adapted to the treatment of eating disorders and dissociative disorders, and to families and adolescents. In addition, several large-scale mental health systems in the United States, Canada, and Europe have implemented DBT as a treatment for borderline patients across inpatient, day treatment, residential, case management, and crisis services.

DBT is rooted in standard cognitive and behavioral protocols, and it remains, first and foremost, a problem-solving, behavior therapy approach. Nonetheless, Linehan found that behavioral methods—though demonstrated to be effective with numerous other patient groups—required substantial modification when applied to a chronically suicidal population.

First, strategies that more clearly reflected the acceptance and validation of clients' current capacities were added in order to balance the behavioral emphasis on client change. That is, the "technologies of acceptance" drawn from principles of Eastern Zen and Western contemplative practices were intermingled with the "technologies of change" based on learning principles. Indeed, the balance of acceptance versus change is the overarching dialectic of treatment, hence the addition of the term "dialectical" to the name of the treatment.

Second, the complexity and severity of the patient group suggested that a comprehensive, multicomponent treatment approach was needed. Thus, therapy was divided into different modes of service delivery, with each component emphasizing one or more of the following treatment functions: (1) enhance patient motivation; (2) enhance patient capabilities; (3) ensure that new capabilities generalize to the patient's natural environment; (4) enhance therapist capabilities and motivation to treat patients effectively; and (5) structure the environment in a manner that will promote and reinforce patient and therapist capabilities.

The result is DBT in its standard format—an outpatient treatment program with four components: individual psychotherapy to address motivational enhancement and skills strengthening (most often weekly, one-hour sessions); highly structured group skills training to enhance capabilities (weekly for $2^1/_2$ hours); as-needed phone consultation with the individual therapist to address application of new capabilities; a consultation meeting for DBT treatment providers intended to keep therapists motivated and to ensure that they are providing effective treatment consistent with the DBT approach (most often once weekly for 60 to 90 minutes). The fifth treatment function—structuring the environment—occurs as needed and may include case management interventions to find housing or to assist the client in other ways to make concrete changes in his or her natural environment so that it will be as reinforcing of adaptive functioning as possible. However, attention may also need to be paid to any contingencies acting on the therapist that reinforce client dysfunctional behaviors (e.g., institutional policies that offer a greater number of low-cost services for clients who are unemployed and on disability).

Conceptualizing DBT in terms of its *functions* allows for flexibility in how the treatment is delivered. That is, DBT can be applied in any mode as long as the five treatment functions are addressed. For example, inpatient DBT programs may offer milieu and staff coaching to enhance motivation; a twice weekly skills group to address capability enhancement; staff coaching and day passes to address skills generalization; consultation meetings and continuing education classes to provide therapist support; and meetings with outpatient providers and family to structure the environment.

II. THEORETICAL FOUNDATION

Described next are Linehan's theory of the etiology and maintenance of BPD, and the theoretical perspectives that form the basis of the DBT model. Emphasis is placed on how each set of concepts impacts treatment.

A. Biosocial Theory of BPD

According to Linehan's biosocial theory, BPD behavioral patterns develop as the result of an ongoing transaction between a biological vulnerability to emotion dysregulation and an "invalidating environment." That is, a cyclical interaction develops whereby an individual prone to intense emotional displays may elicit invalidation from those in the environment who have difficulty understanding the emotions. In turn, the experience of being persistently invalidated tends to increase emotional dysregulation and decrease learning of emotion regulation skills.

Emotional vulnerability is believed to be strongly influenced by biology, such that an individual is predisposed (perhaps due to high genetic loading for an emotional temperament) to have the following characteristics: (1) a low threshold for emotional stimuli; (2) emotional reactions that tend to be rapid and intense; and (3) a slow return to baseline, contributing to high sensitivity to the next emotional stimulus.

The primary characteristic of an invalidating environment is that the private experiences (emotions and

thoughts) and overt behaviors of the individual are often taken as invalid responses to events; are punished, or disregarded; and/or are attributed to socially unacceptable characteristics. In addition, although modulated emotional displays may be ignored or met by punishment, high-level escalation may result in attention, meeting of demands, and other types of reinforcement. Finally, an invalidating environment may oversimplify the ease of meeting life's goals and problem solving.

In addition to deficits in emotion regulation, pervasive invalidation may also lead to difficulties with accurately labeling emotions and difficulties trusting one's own experiences as valid. By oversimplifying problem solving, such an environment does not teach effective problem-solving skills, graduated goals, or distress tolerance but instead teaches perfectionistic standards and self-punishment as a strategy to try to change one's behavior. Finally, invalidation of modulated emotional displays in conjunction with reinforcement of escalated emotional displays teaches the individual to oscillate between emotional inhibition and extreme emotionality.

The transactional nature of the relationship suggests that only mild amounts of invalidation may be sufficient to result in BPD for the individual with a high vulnerability to emotional dysregulation. Conversely, a child with only moderate levels of emotional vulnerability may develop BPD with a sufficiently invalidating environment.

This model represents not only a model of etiology, but also a model of maintenance of BPD behaviors and current transactions. For example, a key theoretical assumption that guided the development of DBT is that suicidal behavior is an attempt to solve a problem—most often the problem of intense and painful emotions that the individual is unable to effectively regulate. Indeed, Linehan conceptualizes the patterns of behavior comprising the BPD diagnostic criteria either as direct consequences of dysregulated emotions or as response patterns that function to regulate out-of-control, aversive emotions. Other dysfunctional behaviors found in BPD and in other patient populations (e.g., binge eating, substance use) may also serve a similar problem-solving function. As such, the task for the DBT therapist is to target the dysfunctional behavior patterns that are functionally linked to emotional arousal.

The biosocial model also suggests that validation will be of critical importance in treating the individual with BPD. Not surprisingly, validation is one of the core treatment strategies of DBT. The model further suggests that treatment providers, much like the rest of the patient's social environment, may also have a tendency to respond to the patient in invalidating ways. Indeed, the patient's behavior may be invalid in many respects. However, a DBT therapist must make a conscious effort to locate the "nugget of truth" in the individual's behavior so that he or she feels understood and accepted, and is thus able to move toward more skillful behavior.

B. Dialectical Philosophy

The feature most distinctive of DBT is its philosophical base in dialectics—a term that conveys two meanings. First, dialectics refers to a world-view that reality reflects an ever-changing, transactional process in which each action leads to its opposite—a reaction—the resolution of which is a synthesis of both positions. Within the therapy relationship, this suggests that multiple tensions will inevitably coexist, and must be addressed and resolved by the therapist.

The dialectical philosophy also conveys the assumption that individuals with BPD get caught between extremes of emotion and behavior, repeatedly going back and forth without ever learning a new synthesis or middle ground. Indeed, a central goal of DBT is to replace these rigid, dichotomous patterns with dialectical thinking and behavior. This overarching target guides the DBT therapist approach to all other target behaviors. That is, in all modes the therapist strives to reduce the incidence of extreme, polarized thoughts, emotions, and actions, and to increase the likelihood of balanced, integrated responses "to the moment."

C. Learning Principles and Behavioral Psychology

Consistent with other behavioral approaches, DBT assumes that all behaviors, whether adaptive or dysfunctional, are influenced by prior learning, are continually subject to environmental contingencies, and are thus situation-specific. This viewpoint has several important treatment implications. First, since all behaviors are caused, it encourages treatment providers to be nonpejorative toward patients, even in the face of aversive patient behaviors. Likewise, it may serve to reduce patients' self-blame, shame, and hopelessness regarding their behaviors and their lives.

Second, it suggests that behavior change requires careful assessment of the problem behavior and the environmental conditions under which the behavior will

occur. Attributing behavior to hypothetical constructs such as "need for approval" is not sufficient because such constructs do not specify the environmental determinants. Rather, the DBT therapist and patient work together to construct a behavioral chain analysis, which is a detailed analysis of events and situational factors before and after a particular instance (or set of instances) of the targeted behavior. The goal is to provide an accurate and reasonably complete account of behavioral and environmental events associated with the problem behavior. Close attention is paid to reciprocal interactions between environmental events and the client's emotional, cognitive, and overt responses.

A chain analysis requires a clear definition of the problem behavior; identification of vulnerability factors (e.g., sleep deprivation or other conditions that influence emotional reactivity); and specific precipitating events that led to the problem behavior. Therapist and client then identify each link between the precipitating event and the problematic behavior to yield a detailed account of each thought, feeling, and action that moved the client from point A to point B. Finally, the reactions of the client and others that followed the behavior are identified. This detailed assessment allows the therapist to identify each point where an alternative client response might have produced positive change and averted conditions that led to problem behavior.

Reasons for the absence of a skilled response can generally be placed into one of four categories: effective behaviors are inhibited by skills deficit(s); effective behaviors are inhibited by faulty beliefs and assumptions; effective behaviors are inhibited by attempts to avoid aversive emotions; the environment is not supportive of the effective behaviors or is overly supportive of the problem behaviors. In turn, each of these problem areas is linked to a behavioral change procedure that is part of the problem-solving strategies described below.

III. DESCRIPTION OF TREATMENT

A. Levels of Disorder and Stages of Treatment

Unlike many other empirically supported, manualized psychotherapy approaches, DBT does not provide a session-by-session protocol for how treatment should proceed. Rather, DBT is designed to be a highly flexible model that can be readily applied to patients with disorders of varying severity and complexity. Linchan conceptualized four levels of disorder, each level having a corresponding stage of treatment.

Level 1 disorders are characterized by behavioral dyscontrol and typically include disorders that are both severe and pervasive. The overall goal of Stage 1 treatment for Level 1 disorders is to help these patients increase control over their behavior and their lives. Standard DBT, which is the general focus of this chapter, is a Stage 1 treatment. Linehan's treatment manual and the existing research data focus on Stage 1 DBT. Behaviors that are targeted for treatment at this stage are arranged hierarchically as follows: (1) reducing life-threatening behaviors (parasuicidal acts, including suicide attempts, high-risk suicidal ideation, plans and threats, as well as homicidal acts, plans, and threats); (2) reducing client and therapist behaviors that interfere with the therapy (e.g., missing sessions or arriving late, phoning at unreasonable hours, not returning phone calls, or pushing therapist or patient limits in any other manner); (3) reducing behavioral patterns that substantially interfere with a reasonable quality of life (e.g., severe depression, poor work behaviors, homelessness, criminal behaviors); (4) acquisition of sufficient life skills to meet client goals (emotion regulation, interpersonal effectiveness, distress tolerance, self-management, mindfulness); and (5) other goals the client wishes to address.

