## Functional Assessment in Forensic Settings: A Valuable Tool for Preventing and Treating Egregious Behavior

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Forensic agencies and institutions are charged with treating the most socially disruptive and mentally disordered individuals while securing public safety. Egregious behaviors in these settings demand immediate response and scarce resources. Functional assessment, sometimes used synonymously with functional or behavioral analysis, is presented as a cornerstone tool to help identify targets for intervention and hypothesize causal behavioral connections. Using an interactive chain analysis approach, the temporal sequence of behavior is examined across domains with an emphasis on obtaining operational knowledge about the functions and controlling variables of target behaviors. A clinical case example is used to illustrate the potential contribution of FA in forensic assessment and case conceptualization.

Keywords: functional analysis; egregious behaviors; drug courts; nondrug dependent

orensic agencies and institutions are charged with treating the most socially disruptive and mentally disordered individuals while securing public safety. Staff and administrators in these settings face great challenges in dealing with egregious acts such as self-harm, suicidal, assaultive, and escape behaviors. The public holds high expectations for community supervision, while in custody even higher ethical mandate dictates oversight should be sufficient to prevent harm to those confined, whether self- or other-induced (American Correctional Association, 2003).

Egregious behaviors in custodial settings demand immediate response and scarce resources, expensive emergency security and medical services, the involvement of skilled professional staff, and increased supervision and reporting. Some residents may view incidents as an opportunity to engage in other disruptive activities; other residents incur trauma-related costs at witnessing or hearing them. Studies of stress among clinicians indicate their most extreme stresses include client suicide attempts, threats of attempts, and client anger (Deutsch, 1984; Hellman, Morrison, & Abromovitz, 1987). When incidents occur frequently, staff morale and sense of control often deteriorate (McCann, Ball, & Ivanoff, 2000; Morgan, Van Haveren, & Pearson, 2002). Thus, managing and treating behaviors that disrupt safe and secure programming is a high priority in any residential setting.

Management requires the ability to predict, control, and guide mission-critical events. Clinicians are often called on to assist and are expected to apply their understanding of human behavior to the tasks set out by administrators. From a behavioral perspective, this requires an environment that facilitates relevant and accurate assessment, effective blocking of behavior, and control over contingencies that supports both a willingness to try new things and more skillful behavior. Addressing the implementation of all three is beyond the scope of a single article; here we focus on assessment—the issue that sets the table for predicting, controlling, and altering a given behavior. The purpose of this article is to acquaint or reacquaint readers with functional assessment (FA), a fundamental method in behavioral assessment. Here we present and enthusiastically endorse the use of FA as a robust and cost-effective means of meeting a variety of treatment demands in forensic residential programming. A case example illustrates FA in a prison setting.

Forensic risk assessment largely focuses on the use of nomothetic and population-based methods for determining violence risk and recidivism (Baird, 2009; Underwood & Knight, 2006). Population-based assessments are typically developed for maximal prediction of the occurrence or absence of a behavior within a given period. These risk assessments are typically contextneutral; they do not specify when and where risk is highest. As an example, for every drunken fight a client gets into, there are incidents in which the same high-violence-risk individual drinks and does not fight; however, his risk score as determined by current risk measures is identical each time within the same week or month. Few argue that current risk assessments are capable of measuring changes in risk on an ongoing basis. Likelihood of violence is calculated as a probability based on a variety of variables (gender, mental health status, "state" of drug use, etc.) These assessments often imply that treatment should work on altering these traits or constellations of psychological constructs. Programs attempt to boost self-esteem, increase empathy, and reduce negativity, callousness, or traumatization. Although the literature is replete with treatments to address specific disorders (e.g., depression, PTSD, anxiety), there are few for specific behaviors such as aggression or violence (cf. Elliot, 1997 for a marked deviation from this trend). Current approaches to treatment dictate that effective intervention strategies, whether directed at reducing offending or reducing the effects of a mental health disorder, should be based on an accurate assessment of individuals and of their environments (Antony & Barlow, 2004; DeMatteo & Marczyk, 2005). Whether egregious behaviors are the result of disturbed or disruptive, a.k.a. "mad or bad," behavior (Toch & Adams, 2002) the goals remain the same: providing treatment for those who need it and maintaining safety for all.

