program hopes to accomplish. It is also the intended long-term outcome of the program. **Objectives** are expected achievements that are well-defined, specific, measurable, and derived from the goal. Objective statements should include a direction, timeframe, and target. Identifying the **resources** that will be necessary to conduct the program is important as well. After goals, objectives, activities, and resources have been determined, it is important to specify what information/data (i.e., performance measures) will be used to provide evidence that the objectives of the program have been achieved. This will be further discussed in step four, "Developing Measures." All of these elements can be organized into a logic model, a visual design of the program. More specific information on logic model development can be found in the JJEC Briefings *Juvenile Justice Program Evaluation: An Overview, 2nd Ed.*, and *Incorporating Evaluation into the Request for Proposal (RFP) Process*. An example of a logic model for a mental health program for juveniles is presented on pages 32-33.

Program Evaluation Step 4: Identifying Measures

Selecting and/or developing measures to assess progress on screening, assessment, and treatment procedures is step four in the evaluation process. There are two types of performance measures: process and outcome. *Process measures* are data used to demonstrate the implementation of activities. Process measures include products of activities and indicators of services provided. Process measures help the evaluator understand whether the program is being implemented as designed. *Outcome measures* are data used to measure achievement of objectives and goal(s).

Measures can take many different forms. They may be qualitative or quantitative in nature. Data may be gathered by observation of the client or directly from the client. Qualitative data are those that are difficult to measure, count, or express in numerical terms. For example, how a client feels the program affected him/her is considered qualitative data. Qualitative research often involves detailed descriptions of characteristics, cases, and settings and typically uses observation, interviewing, and document review to collect data.[65] Quantitative data can be expressed in numerical terms, counted, or compared on a scale.[66] The number of counseling sessions received in a month, for example, is quantitative data. Personal preference and concern about the validity and reliability of the measure should govern decisions about which measures to use.

Process Measures

Process measures, which indicate how well a program has been implemented, can be used to measure many different program elements. For a juvenile program with a mental health component, process measures can gauge service utilization and the extent to which youth who need mental health treatment are actually receiving it. In addition to using a screening assessment to determine which youths need mental health services, a program should employ some type of system-level measurement to monitor service delivery, i.e., which youth in need receive or do not receive services, the kinds and amounts of services received, whether the intervention provided matched the intervention planned, and the disposition of each service component (delivered or not delivered, completed, or prematurely terminated).

It is also important to measure dropout and retention rates of participants in treatment to identify any patterns in who is dropping out. For example, one might discover that the intervention is inappropriate for youths with certain problems or that the youths are not getting all of the services they need. Similarly, one might identify patterns in the characteristics of youths who complete the program. In order to examine dropout and retention, the evaluation should assess the following:

- Rates of program completion,
- Points of dropout (i.e., early, middle, or late stage of intervention),
- Reasons for dropout,
- Potential barriers to participation, and
- Beliefs of participants (youth, family members) about the program, the goals, and the likelihood of success.

Another type of process measure concerns treatment or program fidelity, i.e., whether the actual treatment provided resembled the intended treatment. Program fidelity can be monitored in several ways, including: a checklist completed by the treatment provider; spot or random review of tape-recorded sessions by supervisors; and a simple checklist completed by participants. Monitoring or evaluating program or treatment fidelity is important, but taking proactive steps to promote fidelity is important too. This can be done through:

- use of treatment or program manuals that detail both the content and the delivery style of the intervention,
- intensive training and practice,
- close supervision by knowledgeable supervisors,
- peer support networks in which treatment providers share tips and strategies,
- collecting information on client satisfaction with services
- regular feedback to treatment providers for continuous fidelity monitoring, and
- system recognition or incentives for effective implementation.