The second level of disorder is best described as "quiet desperation" (as opposed to the state of "loud desperation" in Level 1). The central problem at this level is avoidance of emotions and any environmental cues associated with them. A good example would be a patient with post-traumatic stress disorder. The goal of Stage 2 DBT is to increase the patient's ability to experience emotions without trauma. Level 3 disorders are best described as problematic patterns in living that interfere with goals. Thus, treatment at this stage focuses on achieving ordinary happiness and a stable sense of self-respect. Finally, the fourth level of disorder refers to those individuals who have a lingering sense of incompleteness despite the fact that they are otherwise satisfied with their lives. The goals of Stage 4 DBT include developing the capacity for sustained joy via psychological insight, spiritual practices, and an expanded awareness of oneself.

Overall, the orientation of the treatment is first to get overt behaviors under control, then to help the patient to feel better, to resolve problems in living and residual disorder, and to find joy and, for some, a sense of transcendence. Because therapeutic change is usually not linear, progress through the foregoing hierarchy of be-

haviors is an iterative process. That is, attention is shifted away from a lower-priority target back to a higher-priority target if that behavior recurs (e.g., life-threatening behaviors).

With respect to each treatment goal, the task of the therapist is first (and many times thereafter) to elicit the client's collaboration in working on the relevant behavior and then to apply the appropriate treatment strategies as described in the following subsection. Treatment in DBT is oriented to current in-session behaviors or problems that have surfaced since the last session, with suicide attempts and all other life-threatening behaviors taking precedence over all other topics. Furthermore, the high priority that DBT places on discussing the "therapy-interfering" behaviors of the client or therapist (target 2) is also noteworthy. This direct targeting of the therapeutic relationship is typically very important in treating complex, multi-disordered clients and is unique to DBT.

B. Treatment Strategies

DBT addresses all problematic client behaviors and therapy situations in a systematic, problem-solving manner. The behavioral analyses and change procedures involved in problem solving are surrounded by validation of the client's experiences, especially as they relate to the individual's vulnerabilities and sense of desperation. Furthermore, in contrast to many behavioral approaches, DBT places great emphasis on the therapeutic relationship as a mechanism of change. In times of crisis, when all else fails, DBT uses the relationship itself to keep the client alive.

Treatment strategies in DBT are divided into four sets: (1) Dialectical strategies, (2) core strategies (problem solving and validation), (3) communication strategies (irreverence and reciprocal communication), and (4) case management strategies (consultation to the patient, environmental Intervention, and supervision/consultation with therapists). In all treatment strategies, a DBT therapist must constantly strive for a balance of acceptance and change.

There are also a number of specific behavioral treatment protocols covering suicidal behavior, crisis management, therapy-interfering behavior and compliance issues, relationship problem solving, and ancillary treatment issues, including psychotropic medication management. For additional description of these protocols, the interested reader is referred to texts listed in the Further Reading section.

1. Dialectical Strategies

Dialectical strategies are woven throughout all treatment interactions. The most fundamental dialectical strategy is the balanced therapeutic stance—the constant attention to combining acceptance with change. The goal is to bring out the opposites, both in therapy and the client's life, and to provide conditions for synthesis. Strategies include extensive use of stories, metaphor, and paradox; the therapeutic use of ambiguity; viewing therapy, and indeed all of reality, as constant change; cognitive challenging and restructuring techniques; and reinforcement for use of intuitive, nonrational knowledge bases.

2. Core Strategies

Core strategies consist of the balanced application of problem-solving and validation strategies. The problem-solving strategies are central to treatment and are drawn from behavioral psychology principles as described earlier. Included are a wide variety of behavioral assessment and behavioral therapy techniques that are used to directly target maladaptive behaviors. Problem solving is a two-stage process, involving, first, an analysis and acceptance of the current problem, and second, an attempt to generate, evaluate, and implement alternative solutions that might have been made or could be made in the future in similar problematic situations. Analysis of the client's problem behaviors, including dysfunctional actions, emotions, physiological responses, and thought processes, requires careful scrutiny of the chains of events (both responses of the individual and events in the environment) leading up to the problematic responses. This analysis was described earlier and is repeated for every instance of targeted problem behaviors until both therapist and client achieve an understanding of the response patterns involved.

The second stage, which is actually interwoven with the first, requires the generation of new, more skillful responses, as well as an analysis of the individual's capabilities and motivation to actually engage in the new behaviors. This process leads into application of change procedures, which are drawn primarily from cognitive-behavior therapy protocols and anchor the change end of the primary dialectic in DBT. They include management of contingencies in the therapeutic relationship, training in behavioral skills, exposure techniques with response prevention, and cognitive restructuring.

The acceptance pole of this dialectic is represented by the validation strategies. In essence, these strategies

involve the active acceptance of the patient by the therapist and communication of that acceptance to the client. Validation requires that the therapist search for, recognize, and reflect the current validity, or functionality, of the individual's current behaviors. Validation is used to balance and facilitate problem solving it can also promote self-validation, strengthen the therapeutic relationship, and reinforce clinical progress.

For heuristic purposes, validation can be conceptualized in six levels. The first three levels are basic therapeutic strategies for building and maintaining rapport. The second three focus on communicating accurately the valid and invalid nature of the patient's behavior and emotional responses. Level 1 validation involves listening to and observing what the client is saying, feeling, and doing, along with an active effort to understand and make sense of what is being observed. In essence, the therapist is demonstrating interest in the client and notices the nuances of both verbal and nonverbal response in the interaction. Level 2 validation is the accurate reflection, paraphrasing, and summarizing of the client's thoughts, feelings, and behaviors. At Level 2, validating statements remain relatively close to what the client said rather than adding to the client's communication. Level 3 validation refers to articulating or "mind-reading" that which is unstated, such as fears of admitting emotions or thoughts, but without pushing the interpretation on the client. The therapist conveys an intuitive understanding of the client; sometimes knowing clients better than they know themselves.

In Level 4 validation, the therapist validates the client's experience in terms of past learning or in terms of biological dysfunction (e.g., biological predisposition to emotional vulnerability). For example, during a first therapy session, a therapist might validate the client's fears that the therapist will be rejecting by saying, "It makes sense that you would have such concerns, given that you have been rejected by many important people in your life." Level 5 validation involves validating the client in terms of present and normal functioning. In the above situation, for example, a therapist might respond, "Of course you are concerned about me rejecting you; after all, this is our first therapy session and you really don't know what to expect." Finally, Level 6 validation calls for the therapist to show radical genuineness with clients. That is, the therapist must treat the client–therapist relationship as authentic and "real," wherein the therapist behaves as his/her natural self rather than acting in a role-prescribed manner. This involves not treating the client as fragile or as unable to solve problems, but rather as a person of equal status who is capable of effective and reasonable behavior.

DBT does not specify the frequency or timing of particular types of validation. However, validation is required in every interaction, and when appropriate, it is generally preferable to use higher levels of validation over lower levels.

3. Communication Strategies

In DBT, the therapist balances two communication strategies, which represent rather different interpersonal styles. The modal style is the reciprocal strategy, which includes responsiveness to the client's agenda and wishes, warmth, and self-disclosure of personal information that might be useful to the client as-well as immediate reactions to the client's behavior.

Reciprocity is balanced by an irreverent communication style that is used to promote change: a matter-of-fact or at times slightly outrageous or humorous attitude where the therapist takes the client's underlying assumptions or unnoticed implications of the client's behavior and maximizes or minimizes them, in either an unemotional or overemotional manner to make a point the client might not have considered before. Irreverence "jumps track," so to speak, from the client's current pattern of response, thought, or emotion. For example, if a client says "I am going to kill myself!", the therapist might respond, "But I thought you agreed not to drop out of therapy!" It is important that irreverence is balanced with reciprocity. Overuse of irreverence may alienate the patient, while too much reciprocal communication will result in minimal change.

4. Case Management Strategies

There are three strategies designed to guide each therapist during interactions with individuals outside the therapy dyad. First, the consultant-to-the-client strategy is the application of the principle that the DBT therapist teaches the client how to interact effectively with the client's environment rather than teaching the environment how to interact with the client. When absolutely necessary, however, the therapist invokes the environmental intervention strategy, in which he or she actively intervenes in the environment to protect the client or to modify situations that the client does not have the power to influence. The third strategy, the consultation-to-the-therapist strategy, requires that each DBT therapist meet regularly with a supervisor or consultation team. The idea here is that complex, multi-disordered clients should not be treated alone.

Furthermore, the consultant-to-the therapist strategy is used to find the synthesis or middle ground between the other case management strategies, one that argues for change via coaching the client (consultant-to-the-client) and the other that argues for acceptance by directly intervening on the client's behalf (environmental intervention).

IV. EMPIRICAL EVIDENCE

The empirical evidence in support of DBT is promising. In the original randomized clinical trial of DBT conducted by Linehan and colleagues during the treatment development phase, participants were chronically suicidal women diagnosed with BPD who had a recent history of parasuicide. Participants were randomly assigned to one year of either DBT or treatment-as-usual (TAU), a naturalistic control group in which participants receive psychotherapy as it is usually offered in the community. As hypothesized, in comparison to the TAU group, those who received DBT showed significantly greater reduction in rates of parasuicidal behavior, better treatment retention, fewer days of inpatient psychiatric hospitalization, less anger, and improved global social functioning.

Since that time, two additional randomized clinical trials have been reported comparing DBT to TAU. Linehan and her colleagues adapted standard DBT for substance abusers diagnosed with BPD and again found superior outcomes for one-year DBT as compared to one-year TAU. Furthermore, a research group independent of Linehan and colleagues found that six months of DBT produced better patient outcomes than six months of TAU in treating women with BPD.

Finally, several quasi-experimental studies from program evaluations and pilot studies have produced encouraging results, expanding the research base on the efficacy of DBT when adapted for other settings and when extended to treat different treatment populations. These include treatment on inpatient units and in forensic settings, and with suicidal adolescents, and women with binge-eating disorder. These studies do not have the scientific rigor of an experimental design, but taken together, they suggest that extensions of DBT across setting and disorder warrant further investigation.

In sum, the research evidence to date suggests that across studies, DBT reduces severe dysfunctional behaviors that are targeted for intervention (e.g., parasuicide, substance abuse, and binge eating), enhances treatment retention, and reduces psychiatric hospitalization. The data also suggest that, although DBT was developed for the treatment of patients with suicidal behavior, it can be adapted to treat BPD patients with comorbid substance abuse disorder and to other patient populations and settings.

Further research is needed, particularly to address the following questions: (1) Which components of DBT (e.g., specific treatment strategies) contribute to outcomes? For example, though preliminary, skills coaching seems to be a crucial ingredient in producing reductions in parasuicidal behavior. (2) Similarly, can we (and if so, *how* can we) improve the efficacy of DBT through additional treatment development? (3) To what different populations/settings can DBT be successfully adapted? (4) Is DBT effective in public health settings? The majority of studies have been conducted in controlled settings (e.g., academic environments) in which highly trained psychotherapists are delivering the treatment within a well-organized framework. However, DBT has now been adopted in a variety of "real-world" clinical settings, highlighting the need for research in this arena. (5) How long does DBT maintain its gains after treatment is over? Results are positive one-year post-treatment, but examination of additional longitudinal outcomes is needed (e.g., suicide rates at five-year followup).