A focus on personality traits, co-occurring mental health disorders, and static predictors has limited utility for clinicians. Administrators have little control over the types of individuals entering their systems and populating their institutions. Personality traits and long-standing psychiatric disorders may be modulated with medication, but are difficult to change given scarce psychosocial resources, the high demands and low motivation of many clients, and a paucity of effective treatments for the conduct and personality disorders commonly found in correctional settings. What administrators and clinicians do have control over, however, is the context these individuals reside in—the physical structure and the contingencies inside the institution. Population-based risk assessments and clinical assessments do not assist administrators in identifying the contexts where violence is most likely to occur, but behaviorally based FA provides exactly this information, allowing the prediction of which individuals are likely to be violent, the situations in which they are likely to be violent, the ways in which they will be violent, and the purpose or goal of the violent behavior. Looking across assessments of multiple residents, we can identify which situations commonly lead to violence and train staff to create alternate corxtexts and to increase vigilance when a high-risk situation does occur. This builds on the strengt hs of line staff, many of whom already do this, and on the strengths of residential programming, which typically holds many tools for creating structure and a positive context for programming.

Conducting assessment to inform treatment means identifying the individual and environmental variables that govern behavior and therefore using idiographic, individually based assessment methods. Functional assessment is a cornerstone tool that can help meet the goal of identifying targets for intervention and hypothesizing causal connections. It is theoretically consistent from assessment through intervention to evaluation of treatment outcomes, important considerations in evidence-based practice implementation, and provides an understandable framework for forensic clinicians, staff, and administrators. FA is useful in all cognitive—behavioral assessment and treatment planning, but particularly in working with the complex and multiple disorders of forensic clients.

### **BACKGROUND AND CURRENT STATUS**

Functional assessment (FA), contains three broad phases: information gathering, hypothesis generation, and hypothesis testing (Cone, 1997). The aims of such assessment are to "assist in the identification of target behaviors and the environmental conditions maintaining them, and to describe the relationship between them in analytic terms" (Sturmey, 1996, p. 55). We use Cone's definition of FA: "the activities involved in describing and formulating hypotheses about potentially controlling variables" (p. 261) and define functional analysis methods more specifically as including the identification of the conditions under which target behavior occurs, but also the testing of these hypothesized relationships via systematic manipulation of causal events. Most simply put, it is the process of identifying the controlling variables of a target behavior (Carr, 1994). The term functional analysis, first identified by Skinner (1953; cf. Virués-Ortega & Haynes, 2005, for a brief history), provides the foundation for the field of applied behavior analysis (Cooper, Heron, & Howard, 2007). Yoman (2008) provides a technical primer of functional analysis. Unfortunately, the terminology surrounding FA in the literature over the past 30 years varies and is confusing. Table 1 lists some of these terms (Cone, 1997). Some contain all three phases of assessment, while others focus on one (functional analytic causal modeling) or two (behavior analysis). Despite early powerful demonstrations that functional analysis methods could be effectively used to discover the conditions under which serious problem behaviors occurred, their development was hampered and delayed, perhaps as a result of this definitional obfuscation (Blakeslee, Sugai, & Gruba, 1994; Sturmey, 2007). Common misconceptions include (a) the belief that FA is any ABC exploration of behavior (leading clinicians to assume they have been trained in FA methods when they may know only rudimentary behavioral assessment); and (b) that FA is suitable only with the stereotypic or self-harm behaviors typically displayed by severely developmentally delayed and autistic clients, often in institutional settings. This has limited the extension of FA into mainstream clinical practice (Blakeslee et al., 1994; Carr, 1994; Sturmey, 1996, 2007). With few exceptions, its use in clinical practice is primarily limited to the behavior analytic literature (Cone, 1997).