Outcome Measures

Outcome measures can be used to determine the impact of an intervention on a particular youth or on the program or mental health system as a whole. Though mental health interventions are perhaps most concerned with having an impact on individual clients, whether intended or not these interventions may have a number of other consequences as well. A mental health institution, for example, may find that an intervention resulted in fewer suicide attempts, fights, and mental health crises among youths; lower staff burnout; and greater cooperation and academic performance among the population of youths at the institution. After the program has been in place for an extended period of time, the public may express greater community satisfaction with the entire system, litigation may decline, and fewer incidents of mental health problems or delinquency may occur.

Evaluation of mental health interventions can be useful to determine the effects of the intervention on individual clients as well as on the program or larger mental health or juvenile justice system. Examples of mental-health outcome measures that can monitor system-wide impact include: suicidal incidents (verbal threats noted by staff, suicide attempts), fights, discipline episodes, rates of participation in positive activities, hospitalizations for acute mental health crises, and other indices that one might expect to change as a function of the effectiveness of mental health treatment.

Outcome measures can also assess the treatment received by individual juveniles. At the beginning and end of mental health treatment, every youth should be routinely administered measures specific to the problems being treated. For example, there are standardized measures for symptoms of depression (Reynolds Adolescent Depression Scale), PTSD (Posttraumatic Stress Diagnostic Scale), anxiety disorders (Multidimensional Anxiety Scale for Children), and other disorders (Brief Psychiatric Rating Scale for Children).[67]

A treatment service provider can also institute goal attainment assessment. Three to six specific treatment goals should be established for each youth, and achievement of the goals can then be assessed at the end of treatment to determine to what extent the goals were met. This type of goal attainment system can be used first to help guide follow-up service planning for individual youths, and also to monitor overall impact of treatment services on youths who receive treatment. Pre- and posttesting can provide an indication of, for example, the reduction of a particular anxiety.

Program Logic Model: An Example

Based on the problems identified earlier—depression among girls and frustrated and angry youths—the program administrator has identified the following goal: Reduce reported symptoms related to mental health disorders. One of the objectives for the program will be: Within one year, to resolve issues related to the diagnosis of depression for 50% of girls diagnosed with depression. As a means to achieve this objective, the program will provide weekly cognitive behavioral therapy sessions to girls diagnosed with depression by the program. A psychiatrist to diagnose the girls, therapists to provide services to the girls, and a location for services are the major resources required. A process measure for this activity will be the number of weekly cognitive behavioral therapy sessions attended by each depressed girl. This number can then be compared to the number of sessions offered to determine the level of compliance with treatment. An outcome measure for the objective will be a pre-post test using the Reynolds Adolescent Depression Scale. The psychologist will use the first scale results to make a diagnosis of depression. The program selected the pre-post test design because they were not able to gain permission to perform random assignment of girls to treatment or no-treatment groups. The table on the facing page presents the program logic model visually. (Note: This does not represent a complete program logic model, but provides an example of the elements that comprise a logic model.)

Program Logic Model

Goal: Reduce reported symptoms related to mental health disorders

Objective(s)	Within one year, resolve issues related to the diagnosis of depression for at least 50% of girls diagnosed with depression
Resources	Therapists, psychiatrist, program site
Activities	Weekly cognitive behavioral therapy sessions given to girls diagnosed with depression by the program
Process Measures	Number of weekly cognitive behavioral therapy sessions attended by each depressed girl compared to the number of sessions available
Outcome(s)	50% fewer girls have a current diagnosis of depression upon their discharge from the program
Outcome Measure(s)	• Pre-post Reynolds Adolescent Depression Scale • Pre-post psychiatric evaluation

Program Evaluation Step 5: Collecting and Analyzing Data for Evaluation

There are a number of important considerations in the evaluation of mental health programming that relate to step five of the evaluation process, collecting and analyzing data. These considerations include when and how data are collected and consent, confidentiality, and ethical issues.