Fortunately, research evaluating the efficacy of DBT is currently being conducted in several U.S. and European sites. Results from these studies should become available over the next several years, providing further information by which to evaluate the efficacy of DBT.

V. SUMMARY

Dialectical behavior therapy (DBT) is a multicomponent, cognitive-behavioral psychotherapy intended for complex, difficult-to-treat patients Originally developed to treat the seriously and chronically suicidal patient, DBT has evolved into a treatment for suicidal patients who also meet criteria for BPD, and has since been adapted for BPD patients with presenting problems other than suicidal behaviors (e.g., substance abuse) and for other disorders of emotion regulation (e.g., binge-eating disorder). Treatment is based on a unique blend of behavioral psychology principles used to promote change and on Eastern mindfulness principles used to promote acceptance. DBT is conceptualized as occurring in stage based on severity and complexity of disorder, and thus can be applied to patients of varying degrees of severity.

As a comprehensive treatment, DBT serves five functions: (1) to enhance patient motivation; (2) to enhance patient capabilities; (3) to ensure that new capabilities generalize to the patient's natural environment; (4) to enhance therapist capabilities and motivation to treat patients effectively; and (5) to structure the environment in a manner that will promote and reinforce patient and therapist capabilities. In standard DBT, these five functions are divided up among four treatment components: weekly individual psychotherapy; weekly group skills training; as-needed phone consulation with the individual therapist; and a consulation meeting for DBT treatment providers. Other interventions (e.g., pharmacotherapy, case management) occur as needed.

Research evidence to date suggests that across studies, DBT reduces severe dysfunctional behaviors that are targeted for intervention (e.g., parasuicide, substance abuse, and binge eating), enhances treatment retention, and reduces psychiatric hospitalization. The data also suggest that, although DBT was developed for the treatment of patients with suicidal behavior, it can be adapted to treat BPD patients with comorbid substance abuse disorder and to other patient populations and settings.

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See Also the Following Articles

Behavioral Consultation and Therapy ■ Behavioral Therapy Instructions ■ Character Pathology ■ Existential Psychotherapy ■ Gestalt Therapy

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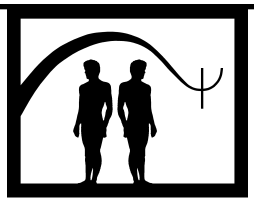

Differential Attention

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GLOSSARY

attention The description of a procedure involving certain therapist behaviors that either precede or follow an individual's behavior. Attention is not *a priori* a reinforcer. Although it can be a powerful reinforcer for some individuals, for others, it can be a punishing stimulus or even a neutral event.

extinction A behavioral procedure that weakens a response by the consistent withholding of a reinforcer following the occurrence of an operant response that had previously produced that reinforcer.

functional analysis An experimental investigation that identifies the maintaining variables for a specific target behavior emitted by an individual; that is, it is based on the assessment of consequences maintaining a target behavior.

Differential attention is a procedure that helps a person to discriminate between a specific behavior and all other behaviors. The procedure can be used in a learning context for skill acquisition or in a treatment context for the reduction of a problem behavior.

I. DESCRIPTION OF TREATMENT

Differential attention involves two inextricably involved processes, reinforcement and extinction. Differential attention is a variant of generic differential reinforcement procedures that involve withholding reinforcement for a specified response from a response class and reinforcing other responses, depending on the reinforcement schedule. The typical outcome is response differentiation. In skill acquisition, there is an increase in the rate of the reinforced response relative to the rate of other members of the response class, and, in behavior reduction, there is a decrease in the rate of the problem response relative to the rate of other members of the response class.

II. THEORETICAL BASES

Contingent attention is typically used to increase responding. When used in a skill acquisition paradigm, attention is delivered following approximations to or the occurrence of a specific behavior while simultaneously withholding attention following the occurrence of all other behaviors. The basic process is one in which attention is differentially delivered only on the occurrence of a target behavior, resulting in skill acquisition or an increase in the rate of the behavior. For example, when increasing the social interaction of a socially withdrawn child, the teacher would provide at-

tention when the child was socially interacting with other children and not when the child was socially withdrawn, thus differentially reinforcing social interaction with attention.

When used in a behavior reduction paradigm, attention is delivered following the occurrence of socially acceptable behaviors while simultaneously withholding attention following the occurrence of a specific problem behavior. The basic processes involve both withholding reinforcement contingent on a target response (extinction) and delivering reinforcement contingent on other or alternative responses. For example, if a child engages in temper tantrums, his parents would withhold attention (i.e., ignore the temper tantrum) and only provide the child with attention when he is quietly playing with his toys and not engaging in the problem behavior.

Theoretically, the delivery of contingent attention can be on one of three basic schedules—continuous, ratio, and interval schedules—although in real life attention is usually delivered on a mixed schedule of reinforcement. To enhance rapidly the discrimination between a target and all other behaviors, attention is delivered on a continuous schedule; that is, attention immediately follows each occurrence of the target behavior. Continuous schedules of attention are used in the early stages of learning when a new skill or behavior is being acquired. Furthermore, continuous schedules of attention may be used for all socially acceptable behaviors, while a specific problem behavior is being ignored—that is, while the problem behavior is on an extinction schedule.

Once discrimination between the target and all other behaviors has been established, attention can be delivered on increasingly intermittent schedules, that is, on ratio and interval schedules. In skill acquisition, the target behavior is reinforced with attention after a fixed or variable number of times the behavior has been emitted (ratio schedules) or after fixed or variable intervals of time (interval schedules). In behavior reduction programs, the problem behavior is always ignored, and other behaviors may be reinforced with attention on ratio or interval schedules. For example, if attention is delivered when a specific problem behavior has not occurred for a prescribed interval, it is an instance of differential reinforcement of other behavior where attention is the reinforcement.

Theoretically, when attention is withheld from a behavior that was previously reinforced by attention, the behavior is said to be on an extinction schedule. Sometimes, putting a behavior on an extinction schedule results in an initial increase or burst of the behavior. Thus, extinction may not be a suitable procedure for reducing some behaviors, such as aggression or self-injury. Furthermore, regardless of the nature of the behavior being targeted for reduction, occasionally the extinction period is accompanied by an initial outburst of aggression by the individual. Therapists need to be prepared to deal with extinction-induced aggression should it occur. In addition, extinction is associated with a phenomenon known as spontaneous recovery, when the behavior briefly recurs spontaneously after a long period of its absence. Again, therapists need to be aware of this possibility and to be prepared to deal with it. A final consideration is that extinction requires consistency of application; that is, no instance of the target behavior must be followed by attention. Inadvertently attending to some instances of the target behavior may make the behavior more resistant to extinction and, theoretically, strengthen the behavior.

III. EMPIRICAL STUDIES

Differential attention has been used extensively in skill acquisition programs in classroom settings. In general, differential attention procedures have been used successfully to increase the academic and social skills of children with disabilities, without concomitantly decreasing other behaviors.

Differential attention has also been used to reduce problem behaviors in individuals with disabilities, especially those with developmental disabilities. The empirical literature on differential attention is limited because, by itself, it is not a very powerful procedure for decreasing severe behavior problems.

Individuals with developmental disabilities sometimes engage in aberrant behavior in specific social contexts when another person diverts their parents' attention from them. For example, Mark F. O'Reilly and colleagues assessed the motivation of aberrant behavior of two individuals with severe mental retardation. They observed that the aberrant behavior (hitting, pinching, property destruction, and self-injury) of these two individuals typically occurred when their parents interacted with someone other than them. Using a brief functional analysis methodology, the therapists established that aberrant behaviors actually did occur when parents diverted their attention from their child to a third person. Furthermore, they found that the two individuals did not engage in aberrant behavior when their parents gave them attention noncontingently—that is, when

they interacted with their children on a fixed schedule in the absence of aberrant behavior. Attention-maintained aberrant behavior was eliminated when the parents gave noncontingent attention to their children while engaging in social interaction with a third person.

Current research on attention-maintained problem behaviors indicates that not all forms of attention are functionally equivalent, suggesting that therapists may need to evaluate the effectiveness of different forms of attention as reinforcement before implementing treatment. For example, if a functional assessment indicates that aggression is maintained by verbal attention, then further analyses should be performed to examine what properties of verbal attention maintain aggression. A common finding is that response-relevant verbal attention ("Stop that! You are hurting me") contingent on aggression maintains the aggression at higher levels than response-irrelevant statements (e.g., "You are looking good today"). This is in accord with research showing that, for about a third of the cases, attention in the form of reprimands and physical contact actually maintains destructive and aggressive behavior in individuals with developmental disabilities. Why this should be so is unclear. We suspect that, as appropriate behavior is infrequently reinforced in individuals with severe behavior disorders, these individuals engage in destructive and aggressive behavior because these behaviors result in a greater density of verbal attention, even though these are in the form of reprimands.

Differential levels of attention can be used as an establishing operation to influence the rate of occurrence of a problem behavior. An establishing operation can be defined as an antecedent condition that influences the probability of a behavior by increasing the value of consequent stimuli and the effectiveness of discriminative stimuli for a given response class. For example, changing antecedent levels of attention for attention-maintained behaviors will produce differential rates of the behavior. Thus, depriving an individual of all attention versus providing the individual noncontingent attention as establishing operations will result in high rates of the problem behavior following the former condition and low rates of the behavior following the latter condition.

Differential attention procedures are appealing for a number of reasons. First, the procedures incorporate an extinction component. That is, the relationship between the problem behavior and reinforcement is disrupted which, by definition, will result in a decrease or even an elimination of the problem behavior. Second, an individual can learn to produce responses that are more appropriate because other, socially appropriate behaviors are differentially attended to. Third, differential attention is a portable procedure that can be used in the natural environment, and is not restricted to a facility or a clinic or for use only by professionals. Fourth, differential attention procedures have been demonstrated to be relatively effective across a wide variety of populations and mild behavior problems (e.g., children, adults, individuals with developmental disabilities, aggression, self-injury, hyperactivity, thumbsucking, noncompliance). Finally, differential attention is a reinforcement procedure, and contingent delivery of aversive stimulation is not required.

Although differential attention procedures have gained wide acceptance, several studies have reported that such procedures are relatively ineffective in comparison to other interventions. However, procedural and functional advancements have been made to enhance the effectiveness of differential attention procedures. For example, differential attention can be delivered based on the most effective time interval (i.e., inter-response time), or the "whole-interval" time period in which the individual is required not to engage in the target problem behavior.

Despite the possibility of enhancing the effectiveness of differential attention procedures, several potential limitations may remain. For example, (a) differential attention can be a cumbersome procedure to use (i.e., care providers are required to attend/observe the individual at all times either to reset an interval timer or to provide attention on a specified schedule in the absence of the target behavior), and (b) the extinction component of the procedure may produce side effects that are potentially hazardous to the individual (e.g., increased rate or magnitude of behavior, new forms of aberrant behavior, emotional responding). Moreover, the extinction component may be difficult to use consistently if the behavior is severe, potentially life threatening, or may be inadvertently attended to by well-meaning staff, peers, or visitors.