Recently, however, influential behaviorally based transdiagnostic models of treatment suggest increasing momentum in the use of FA methods. Dialectical Behavior Therapy (DBT; Linehan, 1993a, 1993b), Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999), Functional Analytic Psychotherapy (FAP; Kohlenberg & Tsai, 1991), and Barlow's Unified Treatment for Emotional Disorders (Barlow, Allen, & Choate, 2004) are four popular cognitive behavioral therapies (CBTs) developed within the past two decades that rely heavily on FA to understand behavior and measure behavior change in treatment. These models share the view that it is possible to offer a comprehensive and individualized assessment by identifying a specific behavior to change, and then evaluating past environments that have produced the behavior (e.g., "tell me about the different fights you've been in . . . "). The assessment is idiographic in na ture and contains variables related to the particular individual's biology, social environment, and cognitive,

### TABLE 1. FUNCTIONAL ASSESSMENT TERMINOLOGY

Process of identifying controlling variables for target behavior is variously called:

Behavior analysis

Functional analysis

Functional assessment

Case conceptualization

Functional analytic causal modeling

Behavioral assessment

Functional assessment:

Activities involved in describing and formulating hypotheses

about potentially controlling variables

Functional analysis:

Testing or verifying hypotheses via systematic manipulation of

environmental events.

Source: Cone (1997).

behavioral and emotional triggers, and patterns of behavior, that is, biopsychosocial. Complex life webs containing myriad influences, past and present, require that we understand at the individual level. Our questions and hypotheses take advantage of current understanding of cognitive-behavioral and neurological science with a developmental lens. An FA of the client's problem behavior takes place in the context of rewards and punishers in the client's environment.

We conduct FA as an interactive clinical process, providing opportunities to highlight client functional behavior while generating hypotheses about causal links to target behavior, ultimately teaching problem-solving and life management skills. In an interview format, the clinician and client review the events surrounding the specific occurrence of a target behavior. The clinician assists the client in identifying factors that increased the likelihood of the behavior occurring in that particular circumstance. Clients learn that their environment has powerful influences on their behavior, and that past behavior impacts later behaviors in important ways. Finally, FA yields multiple foci for treatment interventions. Linked together over time, functional analyses provide the basis for behavioral analysis across situations, helpful with multiply determined behaviors such as self-harm and aggression. Conducting an effective analysis allows the identification of establishing and motivating operations potentiating the target behavior, assists in labeling the controlling variables, and identifies a focus for treatment or intervention. It helps answer the questions, Why did this behavior occur at this time, in this context, and, What problem did it solve for the resident?

Initially, we strongly advise conducting the analysis as a collaborative dialogue between the clinician and client. After clients learn the process, on subsequent occasions they may begin a narrative account of the event by themselves, identifying important variables controlling their behavior prior to meeting with the clinician. This increases the efficiency of the clinical contact while providing needed practice for the client. We use the case of James to illustrate the use of FA in the treatment of egregious behaviors common in forensic settings. The elements discussed below are those contained in a narrative account of the event.

The Case of James Y. James, 35 years old, is in his fourth year of a minimum 8-15-year sentence for manslaughter in state prison. He has served two other shorter local sentences for assault and weapons charges. James has no family who are in contact with him any more (>3 years) except his 18-year-old son; the others have made it clear that he "burned his bridges" over his 20-year career on the streets. He feels this is probably for the best as "Worrying about your family when

you're in just rots your guts. There ain't nothin' you can do to help, nothin." His son's mother died recently, of HIV/AIDS complications, and even though he had not spoken to her for over 10 years, he has been thinking a lot about her, about his son, and about whether he will ever have a'real life. He went to the medical clinic requesting sleep medication because the lack of sleep was causing attention problems in his job in the prison laundry. He credits his job with helping him "stay right."