Participation in an evaluation often involves collecting additional data and consequently may place additional work on program staff. To keep data collection burdens to a minimum, forms should be streamlined and cross-coordinated so there is little redundancy. If data collection is successfully implemented in a coordinated manner, all staff and administrators who see or complete a data form or computer entry should be able to explain why that particular information is needed. Regardless of who does the collecting, training to ensure consistency in how the data are collected, procedures for entering and tracking the data, and decisions about the timing of collection are all critical to ensuring the data's integrity.

Timing Data Collection in Mental Health Evaluation

Troubled youth who are experiencing mental health problems do not always show their symptoms continuously. The manifestations of psychological disorder may wax and wane, sometimes as a function of environmental stress and other times for no apparent reason. Compounding the issue, youth reports of problems may also vary depending on circumstances—perhaps they continue to report symptoms to stay connected to supportive treatment providers, or underreport symptoms to avoid treatment. Staff need to be prepared to weather the inevitable fluctuations in mental health functioning. This can involve periodic monitoring of youth who have received treatment, making contingency plans for relapses and additional treatment needs, and looking for concrete evidence of positive adjustment (e.g., youth involvement in activities, social interactions) versus continued problems (e.g., youth avoidance of activities, difficulties with staff and other youth) when collecting data to monitor the problem or evaluate the success of an intervention.

Fluctuations in mental health problems have implications for evaluating the success of interventions. Data collection should be timed to account for possible fluctuations in symptoms. Collecting data at multiple times during and after treatment is one way to deal with this.

Consent, Confidentiality, and Ethical Issues In Mental Health Treatment and Evaluation

Youth who are in the juvenile justice system, and their parents or significant family caregivers, have a right to know what kinds of mental health treatments are being provided, and in many cases they should be given the opportunity via informed consent procedures to accept or decline treatment.

When youth are involved in treatment, they do not forego the right to be fully informed, for example, about the possible side effects of psychopharmacological medication or the nature of cognitive-behavioral treatment. The exception is when youth are a danger to themselves or others, and there is good cause for imposing treatment. Even under those conditions, youths and family members should be fully informed about the treatment process. When youths participate in assessment or evaluation procedures as well as in treatment, informed consent procedures should outline what kinds of privacy and confidentiality are afforded and what the limitations of confidentiality are.

To be effective, mental health treatment needs to be delivered in such a manner that privacy and confidentiality are maintained. For example, psychological therapies often involve disclosures by youths about sensitive and potentially embarrassing subject matter, such as episodes of sexual abuse, expressions of fear or upsetting thoughts, or revelations of personal weaknesses. If youths believe that their most sensitive secrets are going to be routinely revealed to others, they are much less likely to participate meaningfully in treatment and to trust treatment providers. Some recommended safeguards for confidentiality include:

- restricting access to clinical records to staff who truly have a need to know,
- establishing clear rules throughout an institution or system to provide guidance to staff about how to protect confidentiality,
- avoiding discussion about a youth's treatment or case in front of other youths or other individuals who do not have a true need to know,
- providing youths and family members with information in advance about the boundaries and exceptions to confidentiality,
- storing mental health records in secure facilities with restricted access, and
- going to great lengths to respect the privacy of youths who are receiving treatment.

Any evaluation project involving human subjects that is funded with federal money is subject to the regulations governing the protection of human subjects (28CFR 46) and the confidentiality of identifiable information (28CFR 22). Two major issues regarding the protection of human subjects include the requirement of a review of research by an institutional review board (IRB) and informed consent on the part of the subject or legally authorized representative. With regard to the confidentiality of identifiable information, such information may be used only for research or statistical purposes and identifiable information may only be revealed with prior consent. Before any evaluation project is undertaken, local legislation and regulations should be reviewed as well.