IV. SUMMARY

Differential attention is a widely used procedure in real life, especially in teaching new skills to humans and other animals. When used to decrease problem behaviors, it is often misused and problem behaviors are strengthened rather than decreased. As a treatment procedure, it involves both reinforcement (providing attention to all other socially desirable behaviors, if at-

tention has been determined to be reinforcing) and extinction (withholding attention, if attention has been determined to maintain the problem behavior). Without the extinction component, differential attention is not a very robust behavior reduction procedure. However, extinction is associated with a number of potential side effects that therapists should be aware of before instituting the procedure. For example, it may not be ethical to use extinction in cases of self-injury as the behavior may initially continue at high rates while being ignored. Generally, the rate of behavior change that results from the use of differential attention is much lower when compared to the use of more powerful primary (e.g., food) and conditioned reinforcers (e.g., tokens, money). If a rapid behavior change is desired, differential attention may need to be paired with other, more powerful procedures.

See Also the Following Articles

Attention Training Procedures ■ Differential Reinforcement of Other Behavior ■ Extinction ■ Functional Analysis of Behavior

Further Reading

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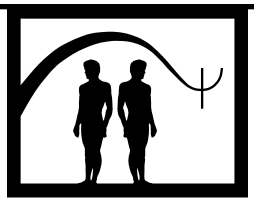

Differential Reinforcement of Other Behavior

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GLOSSARY

differential reinforcement of other behavior (DRO) involves the presentation of a reinforcer contingent upon the absence of the target behavior during a pre-determined interval of time. All other behavior, than the target behavior, is reinforced.

fixed momentary DRO Fixed Momentary DRO is a schedule where the interval length is held constant and reinforcement is delivered for the absence of target behavior at the end of the interval.

fixed whole-interval DRO Fixed Whole-Interval DRO is a schedule where the interval length is held constant and reinforcement is delivered for the absence of target behavior throughout the entire interval.

reinforcer A stimulus that when presented following a behavior will increase the probability of recurrence of that behavior.

target behavior Any behavior that is the focus of an intervention.

variable momentary DRO Variable Momentary DRO is a schedule where the interval lengths vary across an average value and reinforcement is delivered for the absence of target behavior at the end of the interval.

variable whole-interval DRO Variable Whole-Interval DRO is a schedule where the interval lengths vary across an average value and reinforcement is delivered for the absence of target behavior throughout the entire interval.

I. DESCRIPTION

Differential reinforcement of other behavior (DRO) was first described by Reynolds (1961). DRO is considered a behavior suppression intervention method as are positive punishment or negative punishment, extinction, and overcorrection. Differential reinforcement is unique within the category of behavior suppression strategies in that it relies on the contingent presentation of a reinforcer. DRO, also referred to as omission training is described as the presentation of a reinforcer contingent on the absence of the target behavior during a predetermined interval of time. Thus, a reinforcer is delivered if the individual does not emit the target behavior during a preset interval of time, regardless of other behaviors emitted. If the individual emits the target behavior (behavior that we wish to suppress), the delivery of the reinforcer is delayed.

The reader should know that there are several types of differential reinforcement. In addition to DRO, there is differential reinforcement of incompatible behavior (DRI), differential reinforcement of alternative behavior (DRA), and differential reinforcement of low frequency behavior (DRL). Other methods of behavior suppression are only briefly discussed in this article when comparing them to DRO. This article focuses on describing and discussing the basic elements of DRO, the different types of DRO contingencies, its efficacy

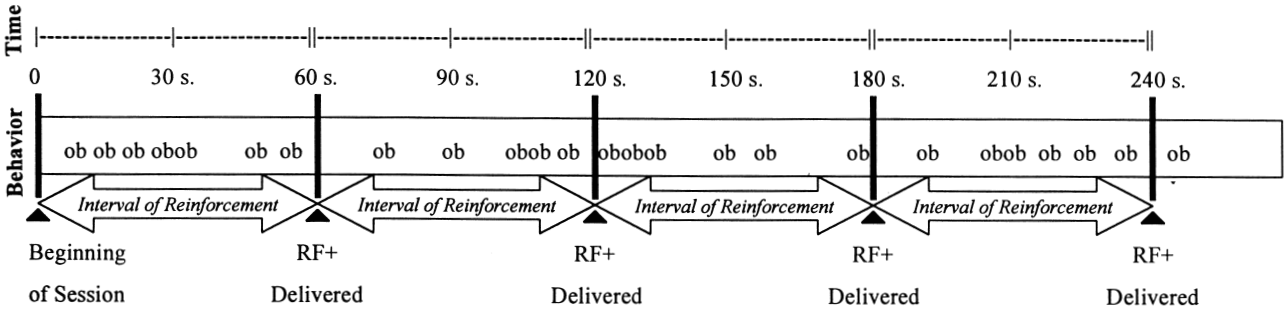

FIGURE 1 Temporal Parameter 1. *Interval of Reinforcement:* The interval of time during which the individual is expected to emit "Other Behavior" than the "Target Behavior" before a reinforcer is delivered. Interval of Reinforcement. Note: This is an example of an individual who is on a 60-s whole-interval DRO schedule. He is engaged in a variety of "Other Behavior" (ob) than the "Target Behavior" (tb) during the entire interval and thus receives his reinforcer at the end of every 60-s Interval of Reinforcement.

and generalization, positive and negative effects of DRO, and how to set-up a DRO intervention.

Although there was once concern that DRO treatment interventions were being underutilized, review papers have demonstrated consistently that DRO schedules are the most frequently used behavioral interventions for suppressing behavior. DRO procedures have also been rated as the most acceptable of the behavior suppression treatment approaches. DRO has been used to suppress a variety of problem behaviors, including: thumb sucking, stereotypies, aggression, food rumination, disruptive behavior, self-injurious behavior, inappropriate verbalizations, and "out-of-seat" behavior in the classroom.

Differential reinforcement of other behavior procedures consist of two basic behavioral elements: (a) reinforcement and (b) extinction. Reinforcement involves the presentation or removal of a stimulus immediately following a behavior that results in increased frequency of that behavior. In the case of DRO, the "behavior" is any behavior other than the target behavior. The extinction component in DRO involves the delaying or withholding of the reinforcer whenever the target behavior is emitted. Hence, we have two basic temporal parameters involved in establishing a DRO intervention: (a) the interval of time during which we expect the individual to refrain from emitting the target behavior (interval of reinforcement; see Figure 1), and (b) the interval of time during which the reinforcer will be withheld (delay interval) following the emission of the target behavior (see Figure 2). Reynolds referred to this as the resetting feature of the differential reinforcement schedule. Rieg, Smith, and Vyse demonstrated in the laboratory that it is not necessarily the absolute length of the interval of reinforcement or the delay interval that predicts the effectiveness of the DRO procedure as much as it is the relationship of these two parameters to one another. These authors concluded that the delay interval should twice as long as the interval of reinforcement to gain maximum suppressive effect of the DRO intervention.

There are two types of DRO schedules: whole-interval DRO and momentary DRO. The distinction is based on the omission requirement. In whole-interval DRO, the reinforcer is delivered if responding has not occurred for the entire predetermined interval. Hence, the individual must be under constant observation. If the individual emits the target response at any point during the interval, the reinforcer is not delivered. In momentary DRO, the reinforcer is delivered if the individual does not emit the target behavior at the moment the interval ends. Within the momentary DRO schedule, it is possible for the individual to have emitted the target behavior at some point during the interval; however, if the target response does not occur at the precise moment the interval is elapsed, the reinforcer is given. A teacher that reinforcers the absence of an undesirable behavior (e.g., physical aggression) at the very moment the bell rings to signal the end of recess is employing a momentary DRO schedule. The momentary DRO schedule is analogous to the momentary time sampling procedure described by Powell, Martindale, Kulp, Martindale, and Bauman. The momentary DRO procedure has the advantage over whole-interval DRO of being easier to implement and requiring less personnel time; whereas; Barton, Brulle, and Repp have also showed it to be as effective in maintaining behavior suppression as whole-interval DRO. These procedures are briefly presented.

In addition to the omission requirement parameter, another variant of the type of interval schedule is either fixed or variable in length. In a fixed schedule, the length of the interval is held constant. In a variable schedule, the length of the interval varies around a predetermined average value. Escalating schedules are also a third possible schedule variation. In escalating DRO schedules, a successfully completed interval results in the delivery of

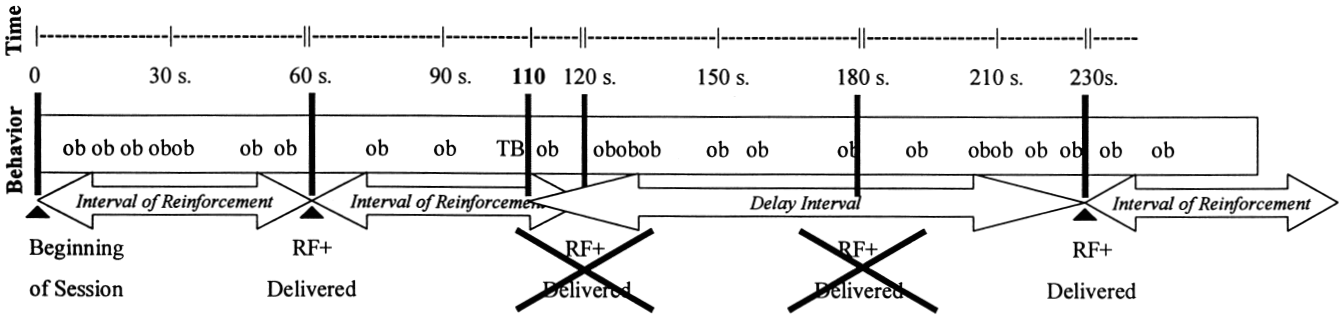

FIGURE 2 Temporal Parameter 2. *Delay Interval:* When the individual emits "Target Behavior" (tb), the time of delivery of the reinforcer is reset. The magnitude of the reset is the *Delay Interval,* which represents the time between the emitting of a "Target Behavior" and the delivery of the next reinforcer. Delay Interval. Note: This is an example of an individual who is on a 60-sec whole-interval DRO schedule. He is engaged in a variety of "Other Behavior" (ob) than the "Target Behavior" (tb) during the first interval and thus receives his reinforcer at the end of the first 60-sec Interval of Reinforcement. However, at the 110-sec mark of this observation session, he emits a "Target Behavior." The next reinforcer is not delivered and the Delay Interval starts immediately following the emission of the "Target Behavior." In this example, the Delay Interval is 120 sec. Hence, the individual does not receive a reinforcer until at least 120 sec after emitting a "Target Behavior." In the above example, the individual did not emit a "Target Behavior" between the 110-sec and 230-sec mark, so a reinforcer was delivered at 230 sec. If he continues to emit only "Other Behavior," he will continue to receive a reinforcer every 60-sec (Interval of Reinforcement).

reinforcement, but also in the increase of the length of the ensuing intervals. Repp and Slack decreased significantly various disruptive responses of students with mental retardation by using an escalating DRO schedule.