James is anxiously looking forward to seeing his 18-year-old son on visiting day. He has been following sports teams his son likes and has started a drawing of the two of them sitting on the front porch of a house in the country. The day before visiting day, while in the recreation yard, other residents talk about their children and grandchildren, bragging about the attention their families pay them, and about their children's life successes. He boasts too and shows his son's picture, talking about the good job he just landed. On visiting day his son does not come at the appointed time and does not call. James sits in the unit and watches the other men go meet their families, his worry and dread building as the hours go by. At the end of the day he hears from another resident from his neighborhood that his son was arrested for armed robbery the night before and is now in county lockup. The residents tease him about his son's "good job" and tell him it is his fault his son has turned out this way. He believes this is probably true, and feels like a failure; very sad, angry, and hopeless. He threatens to "shut up" the resident who says this. Later that evening, the same resident glares at him as the unit settles down to watch a movie; James reacts very quickly and starts a fight with him. Even when code is called, he continues to pummel the other resident, ignores staff commands to stop, and resists their initial efforts to break up the fight. He is tackled by three officers, taken down, and restrained. Two of the officers are hurt as he experiences a burst of energy and continues to fight them even as they begin to subdue him. He is given 30 days in the behavioral management unit and will face additional charges as well. He has lost his job in the prison laundry.

## ELEMENTS OF FUNCTIONAL ASSESSMENT: THE CHAIN ANALYSIS

The metaphor of a chain, first described by Linehan (1993a) and noted in other recent descriptions of FA (Farmer & Chapman, 2008; Persons, 2008), is useful here, describing each element as a link, connected to its previous and following element, and possibly influencing links further along in the sequence. We ask the client to review the event leading to the egregious behavior in thorough detail, proceeding temporally step-by step and attending to five different phenomena as possible links: personal actions (movements, words), emotions, physiological sensations, thoughts/urges, and all environmental events occurring outside the individual (e.g., actions of others, or things occurring in the environment like lightning flashing or a door slamming). As the client describes the event, the clinician attends to "gaps" or missing elements, at times stopping the client to ask for more detail. "Wait—how did you get from being teased about the reason why your son didn't show up to getting in a full blown fight? What happened in between those two things?" We want to elicit enough detail so that an actor could portray the scene, including an understanding of what the client was thinking, feeling, expecting, and so forth.

## Developing the Narrative: Start With Context and Setting

The narrative begins before the first thought or urge to engage in the target behavior. It is usually helpful to set the stage. "What was happening earlier in the day? Just before things started to go poorly, what was going on? Where was the client? Doing what? With whom?" Understanding and gathering sufficient information about the current context and setting where the target behavior occurred is extremely important. "Where was the client? What was going on? What was the

client's mood at the time? What was client expecting to happen? Who else was there? (Expected? just left?) What activities were going on?" This information is described in the second paragraph about James.

#### **Vulnerabilities**

The conditions that increase the likelihood the client will respond to a cue with the target behavior are called vulnerabilities. Vulnerabilities are preexisting situations or circumstances that set the stage for the target behavior to occur. Technically these are known as the "establishing operations" or motivational states that lead to, and alter the occurrence of, the target behavior (McGill, 1999; Michael, 1993). These include long- and short-term, both risk and protective factors related to the occurrence of the target behavior. Vulnerabilities leave the client susceptible to particular reactions to an environmental stimulus (the cue)-reactions such as a thought, emotion, or an action urge. Examples of short-term vulnerabilities include experiencing a strong emotion, experiencing a flashback to an abuse experience, or of rejection by a loved one, being overtired or irritable due to current situation variables, that is, loud noise late at night in the living unit. Longstanding characteristics are often also important vulnerabilities with implications for treatment. Examples include possessing few effective coping skills, physiological predispositions (whether inherited or environmental), a history of being reinforced when engaging in the egregious behavior, or strong norms, for example, gang rules, or beliefs that "disrespect" should not be tolerated or does not have to be tolerated. Both short- and long-term vulnerabilities should be identified in analysis; initially clients usually need assistance identifying these variables. Clinicians need to examine analysis closely for the vulnerabilities underlying them: for example, identifying an underlying assumption that it is easier to be dead than alive. A good question to begin with is, "What was going on that made it likely that you would respond this way in this situation?"