Ethical concerns are sometimes raised when an experimental design is proposed—particularly if the presenting problem is as serious as a mental health disorder. When it is not known whether treatment is better than no treatment and one is reasonably sure that no undue harm will arise by placing youths in either the treatment or no treatment group, it is usually not considered unethical to restrict treatment. If, however, there is concern over the ethicality of not treating a youth, two options may be considered. If a new treatment is being evaluated, one may want to consider evaluating the new treatment compared to the current treatment so that all youth are receiving some treatment. Another option is randomly assigning individuals to a waiting list or to treatment when the number of clients exceeds the number who can be served. As treatment becomes available, the waiting-list clients are moved to the treatment group. This model allows the treatment to be compared with no treatment without denying treatment to anyone. These issues should be discussed in the consent procedures given to youths and/or their families, and decisionmakers in the juvenile justice system should be aware of all of these procedures so they can make an informed decision about how to evaluate the performance of the program.

Collecting and Analyzing Data: An Example

Based on the logic model the program administrator created for his program, data regarding each case will be collected at multiple points in time throughout the program. Data will be collected for all girls entering the program during the first year following the implementation of the new program. As a result of this, rules and procedures for when and how to collect and store data must be created. These decisions will be influenced by concerns for confidentiality and privacy, as well as the need for the data to inform the program manager about the effectiveness of the intervention. Accordingly, a process for obtaining and documenting consent for participation in the evaluation will be developed. The decisions that must be made about data collection include:

- Who is responsible for obtaining the consent for participation and when will it be obtained?
- What is the process for administering the pretest depression scale and who will administer it? When will it be administered? (e.g., All girls entering the program will complete the scale within one month of entry to the program. Those whose scores indicate possible depression will be referred to the psychiatrist.) Where will the scale be administered (e.g., private office)?
- At what point after the pretest scale is completed will the psychiatric exam occur?
- How will attendance at the cognitive-behavioral therapy sessions be tracked?

- Who is responsible for planning and running the cognitive-behavioral therapy sessions?
- When will the posttest depression scale be administered? (e.g., Girls diagnosed with depression will complete the scale within two weeks prior to program discharge.)
- At what point after the posttest scale is completed will the psychiatric exam occur?
- Who will be responsible for coordinating the data collection effort?

The program administrator plans to perform data analyses to answer the primary question, "Did the cognitive-behavioral therapy alleviate the symptoms of depression?" The depression scale and the psychiatric evaluation serve as indicators of depression. The analyses will consider whether these measures indicate that the depressive symptoms that existed when a girl was admitted to the program still exist when she leaves the program. The scores on the scale and psychiatric evaluation administered at intake will be compared to those conducted at discharge to determine the level of depression at discharge. Analyses will also consider whether the program was administered as designed (for example, did each girl attend a therapy session each week at the program? Were the scales administered according to plan?) With these thoughts in mind, the program administrator decides precisely what information is needed for each case and how to keep track of the information.

To keep track of data and analyze data quickly, the program administrator decides that it makes sense to store evaluation information in a database. After consulting with staff, he decides the database should document the following information about each case:

- Sufficient identifying information to track participation in the program but not enough information to identify an individual
- Date of entry to program
- Date of pretest of Reynolds Adolescent Depression Scale
- Score on pretest of Reynolds Adolescent Depression Scale
- Date of the first psychiatric evaluation
- Results of the first psychiatric evaluation
- For each girl diagnosed with depression, consent or refusal to participate in the evaluation
- Date of each cognitive-behavioral therapy session held
- Date of each cognitive-behavioral therapy session attended
- Date of posttest of Reynolds Adolescent Depression Scale
- Score on posttest of Reynolds Adolescent Depression Scale
- Results of the second psychiatric evaluation
- Date of discharge from program

Evaluation Results

At this point, it is time to consider how the program has performed. The logical steps after data analysis are to produce a report detailing the results and consider the implications of those results on the design of the program.