Lindberg, Iwata, Kahng, and Deleon presented a 2×2 diagram of the four possible DRO contingencies that can be created by alternating the omission requirement (whole-interval vs. momentary) and the type of interval schedule (fixed and variable): fixed whole-interval DRO, fixed momentary DRO, variable whole-interval DRO, and variable momentary DRO (see Table 1). Most DRO contingencies with human participants reported in the literature have been based on fixed whole-interval schedules. Furthermore, an important proportion of these studies have focused on problem behavior such as stereotypy and self-injury maintained by getting attention in people with mental retardation or other developmental disabilities. These four types of DRO schedules are now presented.

A. Fixed Whole-Interval DRO

In fixed whole-interval DRO, the interval length is held constant and reinforcement is delivered for the absence of target behavior throughout the entire interval. In his original description of DRO, Reynolds used a fixed whole-interval DRO in which pigeons had to abstain from pecking for a fixed period of time to have access to the reinforcer. Repp, Barton, and Brulle reported decreases in disruptive behaviors of young boys with mental retardation using a fixed 5-min whole-interval DRO schedule. Reese, Sherman, and Sheldon reported a fixed whole-interval DRO schedule in combination with response cost and prompted relaxation to decrease the aggressive behaviors of a man with autism and mental retardation. For example, shorter intervals were used in this study during instructional demands versus leisure activities because the demands of the tasks were different and the contextual variables different.

B. Fixed Momentary DRO

Fixed momentary DRO is a schedule in which the interval length is held constant and reinforcement is delivered for the absence of target behavior at the end of the interval. Hence, the person is given a reinforcer if, at the end of the interval, the individual is not emitting the target behavior. All behavior that occurs during the

TABLE 1
Different Schedules of Differential Reinforcement of Other Behavior

	Fixed length interval	*Variable length interval*
Whole-interval	Fixed whole interval DRO	Variable whole interval DRO
Momentary	Fixed momentary DRO	Variable momentary DRO

interval is ignored and does not cause nondelivery of the reinforcer. Some researcher reported inconsistent strength of suppression of the target behavior while using a fixed momentary DRO procedure. For example, Harris and Wolchick compared the effects of a fixed momentary DRO schedule, time-out, and overcorrection on the stereotypic behavior of four young boys with autism and mental retardation. The authors reported that the DRO contingency produced a moderate decrease in the target response for only one participant; overcorrection was the only treatment that suppressed stereotypy in all four participants.

Some researchers have looked at the utility of the fixed momentary DRO schedule at maintaining the suppression of problem behavior once behavioral control has been gained. Repp, Barton, and Brulle compared the effects of fixed momentary DRO and fixed whole-interval DRO schedules. The results of the study suggested that fixed whole-interval DRO was more effective than fixed momentary DRO at suppressing responding of disruptive behaviors in four young boys with mental retardation, but that fixed momentary DRO maintained previous levels of response suppression attained with a fixed whole-interval DRO schedule. Derwas and Jones also compared fixed whole-interval DRO and fixed momentary DRO as treatments for the stereotypy of five men with severe mental retardation. In contrast to Repp et al., these authors reported that fixed momentary DRO was more effective than fixed whole-interval DRO in decreasing the target response for three of the five participants. They found that one participant responded to fixed whole-interval DRO but was maintained at a low rate in a fixed momentary DRO schedule, and that fixed momentary DRO actually increased the stereotypy of the other participant. With the exception of certain results reported by Derwas and Jones, research indicates that fixed whole-interval DRO is a more effective schedule than fixed momentary DRO to obtain initial suppression of problem behavior. One important limitation of the fixed momentary DRO schedule is its predictability. Individuals can quickly learn that they can emit any behavior during much of the interval as long as they pace themselves with the end of the interval they will receive the reinforcer, regardless of the target behavior emitted during the interval.

C. Variable Whole-Interval DRO

Variable whole-interval DRO is a schedule in which the interval lengths vary across an average value and reinforcement is delivered for the absence of target behavior throughout the entire interval. Very few studies have examined the effects of variable DRO schedules in humans. Toping and Crowe reported that variable whole-interval DRO and fixed whole-interval DRO were equally effective (and more effective than extinction) in suppressing a key-pressing behavior in college student who had been previously trained to key press on either a fixed-interval or variable-interval schedule of reinforcement.

D. Variable Momentary DRO

Variable momentary DRO is a schedule in which the interval lengths vary across an average value and the reinforcer is delivered for the absence of the emission of the target behavior at the end of the interval. Sisson, Van Hasselt, Hersen, and Aurand reported limited effects of a variable momentary DRO schedule in decreasing disruptive and stereotypic behavior of three children. The authors reported that the 20-sec variable momentary DRO schedule decreased the stereotypy of only one of the participants, and that the addition of overcorrection was needed to ensure maintenance. Lindberg et al. compared the effects of fixed whole-interval DRO and variable whole-interval DRO schedules, and the effects of variable whole-interval DRO and variable momentary DRO schedules in three women with mental retardation who emitted self-injurious behavior maintained by attention from others. Results indicated that variable whole-interval DRO and variable momentary DRO were as effective as the more widely used fixed interval schedules. For all three participants the self-injurious behavior decreased to near zero rates. The study published by Lindberg et al. was more carefully designed than previous studies and demonstrated that variable momentary DRO schedules could be highly effective. The results are interesting because momentary schedules are easier to implement, requiring much less monitoring than fixed DRO schedules.

II. EFFICACY

Many earlier published studies used the DRO schedule in combination with other behavioral strategies when attempting to decrease a target response (e.g., the use of DRO and time out or the use of DRO and overcorrection). These earlier studies made it difficult to untangle the effects of the DRO schedule itself. A number of more recent clinical studies have examined the efficacy of DRO alone. These studies have also looked at the efficacy of DRO procedures when used alone in

suppressing serious and long-standing problem behaviors such as self-injurious behavior

A. Length of Interval

The length of the interval has been shown to contribute to the efficacy of the DRO procedures. Generally, a shorter interval length that is then extended in time will be more effective. A shorter interval offers a greater probability of successful experience (i.e., omission of target behavior) for the participant. The initial length of the DRO interval should be in relation to the mean interval length between target behaviors observed during a baseline condition. Repp et al. empirically demonstrated that a shorter interval resulted in greater suppression of the target behavior compared to an interval length that was twice the mean interval observed during baseline. However, Piazza, Fisher, Hanaley, Hilker, and Derby cautioned against an interval being so short that the person has difficulty discriminating when the target behavior resulted in nondelivery of the reinforcer. As pointed out by Mazaleski, Iwata, Vollmer, Zarcone, and Smith, withholding the reinforcer for a predetermined interval (i.e., extinction) whenever the target behavior occurs, might minimize the problems observed by Piazza et al. It has been demonstrated that DRO suppression strength is maximized when the delay interval (length of time before delivering a reinforcer following the emission of a target behavior) is greater than the interval of reinforcement (interval during which the target behavior must be suppressed before a reinforcer is delivered).

B. Functional Assessment

As noted by Vollmer & Iwata, the lack of efficacy of some DRO interventions are often due to the fact that the authors failed to conduct an a priori functional assessment of the target behavior. Thus, the selected reinforcer must be relevant to the function of the target behavior for this, or any, behavioral intervention to be optimally effective at suppressing a behavior. This is briefly explained in the next section.

III. FUNCTIONAL ASSESSMENT AND REINFORCER PREFERENCE

Despite the straightforward definition of DRO, that is the delivery of reinforcement contingent on the occurrence of any behavior other than the target behavior, many procedural and functional variations have been reported in the literature. For instance, certain studies reset the time interval if the target response has been emitted, whereas others do not use the time resetting feature that was originally described by Reynolds. Certain studies use an arbitrary response-reinforcer relationship whereas others use a functional response-reinforcer relationship (i.e., certain studies conduct a functional analysis before implementing the DRO schedule). The efficacy of the DRO procedure is dependent on the congruence between the reinforcer salience as well as the reinforcer's relationship to the function of the target behavior. Emitting "other behavior" must produce consequences that are of equal or greater value to those produced by the target behavior; or else, the participant will continue emitting the target behavior. Hence, the reinforcer that is delivered for emitting "other behavior" must be able to compete with the reinforcers produced for emitting the "target behavior."

Functional assessment is a process of gathering data surrounding the emission of problem behavior. The data used to conduct a functional analysis is gathered via one or more of the following methods: direct observation, interview of individuals present when the problem behavior is emitted, direct manipulation of the antecedents and consequences, and rating scales.

Reiss and Havercamp have demonstrated that there are clear individual differences in reinforcer preference. In addition to this, Piazza et al. empirically demonstrated that the salience of one reinforcer may not necessarily be the same for two different behaviors within the same individual. Hence, it is important to clearly identify an inventory of reinforcer preferences for each individual and for different target behaviors we wish to suppress. Piazza et al. also found that a reinforcer stimulus for a simple behavior may often lose its salience to reinforce more complex behavioral chains such as the suppression of a well-ingrained problem behavior.

IV. MAINTAINING BEHAVIOR SUPPRESSION AND GENERALIZATION

As Barton et al. demonstrated, although a momentary DRO schedule may not result in as great of a change in behavior suppression as a whole-interval DRO schedule, the former has great potential in maintaining suppression of the target behavior. Barton et al. compared the suppression effects of whole-interval DRO and momentary DRO with nine school-aged students with severe to profound mental retardation and associated sensory and auditory impairments. Target behaviors for all

nine participants were observed and recorded during a baseline phase. Following the baseline phase, the nine participants were placed on a whole-interval DRO schedule to suppress their target behaviors. Then, the participants were randomly assigned to three treatment groups of three participants. The first group of three participants were maintained on the whole-interval DRO to observe its ability at maintaining suppression of the participants' target behavior (A-B treatment design). The second treatment group was moved from the whole-interval DRO to a momentary DRO schedule to study the latter's efficacy at maintaining the suppression of the target behavior (A-B-C treatment design). In the third treatment group of participants, the whole-interval DRO procedure was suspended, and the participants were returned to a baseline treatment state (A-B-A design). The purpose of this intervention was to measure the suppression maintenance effect of "no intervention" on the target behavior and allow comparison with the two other DRO procedures.