James' long-term vulnerabilities for this behavior include his history of violence and aggression, his previous experience in prison culture and his current long sentence, and his absence of social support outside of prison, other than from his son. Short-term vulnerabilities include his recent sleep problems, remorse about his life situation, and his rollercoaster emotions on visiting day: anticipation, nervousness, dread, and then the sadness, anger, guilt, and rage.

#### Cues and Links

The initial cue or prompting event in a chain analysis is the event that "starts the analysis rolling." As the discriminative stimulus, the cue is an operant antecedent (rather than respondent) variable because it controls the egregious behavior based on its relationship to reinforcing or punishing consequences (rather than to a respondent unconditioned stimulus). Identifying the cue accurately in each event is important as one focus of treatment involves teaching the client to deal differently with the cue when it recurs in the future. The cue and target behavior are both links in the analysis, selected because of their importance in the analysis. The events prior to the cue, between the cue and the target behavior, and following the target are "links" in the analysis; as described above these include actions, thoughts, emotions, physiological reactions or sensations, and events in the environment. In James' case, the cue appears to be the glare from the resident who accused him of being responsible for his son's arrest/criminal behavior. Although he had threatened the other resident earlier, he did not become violent until the glare before the movie. Links in James' chain include (a) thoughts-"What's he lookin' at now?! He's looking down on me because I don't have family. I hate the scum in this place!" (b) emotions—anger, envy, hopelessness, shame; (c) behavior—look at him, look away, grab his eye, move toward him; and (d) sensations—rise of heat in upper body and then surge of adrenalin when James realized he was going to hit the other resident.

### **Target Behavior**

In an FA, the target behavior is a single incident of the specific behavior under examination. It is typically, as in the case of egregious behaviors, a behavior desirable to reduce in frequency. It is important to remember that this behavior is often a response to a powerful cue or an attempt to problem solve on the part of the client. Do not assume that because fighting is institutionally defined as an egregious behavior, that clients view it the same way!

A single instance of the behavior is, for example, a client slamming his fist into and breaking a mirror after a phone call from home this afternoon, cutting one's forearm this afternoon (even though this occurred twice previously this week), or James going after and fighting with the other resident who had called him out when he glares at him later that evening. Although murderous threats and fist slamming may be typical ways these clients deal with anger, a functional analysis is conducted on *only one* incident at a time. In some cases, the target may be an effective behavior such as turning down an offer to use drugs: the purpose of conducting a functional analysis on this behavior is to understand the strengths and controlling variables associated with functional behavior. James' instigation of the fight with the other resident is the target behavior in this instance. We use the term "target behavior" to encompass both and to validate that, even when egregious, it probably provided short-term relief for the client, despite its negative longer-term consequences. We hypothesize this may be the case for James.

#### Outcomes

These are the consequences that follow a target behavior, both positive and negative. They include the things that happen (and things that do not happen) as a result of the target behavior. Changes in emotions and thoughts of the client are as important to identify as changes and consequences in the environment. In the case of fighting among clients, loss of privileges, room confinement, preservation of status, likely reduction of future threats from peers, and decreased emotional dysregulation, that is, re-regulation, are all outcomes. It is important to ask what the client expected to occur; unpleasant surprises may occur when things do not turn out as planned. Expected outcomes may be a contributor to the target occurring in this instance; reinforcing outcomes increase the likelihood it will occur again in similar circumstances. In James' situation, the outcomes include those stated in the case vignette and others: feeling relief after escaping the other residents' judgments and glares, feeling less physically pent up and indeed, spent, after the fight, and the fact that, while in the behavioral management unit, James will have daily visits from the mental health counselor (Figure 1).

## FORMING CLINICAL HYPOTHESES: FUNCTIONS AND OTHER CONTROLLING VARIABLES

Once the clinician and client complete the chain analysis on the target behavior, the clinician's next step is to form hypotheses about the functions and controlling variables of the behavior.