Program Evaluation Steps 6 and 7: Report Findings and Reassess Program Logic

Throughout this document a number of references have been made to the importance of reporting program findings. The stakeholders of the program should have an opportunity to see the results of the analysis in a format that will help them make decisions about how to use the information. Reporting findings, step six in the evaluation process, leads to the logical, final stage of the evaluation process—reassessing program logic. Program managers and administrators should be able to understand the results to determine whether and/or how to make modifications to the program design or implementation. Understanding and using evaluation results is frequently a greater challenge when an external evaluator performs the evaluation. Program staff should work very closely with the evaluator to ensure that the results provide the information they need to reassess the program. Staff should also make sure that they understand the results and their implications.

Report Findings and Reassess Program Logic: An Example

Approximately three months following the end of collecting data about the effectiveness of the program in treating depressed girls, the program administrator releases a report. The report makes the following key statements:

- Eighty-five percent (85%) of girls diagnosed with depression received weekly therapy sessions throughout their stay at the program. Another 10% of girls diagnosed with depression received at least 75% of the weekly therapy sessions during their program stay. The average length of stay for these two groups was 6 months.
- The remaining 5% diagnosed with depression received less than half of the required sessions. Each of the girls in the 5% group attended the program for less than six weeks.
- Twenty-five percent (25%) of the depressed girls who attended therapy every week while at the program did not have depression at discharge.
- Of the depressed girls who did not receive therapy every week while at the program, only 15% did not have symptoms of depression at discharge.

Conversation with the evaluator led the program administrator to conclude that with the exception of a few situations, the program was being administered as designed. Though the intervention appeared to be successful with some youths, the program was not successful in reaching the 50% target for those youths who participated in the program as designed. Furthermore, those youths who did not receive therapy each week were more likely to have depression at discharge than those who did receive therapy each week. As a result, the program administrator has made a change to the program design: the number of therapy sessions has been increased to two per week. The next evaluation will examine whether the outcomes achieved with the revised program design are better than those with the original program design.

Conclusion

As previously discussed, youth involved in the juvenile justice system have higher rates of mental health problems and psychological disorders than youth in the general population. Those juveniles who engage in delinquent acts and who also have mental health problems present serious problems to the juvenile justice system. In addition to holding juveniles accountable for their offending behaviors, the juvenile justice system is faced with the prospect of identifying and treating delinquent youth who have complex problems.

In order to respond to this issue at the community, residential, and institutional programming levels, it is crucial that juvenile justice planners and key stakeholders educate themselves about the role of mental illness in delinquency. They should be aware of the roles of prevention and the types of evidence-based treatment services that are appropriate for specific mental health problems in youthful offender populations. Aside from understanding this information, it is necessary for program managers to implement these treatments within their programs. In addition, juvenile justice planners and key stakeholders should work and collaborate with all appropriate agencies to ensure a full continuum of care for youth with mental illness.

As crucial as it is to implement these programs, however, it is equally as crucial that they be evaluated. Evaluation is a key component in program development and management. Because programs are constantly screening, assessing, and treating clients, it is important to have mental health outcome measures in place for continual feedback on progress and (or) setbacks. It is also important that program managers promote program fidelity and monitor it through collection of process measures to ensure that their programs are carrying out the actual procedures needed to produce the intended treatment. Finally, when possible and appropriate, the use of experimental designs is recommended in program evaluation because it allows one to determine if outcomes are a result of the intervention rather than some other factor. The results of the evaluation are a key management tool that can be used to revise the program design or implement tactics to improve program integrity. Reporting of findings and reassessing program logic are the final, critical steps in the evaluation process.

Over a million youth enter the juvenile justice system each year because of delinquent behaviors. It is likely that significant numbers of these youth have moderate to severe mental and emotional problems that put them at risk for developing serious physical and emotional disorders.[68] It is up to juvenile justice planners and key stakeholders to make a firm commitment to prevent and address mental health problems in youth involved in the juvenile justice system, and to systematically evaluate the impacts of their interventions.