This study demonstrated that both whole-interval and momentary DRO were effective at maintaining suppression of the target behavior. The third treatment group (A-B-A) saw a rapid return to previous frequencies of target behavior when the whole-interval DRO intervention procedure was halted. The authors found that momentary DRO schedule was equally effective as a whole-interval DRO schedule in maintaining the behavior improvements. Because momentary DRO is less personnel intensive than a whole-interval DRO schedule, it may be the procedure of choice to maintain suppression of problem behavior. Because it does not demand constant eye-on supervision, the momentary DRO procedure may result in less resistance from direct-care staff and be less likely to be abandoned along the way.

V. NEGATIVE EFFECTS

Although some authors initially claimed that there were no negative effects associated to DRO procedures, this may not always be true. One concern with the use of DRO schedules is the possibility of inadvertently reinforcing a non-target behavior that could become a problem behavior. Skinner accurately described the effects of superstitious conditioning in the laboratory with pigeons. Superstitious behavior, or behavior that is irrelevant to the presentation of the reinforcer, is seen everyday (e.g., in gambling establishments). Inadvertent reinforcement within a DRO procedure might occur when the presentation of a reinforcer immediately follows a behavior that happens to occur at the end of an interval. For example, if a child is on a 10-min fixed whole-interval DRO schedule and the target behavior is being out of seat. At the end of a 10-min interval during which the child sat quietly but might have been throwing spit balls at a peer, the child will receive the reinforcer. In this situation, the child's throwing of spit balls might be accidentally reinforced.

Cowerdy, Iwata, and Pace reported that their DRO procedure was associated with a intense emotional reaction on the part of the child. In their study, a 9-year-old boy with borderline intellectual functioning and severe scratching and skin-rubbing behavior became upset and cried each time he was told that he had failed to earn his reinforcer for the preceding interval because of the presence of self-injurious behavior. Some negative side effects can be avoided by conducting a systematic thorough reinforcer preference.

Generally speaking, DRO procedures are among the least restrictive procedures used to suppress problem behaviors. In addition, DRO procedures generally result in the least negative side effects and are the most accepted form of intervention.

VI. STEPS TO SETTING-UP A DRO INTERVENTION

1. Operationally define the target behavior. Use terminology that is observable and measurable and nonjudgmental (i.e., yells, throws objects, and punches vs. gets angry).
2. Conduct a functional assessment of the problem behavior. Also useful may be a scatter plot.
3. Conduct a reinforcer preference inventory for the individual and identify the most salient reinforcers.
4. Establish the preferred type of schedule of reinforcement; Fixed whole-interval DRO, variable whole-interval DRO, fixed momentary DRO, variable momentary DRO. The choice of a DRO schedule may depend on the baseline frequency of the problem behavior as well as the availability of trained personnel to effectively carry out the procedure. A whole-interval procedure may work best initially to suppress the target behavior and can then be replaced by a less personnel-consuming momentary schedule. A variable interval schedule has the advantage of being more difficult to predict the time of delivery and results generally in learning (e.g., to suppress the target behavior) that is more resistant to extinction than a fixed interval schedule of reinforcement.

5. Determine the most efficient other behavior ↔ reinforcer interval (interval of reinforcement). Poling & Ryan described calculating the average interresponse time observed during a baseline condition to determine an efficient interval. A cooking timer is generally adequate, however, recording beeps at the predetermined intervals onto an audiotape can be less disruptive when an ear piece is used. The use of a handheld behavior observation system is obviously the most elegant and expensive.

6. Determine the most efficient target behavior ↔ reinforcer interval (delay interval—resetting feature). Uhl and Garcia suggested delaying the reinforcer (delay interval) for a duration that is greater than the interval of reinforcement.

7. Set up your data-recording materials.

8. Train the necessary people (e.g., direct-care staff, parents, teachers, etc.) on conducting the DRO and data recording.

9. Review behavioral data and revise DRO procedure as needed (i.e., you will want to gradually increase the interval once you've gained control of the target behavior).

VII. SUMMARY

In summary, DRO is the most commonly used procedure for suppressing problem behavior. There are several different types of DRO schedules: fixed momentary DRO, variable interval momentary DRO, fixed whole-interval DRO, and variable whole-interval DRO. There are several crucial elements to consider when selecting a DRO schedule. These elements include the function of the target behavior and the selection of an appropriate reinforcer, the frequency of the target behavior, the length of the interval of reinforcement, the use of a delay interval and its length, the choice between a whole-interval versus a momentary interval schedule, and the choice between a fixed or variable interval time. Numerous studies have shown DRO procedures to be among the most effective in suppressing problem behavior and maintaining suppression of problem behavior through the delivery of reinforcement contingent on the absence of the target behavior. In addition to being an effective behavior suppression techniques, DRO procedures have also garnered the highest ratings of treatment acceptability from professionals and parents.

See Also the Following Articles

Conditioned Reinforcement ■ Covert Positive Reinforcement ■ Differential Attention ■ Discrimination Training ■ Habit Reversal ■ Negative Reinforcement ■ Positive Reinforcement ■ Response-Contingent Water Misting ■ Response Cost

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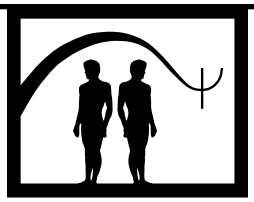

Discrimination Training

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GLOSSARY

discriminative stimulus A neutral stimulus that predicts when the performance of a particular response will lead to a desired outcome.

extinction In classical conditioning, the weakening and eventual disappearance of a learned response that occurs when the conditioned stimulus (CS) is no longer paired with the unconditioned stimulus (US). In operant conditioning, the process in which a reinforcer is repeatedly left absent after the occurrence of a behavior, resulting in the inhibition of that behavior.

generalization The degree to which novel stimuli resembling the original discriminative stimulus (S+) or conditioned stimulus (CS) elicit a behavioral response.

generalization gradient A decline in the magnitude of a response with increases in the physical difference from the original stimulus (S+), or an increase in magnitude corresponding with decreases in the physical difference of the S+.

postdiscrimination gradient A term coined by Kenneth W. Spence in his 1937 paper on discrimination training. The postdiscrimination gradient is derived from the interaction of the excitation and inhibition gradients elicited by a single stimulus.

stimulus control Control over the occurrence of a response by a discriminative stimulus (S+).

I. DESCRIPTION OF TREATMENT

Discrimination training refers to the process by which an individual learns to perform a particular response in the presence of a designated stimulus (S+) while inhibiting this response in the presence of other stimuli (S–). A typical procedure used to train behaviors to come under discriminative control involves the presentation of two different stimuli, one that acts as a discriminative stimulus (S+), cueing the individual to respond, and one that acts as a cue for the response to stop (S–). If an individual performs the desired behavior after the correct cue, she or he will receive a reward. However, if the response occurs after the wrong cue is presented, no reward is provided. Such differential reinforcement of behavior after the presentation of different stimuli results in an increased likelihood of responding following the S+, and decreased response rates, or even an absence of responding, in the presence of other cues. For example, even people can be discriminative stimuli: A child might make a special request from mom if she appears to be in a good mood (S+). However, if mom is grouchy and stomping around the house (S–), the child is likely to keep quiet.

Stimulus discrimination can be thought of as the opposite of stimulus generalization, a process by which an

individual learns to respond the same way while in the presence of two or more similar stimuli. For example, an infant may see a dog, and be rewarded repeatedly by a parent for saying "dog." Fairly soon, all four-legged, friendly neighborhood animals are called "dogs," whether they be cats, goats, or guinea pigs. Of course, the more similar in appearance the new animal is to the original dog, the more likely the child is to call it a dog. This behavior demonstrates the idea of a generalization gradient, or the notion that the strength of a response to a given stimulus is a function of its similarity to the original discriminative stimulus. When an individual undergoes discrimination training, the reverse is true: Learning to respond differentially when in the presence of two stimuli is easier if those stimuli are very different. For example, it is easier for a child to learn the difference between red and blue than between red and orange.

Both the concepts of stimulus discrimination and stimulus generalization are dependent on the notion of stimulus control. When a given cue determines how likely someone is to perform a particular behavior, that behavior is said to be under stimulus control. For example, in a 1980 study, K. D. Brownell, A. J. Stunkard, and J. M. Albaum attempted to attain stimulus control over using the stairs rather than an escalator in a shopping mall, a train station, and a bus terminal. The stimulus used was a poster depicting a "healthy" heart climbing the stairs, and an "unhealthy" heart riding an escalator. The poster's caption read: "Your heart needs exercise, here's your chance." Results indicated that the use of the stairs increased significantly during the time the "intervention" was posted. A reasonable conclusion of this study is that the poster exerted stimulus control over stair-climbing behavior.

Teaching an individual to respond discriminately when in the presence of different cues is a somewhat different matter. One of two methods of discrimination training typically are used. Simultaneous discrimination training is a technique in which both S+ and S– are presented at the same time. For example, suppose an individual was presented with a circle and an ellipse, and had to correctly identify which was the circle in order to earn a reward. This person has access to both stimuli at the same time, and must compare and choose between the two immediately. On the other hand, in successive discrimination training, the two stimuli are presented sequentially, or one after another. An example of this would involve presentation of a Pepsi and a Coke, which an individual would have to try one after the other, to correctly determine which was the Pepsi to get a reward.

Of these two techniques, simultaneous discrimination is most commonly used in applied settings, and is thought to be superior to successive methods. Research comparing the two techniques has yielded comparable results; however, some studies have indicated that simultaneous presentation of stimuli leads to better generalization effects. For example, in a 1978 generalization study by Marion C. Panyan and R. Vance Hall, investigators examined the effects of both simultaneous and successive stimulus presentation in training two females with severe developmental disabilities on vocal imitation and tracing tasks. Each participant experienced both the concurrent and serial conditions. In the concurrent condition, the two women were required to practice a tracing task for 5 minutes, then a vocal imitation task for 5 minutes, and finally, to return to the tracing task for the last 5 minutes. Subsequent sessions reversed the order of task presentation. In the serial condition, the participants were required to gain mastery over either the tracing task or the imitation task first (or complete 200 trials) before moving on to the remaining task. Although no differences between serial and concurrent training methods in terms of number of trials required to gain mastery were found, concurrent presentation appeared to result in better generalization of skills to untrained items. In other words, if a participant was presented a novel consonant sound, she was more likely to demonstrate some skill in imitating it directly following a concurrent than a serial training session.

In addition to presenting cues in a simultaneous or successive manner, the schedule of reward distribution may also vary. In concurrent schedule discrimination training, an individual must choose between two response options simultaneously. For example, an individual has the option to press either a red button or green button. The red button signifies delivery of reward every 3 minutes, while the green button denotes rewards every 6 minutes. This reward schedule is likely to impact how often and when these buttons are pressed. If a multiple schedule is used, stimuli are presented successively, and reinforcement is given differentially in a sequential manner. Consider the example of a pigeon trained to peck a light that varies in color from red to green. When the light is red, the pigeon may be rewarded on an average of once per 2 responses, but when it is green, the pigeon's pecks are rewarded on an average of once per 10 responses. If this is a smart bird, it will likely learn to peck the most efficient way to gain the most reinforcers—that is, pecking less often when the light is red, and at a higher rate when the light is green. To evaluate the degree of discriminative control, researchers look for differential response rates between the two stimuli.