#### **Functions of Behavior**

The function of any target behavior is the consequence maintaining the behavior, as identified by Skinner (1953). Operant behavior persists because it is reinforced, even if only intermittently. Identifying the function of a behavior is aided by asking the question, "What is the problem that this behavior solved?" or "What outcome(s) did the client hope to achieve from the behavior?" As noted above, one behavior may serve multiple functions or solve multiple problems. Self-harm may bring instant physiological and emotional relief from high levels of emotional distress. It

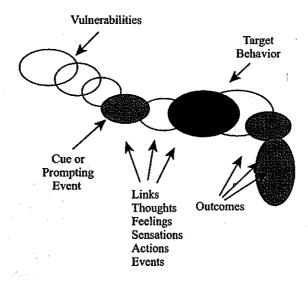


FIGURE 1. Chain analysis elements.

may also result in concern expressed by friends and family, or it may reduce their demands on the individual, providing relief from unwanted activities or responsibilities. Well-meaning efforts by caring individuals may inadvertently increase the likelihood of the behavior occurring again. James' fight resulted in escape from the other residents' judgmental comments and glares; it also may have allowed escape from his emotional pain: guilt, building rage, hopelessness, shame, and lack of control over what occurred with his son.

It is important to understand that clients are not always aware of the function of their behavior and so may not be able to answer the question, "What problem did this solve for you?" without significant clinical assistance. Knowledge of desired personal outcomes of behavior, and of the reinforcers maintaining behavior, can easily exist outside an individual's awareness. Controlling variables, that is, "What links are the best predictors of this behavior occurring again?" are other elements of the analysis that predict the target behavior. The behavioral literature provides extensive and detailed discussion of such elements, including: (a) establishing or motivating operations such as a learning history that includes reinforcement for aggressive behavior, a high level of misery, or the belief that fighting defends your respect and reputation; (b) discriminative stimuli, for example, James feeling shame at being called out on his failure as father by other residents; and (c) the sequencing of behaviors learned through past associations such as planning a criminal incident, coping with minor disrespects, and avoiding confrontation while in prison. A good foundation in learning principles helps significantly in determining which data elements in the analysis deserve heightened clinical attention.

In addition to "What links are the best predictors?" another useful question in identifying strong controlling variables of the behavior is: "What link in the chain, if we changed it, would most strongly reduce the chance this behavior will recur For example, we hypothesize that there is a strong difference in the likely occurrence of aggression and violent behavior between those who view this particular behavior as a reasonable way to deal with emotional dysregulation and those who do not. As such, we note that viewing the egregious behavior as a problem-solving option is both a vulnerability and a strong controlling variable. Thus, James believes that addressing an unwanted behavior in others through violence is, at minimum, reasonable behavior in some circumstances. An underlying connected vulnerability may be the client's belief that "I shouldn't have to feel that way," or "If I feel this way, I must do something to make it stop." In James' case it may be feelings of shame and hopelessness, "What does it matter if I get in trouble for this? I'm no good anyway." We stress again that it is the function rather than the frequency or the form of behavior that is the focus of our attention,

## Targeting Controlling Variables, Formulating Hypotheses, and Developing Interventions

A good portion of egregious behavior can generally be seen as an attempt to solve a problem. Most egregious behaviors we see in institutions have strong cues linked to them. James' case example illustrates a common cue found in forensic settings that is a sign of disrespect or aggression, in this case communicated through the other resident's glare.

Avoidance or reduction of emotional pain (shame, hopelessness, loss of status) is a strong motivator. Again, recall that behavior may serve multiple functions, as it may have in James' case. In many clinical and institutional settings, the implementation of direct test conditions may not be feasible and so intervention hypotheses are tested as part of treatment.