Resources

For information on the scales and other resources referenced in the guidebook, see the following sources:

- The Brief Psychiatric Rating Scale for Children, developed by J. E. Overall, Ph.D., and B. Pfefferbaum, Ph.D., is in the public domain: Overall, J.E., & Pfefferbaum, B. (1982). The Brief Psychiatric Rating Scale for Children. *Psychopharmacology Bulletin, 18,* 10-16.

- The Child Behavior Checklist:
  ASEBA
  1 South Prospect Street
  Burlington, VT 05401-3456
  Telephone: 802.656.8313
  Email: mail@ASEBA.org
  Web: http://www.ASEBA.org

- Center for the Promotion of Mental Health in Juvenile Justice
  Columbia University/ NYSPI
  1051 Riverside Drive Unit 74
  New York, New York 10031
  Web: http://www.promotementalhealth.org

- The Massachusetts Youth Screening Instrument
  MAYSI Project Office
  Department of Psychiatry
  University of Massachusetts Medical Center
  Worcester, MA 01655
  Telephone: 508.856.8727
  Web: http://www.umassmed.edu/nysap/maysi2/what.cfm

- The Multidimensional Anxiety Scale for Children developed by J. March, M.D.
  Multi-Health Systems, Inc.
  908 Niagara Falls Blvd.
  North Tonawanda, NY 14120-2060
  Telephone: 800.456.3003
  Web: http://www.mhs.com

- National Center for Mental Health in Juvenile Justice: Policy Research Associates
  345 Delaware Avenue
  Delmar, New York 12054
  Telephone: 866.9NCMHJJ
  Web: http://www.ncmhjj.com/publications

- The Posttraumatic Stress Diagnostic Scale, developed by E. Foa, Ph.D.
  National Computer Systems, Inc.
  P.O. Box 1416
  Minneapolis, MN 55440
  Telephone: 800.627.7271

- The Reynolds Adolescent Depression Scale, developed by W. R. Reynolds, Ph.D.
  Psychological Assessment Resources, Inc.
  P.O. Box 998
  Odessa, FL 33556
  Telephone: 800.331.8378

End Notes

[1] Otto, Greenstein, Johnson, & Friedman, 1992

[2] Sondheimer, 2001; Tatem Kelley, Loeber, Keenan, & DeLamatre, 1997

[3] Cocozza & Skowyra, 2000

[4] Juvenile Justice Evaluation Center, 2003

[5] American Psychiatric Association, 2000

[6] American Psychiatric Association, 2000

[7] Ryan & Lane, 1997

[8] Wierson, Forehand, & Frame, 1992

[9] American Academy of Child and Adolescent Psychiatrists, 2000

[10] Wierson, et al., 1992

[11] Otto et al., 1992; see also Friedman & Kutash, 1986; Hollander & Turner, 1985; McManus, Alessi, Grapentine, & Brickman, 1984

[12] Davis, Bean, Schumacher, & Stringer, 1991

[13] Timmons-Mitchell, Brown, Schultz, Webster, Underwood & Semple, 1997

[14] Cauffman, Feldman, Waterman & Steiner, 1998

[15] Conner, 2002

[16] Patterson, 1982; Wahler & Dumas, 1987

[17] Farrington, & West, 1981; Patterson, 1982; Loeber & Stouthamer-Loeber, 1986

[18] Bates, Bayles, Bennett, Ridge, & Brown, 1991; Campbell, Breaux, Ewing, & Szumowski, 1986; Offord & Boyle, 1986; Bates, 1998; Loeber & Stouthamer-Loeber, 1986; Moffitt, 1990

[19] Dumas, 1986 ; Wahler & Dumas, 1987; West & Prinz, 1987; Offord, 1982; Robins, 1981; Offord & Boyle, 1986; Rutter & Giller, 1983

[20] Rutter, 1978; Zelkowitz, 1987

[21] Offord & Waters, 1983; Rutter & Giller, 1983; Dumas, Neese, Prinz, & Blechman, 1996; Loeber, 1988; Loeber, 1990; Patterson, DeBaryshe, & Ramsey, 1989; Brook, Brook, Gordon, Whiteman & Cohen, 1990; Kandel, 1982; Kellam, Brown, & Fleming, 1985