In conditional discrimination, a process by which an individual is required to make a certain response during presentation of one stimulus and a second, different response, during the presence of a second stimulus, responding is said to be "conditional," or dependent, on the stimulus presented. For example, in receptive labeling tasks, children with speech comprehension and production difficulties are required to point to or touch one of two different objects named by the teacher. First the child is presented with a cookie, which the teacher names for the child. When the child touches the cookie, she or he can have a taste of it. Next, when the child has reliably learned to reach for the cookie when the teacher says "Where's the cookie?," it is presented in conjunction with another item. If an apple and a cookie are presented and the instructor asks, "Where's the cookie?", the child must reach for the cookie. If the correct response is given, the cookie is delivered. If not, the cookie is removed for a brief period. Eventually, the child must respond correctly to randomly presented pairs of objects—this constitutes a conditional discrimination task, as either choice may be correct at a given time.

A number of factors influence the ease of discrimination training and the stability of stimulus control. Namely, these factors include degree of similarity between S+ and S–, as discussed previously. The "information value" of the stimulus is also important. If an employee is rewarded every time he or she performs a task for one supervisor but rarely when a task is performed for another supervisor, the instructions of the former boss may be more salient to that worker. Thus, the first boss may elicit a better, more consistent performance than the second. In addition, the effects of prior discrimination learning may also enhance the development of discriminative control. In 1952, the "easy to hard" effect was first described by D. H. Lawrence, who used rats to examine how well they transferred the learning of one task to a similar, but more difficult one. Results suggested that if a relatively easy task was taught first, performance was facilitated later when more difficult tasks were attempted. Finally, the differential outcome effect, which refers to the degree to which a particular response leads to a unique outcome, also plays a role in discrimination learning. That is, differential responding occurs more readily when a particular response results in a particular outcome, and when other responses lead to significantly different outcomes. Continua along which outcomes must differ include magnitude, delay of reinforcement, or quality of reward.

In the clinical realm, discrimination training is often used in a population of both adults and children with developmental disabilities. For example, it has been used to enhance receptive and expressive speech, visual discrimination of relevant cues, the development of social skills, and to reduce problem behaviors such as aggression and pica. More diverse applications of discrimination training involve its use in biofeedback training, in marital therapy, and behavioral health.

II. THEORETICAL BASES

There are two dominant theories of discrimination learning, developed through the use of animal models. The first, conceptualized by C. L. Hull and Kenneth W. Spence in 1936, involves a few major assumptions. Simply put, Hull and Spence believed that a given stimulus had both excitatory properties (properties that would lead an individual to respond) and inhibitory properties (properties that would lead a individual to not perform a response). These properties, they argued, interacted: Whichever property predominated dictated whether an individual would respond. The S+, which by definition results in the performance of a particular behavior, has more excitatory than inhibitory strength. Other stimuli, especially if they are very different from the original discriminative stimulus, may have stronger inhibitory than excitatory effects. The opposite is true of cues highly similar to the discriminative stimulus. The underlying assumption of this idea is that both the excitation and inhibition to a given stimulus are thought to generalize to other, similar stimuli. This explains the generalization gradient phenomenon, as well as the fact that discrimination tasks comparing two very different stimuli are more difficult to learn than those contrasting similar cues.

In an extensive 1981 review, Werner K. Honig and Peter J. Urcuioli argue that the Hull–Spence theory of discrimination has a great deal of support from generalization studies, or experiments requiring rats or pigeons to discriminate between two stimuli. In these studies, the animal is presented with a variety of stimuli, each sharing some similarity with the S+. The rate of responding under each condition of the stimulus is recorded in a graph, which typically depicts the highest rate of responding (the peak of the curve). This peak is thought to correspond with the excitatory properties of a stimulus, and thus is often called an excitatory gradient. Similarly, an inhibitory gradient, or the lowest point of the curve, representing the lowest rate of responding, can be demonstrated in extinction studies, in which responses given in the presence

of different stimuli do not result in a reward. If Hull and Spence were correct in believing that each stimulus had both inhibitory and excitatory properties, this would allow an interesting prediction. Because each different stimulus evokes both excitation and inhibition, these tendencies interact to produce a gradient of responding called the postdiscrimination gradient. Further, they would result in a shift of peak responding *away* from the original discriminative stimulus. A vast number of animal studies have supported this hypothesis in their demonstration of a peak shift, or a displacement of the peak of the excitatory gradient away from the original S+. Some researchers have suggested that degree of displacement is directly related to the dissimilarity between S+ and S– cues. That is, if the S+ is vastly different than the S–, peak shift tends to be minimized. If the cues are similar, peak shift will be larger.

The first individual to demonstrate the peak-shift phenomenon was Harley Hanson, in his 1959 doctoral thesis. In the first phase, he trained pigeons to earn a food reward by pecking a key during the S+ stimulus, which was a colored light with wavelength at 550 nanometers. He then presented different groups of pigeons with a variety of cues differing along a continua of wavelengths, but continued to deliver reinforcement when they pecked a key subsequent to the presentation of the 550 nanometer light. The third phase of the experiment consisted of generalization testing, during which he presented light stimuli in varied hues (ranging from 480 to 600 nanometers). Hull–Spence theory would predict a displacement of maximum responding away from the original 550 nanometer S+ in the direction opposite that of the S–. Indeed, in discrimination groups, the maximum rate of responding did not occur at the original S+, but was shifted away, in the predicted direction. In addition, the degree of shift appeared dictated by the difference between S+ and S– cues. The more similar S+ was to S–, the greater the peak shift; the less similar, the less pronounced the displacement. Since this initial study, a number of other animal studies have also demonstrated this phenomenon, both in pigeons and rats.

In contrast to Hull–Spence theory, N. S. Sutherland and N. J. Mackintosh forwarded a competing theory in 1971. They posited the attention theory of discrimination, which they argued involved two processes. Primarily, they suggested that the attention of an individual is affected when that person is reinforced. That is, the individual's attention is drawn to salient features of stimuli around them. Secondarily, they argued that the brain comprises "analyzers" whose function is to receive and process sensory information. Each dimension of a stimulus is processed by a different analyzer. When discrimination training begins, the strength of an analyzer is correlated with the strength of an incoming signal. If a given stimulus has salient features, the individual's attention will be drawn to it. Further, if a subject attends to a particular stimulus, performs the appropriate response and is rewarded, the analyzer for that stimulus is thought to gain strength. Other analyzers corresponding to less relevant stimuli are thought to weaken. Sutherland and Mackintosh suggest that a "bond" develops between a specific response and its analyzer. This theory accounts for how the information value of a given stimulus affects the ease of discrimination learning.

A 1973 study by T. G. Waller examining consistency of reward delivery on runway performance in a rat model provided support for the attention theory of discrimination. Of four groups of rats, two groups ran an alleyway and were rewarded at the goal box on every trial. The remaining two groups received reward for this performance only 50% of the time. One group in each of the two conditions (100% reinforcement and 50% reinforcement) ran an alleyway that was gray in color, while the other group in each condition ran a vertically striped alley. In phase two of the experiment, all subjects were trained to choose between two goal boxes—one with stripes slanting to the right, and one with stripes slanting to the left—for a food reward. Attention theory would predict that of the groups originally trained to run the striped alleyway, the 50% group would learn the discrimination less readily than the 100% group, because their analyzer for this cue is weak relative to that of the 100% group. In addition, proponents of attention theory would expect that groups trained in the gray alleyway would learn the discrimination task equally well. Because these rats had no exposure to stripes, their analyzer strength for this stimulus would be about equal. Results indicated that rats trained in the gray alley learned the task at roughly the same rate, whereas of the rats that experienced the striped alley in phase 1, the 50% reinforcement group took more trials to learn the task than did the 100% reinforcement group.

III. EMPIRICAL STUDIES

A great deal of research from animal models supports the efficacy of discrimination training in a labo-

ratory setting. In addition, there is a wealth of clinical research supporting the effectiveness of discrimination training in real world settings, especially among populations that demonstrate difficulty with discrimination tasks. Discrimination training in the clinical realm has proven effective in teaching new skills, as well as modifying inappropriate behaviors such as impulsivity, either as a treatment modality in itself, or integrated in a multicomponent behavioral intervention. One way in which discrimination training is used in a clinical population was formulated in the 1960s by Ole Ivar Lovaas to teach autistic children receptive and expressive language skills. First, the child is taught receptive labeling, followed by speech imitation training. In receptive labeling, a teacher presents desired objects—such as toys or edibles—and gives a simple phrase or question, such as "cookie," or "Where's the cookie?" For children to earn this reward, they must perform a simple task such as pointing toward or touching the named item. If they do not complete the desired task, the teacher models the appropriate response for them, and then may physically prompt the child. However, no reward is given: acquisition of the desired item is contingent on the correct response. In this model, the teacher's statement serves as a discriminative stimulus for the response of nonverbally indicating the object. After a child learns to indicate a given object in a reliable way without prompting, a new object is introduced, and the procedure is repeated. Finally, the two objects are presented simultaneously, and the teacher names either one, in random order, rewarding the child for correct identifications.

In addition to teaching language skills, the field is replete with studies demonstrating possible applications of discrimination training. For example, in a 1977 study, David Marholin and Warren Steinman examined the development of stimulus control in the classroom. Investigators explored reasons why children may exhibit appropriate behaviors in one classroom setting, but act inappropriately in another. Marholin and Steinman hypothesized that due to reinforcement and punishment given by a teacher, that teacher's presence may serve as a discriminative stimulus for appropriate behavior. In the teacher's absence, children's behavior may devolve into disruption and off-task antics. To test this hypothesis, authors assessed the academic performance of eight children ranging in age from 10 to 12 years and demonstrating conduct problems as well as poor academic performance. The study was conducted in a typical classroom setting. Using an ABCBC design, the first condition (A) served as a baseline, during which the children received no reinforcement, while during the second (B), the teacher reinforced appropriate behavior. The third condition (C) was characterized by reinforcement of both the rate and accuracy of on-task academic performance. Each session lasted for 30 minutes. For the final 3 sessions of each condition (A, B, and C), the teacher was absent for a 10-minute period. Two independent raters collected data on both appropriate and inappropriate behaviors, while the teacher was present and absent. Examples of appropriate behaviors included looking at books or handouts, getting out materials, writing answers, etc. Inappropriate behaviors comprised fidgeting, speaking out, or physical aggression.