Although FA does not identify which interventions will be effective in treating problem behavior, it does identify antecedents that may trigger problem behavior, potential behavior deficits that should be remedied, and reinforcement contingencies that can be altered. Powerful reinforcers that can be used as part of the intervention package are identified as well, and should be given careful attention. FA can also help identify interventions that are likely ineffective or that may even worsen the problem behavior. For example: (a) Interventions that involve time-out, in- or out-of-community suspension or expulsion, or planned ignoring are contraindicated for problem behaviors maintained by escape and (b) interventions that involve reprimands, discussions, or counseling are contraindicated for problem behaviors maintained by attention (Cooper et al., 2007). In a forthcoming paper, we examine the interventions derived from functional analyses particularly useful in forensic settings.

# THE POTENTIAL OF FUNCTIONAL ASSESSMENT IN FORENSIC TREATMENT

Functional assessment meets three primary requirements of a modern forensic residential program and more generally, of evidence-based practice. First, it provides assessment of environmental variables causally predictive of target behaviors, whether they be risk factors (e.g., impulsivity) or protective factors (e.g., skills to regulate negative emotions). This is a large improvement over risk assessments focused on psychological variables related to the target behavior (e.g., selfesteem). Second, FA addresses treatment planning. It directly informs clinical hypotheses made about the strength and amenability to change of risk factors causally related to the target behavior in this particular client. Interventions address those factors most predictive and amenable to treatment, using any of the foci or behavior change tactics named above, including client motivation to change, cognitive restructuring, "skills" adoption, mastery and generalization, con tingency management, exposure, or problem-solving. The third critical requirement for modern forensic rehabilitation programs is the collection and review of data related to target behaviors. Currently, evidence-based practices for adolescents incorporate ongoing data evaluation as a necessary quality improvement and program effectiveness component for a variety of behaviors related to delinquency and recidivism (Fisher & Chamberlain, 2000; Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998; Sexton & Alexander, 1999) as do some promising programs (e.g., Schmidt & Salsbury, 2009). It has been a challenge to develop valid risk and protective factor inventories sensitive enough to respond to changes in risk and protective factors in short time periods (Andrews, Bonta, & Hoge, 1990; Baird, 2009).

Functional assessment provides an opportunity to observe or create environments or situations hypothesized to be strongly predictive of the target behavior. Many such predictors occur naturally in any environment, such as interpreting the behavior of another as disrespectful, suffering an unexpected disappointment, believing that one has been taken advantage of, or

dealing with boredom. Identifying the functions of egregious behavior is an important task in assessment and developing individual treatment plans. In secure and residential settings, the use of FA methods has wide-reaching potential to benefit individual clients, program structure, staff, and administration.

#### REFERENCES

- American Correctional Association. (2003). Standards for adult correctional institutions (4th ed.). Lanham, MD: Author.
- Andrew, D. A., Bonta, J., & Hoge, R. D. (1990). Classification for effective rehabilitation: Rediscover psychology. Criminal Justice and Behavior, 17, 19-52.
- Antony, M. M., & Barlow, D. H. (2004). Handbook of assessment and treatment planning for psychological disorders. New York: Guilford.
- Baird, C. (2009). A question of evidence: A critique of risk assessment models used in the justice system. Madison, WI: National Council on Crime and Delinquency.
- Barlow, D. H., Allen, L. B., & Choate, M. L. (2004). Toward a unified treatment for emotional disorders. Behavior Therapy, 35, 205-230.
- Blakeslee, T., Sugai, G., & Gruba, J. (1994). A review of functional assessment use in data-based intervention studies. *Journal of Behavioral Education*, 4, 397–413.
- Carr, E. G. (1994). Emerging themes in the functional analysis of problem behavior. *Journal of Applied Behavior Analysis*, 27, 393–399.
- Cone, D. J. (1997). Issues in functional analysis in behavioral assessment. Behavior Research and Therapy, 35, 259–275.
- Cooper, J. O., Heron, T. E., & Heward, W. L. (2007). Applied behavior analysis (2nd ed.). Upper Saddle River, NJ: Pearson Merrill Prentice Hall.
- DeMatteo, D., & Marczyk, G. (2005). Risk factors, protective factors and the prevention of antisocial behavior among juveniles. In K. Heilbrun (Ed.), *Juvenile delinquency: Prevention, assessment and intervention* (pp. 19-44). New York: Oxford Press.
- Deutsch, C. J. (1984). Self-reported sources of stress among psychotherapists. *Professional Psychology:* Research and Practice, 15, 833-845.
- Elliott, D. S. (1997). Blueprints for violence prevention. Boulder, CO: Center for the Study and Prevention of Violence, University of Colorado.
- Farmer, R. F., & Chapman, A. L. (2007). Behavioral interventions in cognitive-behavioral therapy: Practical Guidelines for putting theory into action. Washington, DC: APA Press.
- Fisher, P. A., & Chamberlain, P. (2000). Multidimensional treatment foster care: A program for intensive parenting, family support, and skill building. *Journal of Emotional and Behavioral Disorders*, 8(3), 155–164.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). Acceptance and commitment therapy: An experiential approach to behavior change. New York: Guilford Press.
- Hellman, I. D., Morrison, T. L., & Abromovitz, S. I. (1987). Therapist flexibility/rigidity and work stress. Professional Psychology, Research and Practice, 18(1), 21-27.
- Henggeler, S. W., Schoenwald, S. K., Borduin, C. M., Rowland, M. D., & Cunningham, P. B. (1998).