[22] Prinz, Connor, & Wilson, 1981

[23] Moffitt, 1993a; Moffitt, 1993b; Campbell, 1991; Walker & Buckley, 1973; Patterson, Reid, & Dishion, 1992

[24] Bierman, 1986; Cantrell & Prinz, 1985; Dodge, 1989; Parker & Asher, 1987

[25] Asarnow, 1988; Blechman, Tinsley, Carella, & McEnroe, 1985; Dodge, Pettit, McClaskey, & Brown, 1986; Shinn, Ramsey, Walker, Stieber, & O'Neill, 1987

[26] Fox & Forbing, 1991; Sturge, 1982

[27] Conduct Problems Prevention Research Group, 1992; Reid, 1993; Reid & Eddy, 1997

[28] Dishion, Patterson, Stoolmiller, & Skinner, 1991; Snyder, Dishion, & Patterson, 1986

[29] Patterson, Reid & Dishion, 1992; Prinz, Foster, Kent, & O'Leary, 1979

[30] Hawkins & Lam, 1987; Hawkins & Weis, 1985

[31] Rutter, 1978; Zelkowitz, 1987

[32] Neuwwirth, 1996

[33] Spearing, 2001

[34] Obeidallah & Earls, 1999

[35] Obeidallah & Earls, 1999; Timmons-Mitchell et al., 1997

[36] Hinshaw, 1987

[37] Teplin, Abram, McClelland, Dulcan, & Mericle, 2002

[38] Grisso & Barnum, 2000

[39] Achenbach, 1991

[40] Columbia University Department of Child and Adolescent Psychiatry, 2001; Center for the Promotion of Mental Health in Juvenile Justice, 2002.

[41] Cantanzaro & Mearns, 2002

[42] Boesky, 2002; Teplin et al., 2002; National Institute of Mental Health, 2000; Lewinsohn, Clarke, Hops, & Andrews, 1990; Reynolds & Coats, 1986

[43] Jensen, Ryan, & Prien, 1992

[44] Ibid

[45] Pynoos & Nader, 1993

[46] Coalition for Juvenile Justice, 2000

[47] Hagopian & Ollendick, 1997

[48] HealthyPlace.com, 2000

[49] Harris & Wiebe, 1992

[50] Iguchi, n.d.

[51] Hagopian & Ollendick, 1997

[52] Bernstein & Shaw, 1993

[53] Coalition for Juvenile Justice, 2000

[54] Alexander & Parsons, 1982; Alexander, Pugh, Parsons, & Sexton, 2000

[55] Coatsworth, Szapocnik, Kurtines, & Santisteban, 1997

[56] Szapocznik, & Williams, 2000

[57] Liddle, Rowe, Dakof, & Lyke, 1998; Liddle, Rowe, Diamond, Sessa, Schmidt, & Ettinger, 2000

[58] Henggeler, 1998; Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 2000

[59] Boesky, 2002

[60] Ibid

[61] Olds, Henderson, Chamberlin, & Tatelbaum, 1986; Olds, Henderson, Tatelbaum, & Chamberlin, 1988

[62] Webster-Stratton, 1984a

[63] Sanders & Markie-Dadds, 1996; Sanders, Markie-Dadds, Tully, & Bor, 2000

[64] Redmond, Spoth, Shin, & Lepper, 1999; Spoth, Redmond & Shin, 2001; Dishion & Kavanagh, 2000; Dishion & Kavanagh, 2001

[65] http://www.bja.evaluationwebsite.org/html/glossary/q.html (March 11, 2003)

[66] Ibid

[67] Reynolds and Coats, 1986; Foa, 2000; Overall and Pfefferbaum, 1982

[68] Montgomery, 2000

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