  Multisystemic treatment of antisocial behavior in children and adolescents. New York: Guilford Press.
- Kohlenberg, R. J., & Tsai, M. (1991). Functional analytic psychotherapy: A guide for creating intense and curative therapeutic relationships. New York: Plenum.
- Linehan, M. M. (1993a). Cognitive-behavioral treatment of borderline personality disorder. New York: Guilford.
- Linehan, M. M. (1993b). Skills training manual for treating borderline personality disorder. New York: Guilford.

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- McCann, R. A., Ball, E. M., & Ivanoff, A. (2000). DBT with an inpatient forensic population: The CMHIP model. Cognitive & Behavioral Practice, 7, 447–456.
- McGill, P. (1999). Establishing operations: Implications for the assessment, treatment, and prevention of problem behavior. *Journal of Applied Behavior Analysis*, 32, 393–418.
- Michael, J. (1993). Establishing operations. The Behavior Analyst, 16, 191-206.
- Morgan, R. D., Van Haveren, R., & Pearson, C. A. (2002). Correctional officer burnout: Further analyses. Criminal Justice & Behavior, 29, 144-160.
- Persons, J. B. (2008). The case formulation approach to cognitive-behavioral therapy. New York: Guilford Press.
- Schmidt, H., III., & Salsbury, R. E., III. (2009). Fitting treatment to context: Washington state's integrated treatment model for youth involved in juvenile justice. In E. J. Bruns & E. W. Trupin (Eds.), Report on emotional and behavioral disorders in youth (pp. 31–38). Seattle, WA: University of Washington School of Medicine.
- Sexton, T. L., & Alexander, J. F. (1999). Functional family therapy: Principles of clinical intervention, assessment, and implementation. Henderson, NV: RCH Enterprises.
- Skinner, B. (1953). Behavior, science, and human behavior (pp. 1-15). New York: The Free Press.
- Sturmey, P. (1996). Functional analysis in clinical psychology. London: Wiley.
- Sturmey, P. (2007). Functional analysis in clinical treatment. New York: Elsevier.
- Toch, H., & Adams, K. (Eds.). (2002). Acting out: Maladaptive behavior in confinement. Washington, DC: American Psychological Association.
- Underwood, A. L., & Knight, P. (2006). Treatment and postrelease rehabilitative programs for juvenile offenders. Child Adolescent Psychiatric Clinics of North America, 15, 539-556.
- Virués-Ortega, J., & Haynes, S. N. (2005). Functional analysis in behavior therapy: Behavioral foundations and clinical application. *International Journal of Clinical and Health Psychology*, 5, 567–587.
- Yoman, J. (2008). A primer on functional analysis. Cognitive and Behavioral Practice, 15, 325-340.
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