Results indicated that the presence of the teacher made a big impact on children's behavior. Specifically, the students demonstrated much higher levels of disruptive and off-task behavior while the teacher was not present, regardless of which contingency condition was in operation. Predictably, however, children engaged in more on-task behavior while they were reinforced for academic behaviors (remember, reinforcement was contingent on the teacher's presence). On-task behavior was at peak levels when the children experienced condition C, under which they received reinforcement for rate and correctness of academic work. This differential rate of on-task behavior across teacher-present and teacher-absent conditions supports the notion that the teacher had become a discriminative stimulus for on-task behavior. Yet teachers are occasionally absent, so some attempt must be made to encourage generalization of on-task behavior to teacher-absent conditions. The authors suggested that reinforcement for the quality of a child's work (as in condition C) rather than on-task behavior *per se* (as in condition C) may foster the transfer of discriminative control from the teacher to academic materials.

IV. SUMMARY

Discrimination training refers to the process by which a subject learns to respond differentially to two or more different stimuli. To bring a behavior under discriminative control, responses to the correct cue (S+) are rewarded, while responses to the wrong cue (S–), are not. The discriminative control of a stimulus may be assessed by an increased probability of responding to S+, and a decrease in, or absence of, responding in the presence of S–. Two dominant theories of discrimination

learning serve as underpinnings of discrimination training. Hull–Spence theory suggests that each cue has both excitatory and inhibitory properties, which summate algebraically to produce a response. Whether or not the subject responds in the presence of a particular stimulus is dependent on whether the excitatory strength of that stimulus outweighs its inhibitory properties. Hull–Spence theory draws empirical support from experiments examining the peak shift phenomenon. In contrast, Sutherland-Mackintosh attention theory of discrimination suggests that when a stimulus predicts a reward, that stimulus captures a subject's attention. The relative salience of a stimulus is directly related to how readily a subject learns a discrimination task. A plenitude of research, typically animal studies, supports this theory. Discrimination training has been used for a variety of clinical issues, including social skills training, biofeedback training, and modification of severe behavior problems.

See Also the Following Articles

Classical Conditioning ■ Differential Reinforcement of Other Behavior ■ Extinction ■ Operant Conditioning ■ Response Cost

Further Reading

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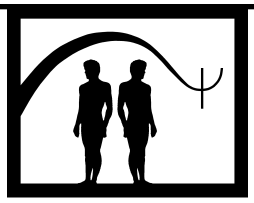

Documentation

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GLOSSARY

general clinical record Includes the patient's name, the date, duration of time spent with the patient, nature of the service and service code, and clinician signature.

health care documentation Requires that a record be factual, complete, legible, and maintained concurrently with provision of the service being documented.

privacy rule Creates a high standard of privacy for psychotherapy notes. These are identifiable but kept in a separate part of the health care manual.

protected psychotherapy notes Establishes an absolute privilege for information disclosed in psychotherapy or counseling.

I. PRINCIPLES AND PURPOSES

Standard principles of health care documentation require that a record be factual, complete, legible, and maintained contemporaneously with the provision of the service being documented. Documenting psychotherapy services poses special challenges because of the extremely sensitive nature of the material brought forth in a confidential atmosphere of trust. Strong legal and ethical principles underlie the confidentiality of medical services in general. The confidentiality of psychotherapy is given a special status of privilege in state courts, and this privilege was extended to federal courts in the 1996 U.S. Supreme Court decision in *Jaffee v. Redmond.* The special status of psychotherapy notes is a significant element of the federal regulations that the Department of Health and Human Services (HHS) developed at the direction of the Health Insurance Portability and Accountability Act (HIPAA) of 1997, to take effect in 2003. These regulations may bring order and consistency to what has been a heterogenous and sometimes controversial approach to documenting psychotherapy in actual clinical practice.

The health care record has multiple purposes and many potential readers, intended and unintended. For the clinician and the patient or client, it is a record of diagnosis and treatment that serves continuity of care both by the treating clinician and any succeeding caregiver. In an organized setting such as a hospital or clinic, it may facilitate knowledgeable treatment by circulating information among a number of caregivers. The record may also benefit future patients by contributing data to research. Medical information is often requested by third-party payers to assess the validity of health care insurance claims. In the era of managed

care, this information is often demanded in advance of authorizing payment for anticipated treatment services, often with controversial implications because unknown people in the managed care organization presume to judge the medical necessity of recommended treatment without any firsthand knowledge of the patient or assurance of training equivalent to that of the patient's therapist. With self-insured employers, medical information about employees may be reported back to employers to obtain payment.

If there is contention about the care given to a patient, as in malpractice litigation or an ethics investigation, the record may provide a relatively objective, contemporaneous account of what did or did not transpire; an old legal saw is, "If it isn't in writing, it didn't happen." Medical records may also be sought if the information therein is relevant to a civil lawsuit or criminal investigation, prosecution, or defense. There are detailed legal processes that attempt to strike a balance between protecting privacy and permitting access to all relevant information in pursuit of justice.

Needless to say, in view of its importance to the patient and its legal ramifications, the record should be professional and respectful. Humorous, flippant, or demeaning remarks about a patient have no place in a clinical record.

II. DILEMMAS AND CONTROVERSIES

The information documented in a psychotherapy record is of a different nature than routine clinical or administrative data. Whereas the latter includes history as narrated by the patient or others, observations and physical or mental examination findings by the clinician, laboratory data, treatment plans, prescriptions, and side effects, and so on, psychotherapy data are much more subjective. Furthermore, as acknowledged both by the U.S. Supreme Court in *Jaffee* and in the HIPAA rules, psychotherapy material is elicited in an atmosphere of privacy, trust, and complete freedom to speak one's thoughts. It may include repetitive thought patterns, dreams, fantasies, wishes, revelations of behavior that induce shame or guilt, or details of the intimate lives of the patient and other people. The psychotherapy cannot take place unless these things are addressed, and they will not be addressed unless the patient knows that whatever is spoken will not adversely affect either the patient or other people in relationships. This incontrovertible fact necessitates a higher level of protection for the contents of psychotherapy discourse. The privacy of one's mental life and ideas is a most cherished value.

A powerful dilemma ensues: On the one hand, documentation protects the patient and the therapist and may facilitate treatment. On the other hand, documentation of the intimate mental contents of psychotherapy could expose the patient to embarrassment and damage. Although unlikely, disclosures of contents of the record could occur involving other facility personnel, courts, attorneys, law enforcement officials, researchers, insurance carriers, managed care companies, or employers making personnel decisions.

There is a wide variation in the way psychotherapists handle this dilemma, depending on the locus of treatment, the therapist's technical and theoretical orientation, the nature of payment, and the potential risks of invasion of the record. Many therapists, especially in solo private practice, keep minimal records. Some keep none, which forestalls access to any written psychotherapy information by third parties for any reason (although it does not preclude a subpoena of the therapist for testimony). However, it also exposes the therapist to serious legal risks and may detract from the continuity and coordination of care. In hospitals or multidisciplinary, ambulatory settings a detailed record may be required by institutional standards and the exigencies of coordinating care by a variety of caregivers. In training situations detailed notes may be essential for supervision or consultation with more experienced clinicians.

Some varieties of treatments require special approaches. In group therapy, the leader may make a general note describing the process of each meeting of the group, identifying individuals only by first name if at all, and then write an individual note for each patient's chart that does not mention other patients. For psychoanalytic treatment in a high frequency of sessions, an American Psychoanalytic Association practice bulletin states a rationale that requiring daily notes may actually be detrimental to the treatment process. This is because such a focused activity interferes with the free-associative attention state of the psychoanalyst that allows processing the analytic experience at multiple levels of consciousness.

Many therapists safeguard psychotherapy information by writing a factual clinical note that gives little detail about the psychotherapy contents, and then keeping personal notes in which the identity of the patient cannot be discerned and the intimate contents of psychotherapy can be detailed. This is a common

procedure when very close examination of the process of treatment sessions is necessary for supervision, training, or research. Audio- or videotaping may achieve similar educational purposes but necessitate special editing to remove identifying material. This practice is the only way in which the psychotherapy proceedings can be recorded and closely studied without exposing the patient to damaging disclosures. However, the custom is decried by malpractice defense attorneys because it creates a "shadow" record that cannot be corrected by the patient or used in a courtroom without a fight to support a contested subpoena. Yet, prior to the protections afforded by *Jaffee v. Redmond* or the HIPAA rules, it was the only way to create a detailed record for study or supervision, despite a slight degree of risk of invasion by a legal proceeding.

III. LEGAL REQUIREMENTS

Some states require that all health care services be documented. In other situations documentation may not be specifically mandated, but failure to maintain documentation may be interpreted in legal proceedings as a lapse in meeting a generally accepted standard of care in the community. Some professional organizations require documentation as an essential component of care, whereas others do not specify this. Maintaining confidentiality of psychotherapy records receives strong emphasis in health care professional organizations' ethical codes. Hospitals and other organized settings may establish their own requirements for documentation, and systematic record-keeping practices are essential requirements of private and public accreditation organizations.

IV. FEDERAL PRIVACY REGULATIONS

The final HIPAA privacy rule was published in the *Federal Register* in December, 2000, to take effect in April, 2003 for most health care entities and 2004 for smaller plans, barring intervention by Congress or the Bush administration. It applies to all identifiable health care information recorded in any medium, written or electronic. Crucially for the integrity of psychotherapy, it creates a higher standard of privacy for "psychotherapy notes," which would be identifiable but must be kept in a separate part of the health care record. Whereas only a low level of blanket consent is required for the use of the general medical record for treatment operations or claims payment, the patient must give specific authorization for disclosure of psychotherapy notes. Authorization must be dated with a time limit and state the recipient of the information as well as the nature of the information to be disclosed. If the patient wishes to have psychotherapy records transmitted to another professional, an insurance company, an attorney for legal proceedings, and so on, that patient must sign an authorization to do so. Authorization is not required for disclosure of records if the patient sues the therapist or the therapist is investigated by a state licensing board or other oversight authority. The therapist is permitted (not required) to disclose without authorization information "necessary to prevent or lessen a serious and imminent threat to the health or safety of a person or the public."

The implications of the HIPAA privacy rule are far-reaching for the procedures for maintaining documentation of psychotherapy in all settings, although technically they apply only if the practitioner communicates patient information electronically in any fashion. When the rule goes into effect, there will be three potential levels of documentation of psychotherapy services.

V. THE GENERAL CLINICAL RECORD

The basic clinical record or medical record for psychotherapy is similar to that for any other medical service. Elements that frame the notation include the patient's name, the date, the duration of time spent with the patient when time is an essential part of the service code (start and stop times in some instances), the nature of the service and the service code, and the signature of the clinician. Service codes are usually drawn from the AMA's *Current Procedural Terminology* (CPT). The clinical substance of the note may include any or all of the following: relevant history, symptoms and signs, observations and examination findings, laboratory findings, results of other tests such as CT or MRI imaging studies, standardized symptom rating scales, psychological tests, diagnosis, functional status, the treatment plan, prognosis, and progress. If the patient is receiving medications as well as psychotherapy, notations regarding prescriptions, therapeutic effects, and side effects are also part of the general clinical note. If the service is "psychotherapy with medical evaluation and management (E&M)" conducted by a psychiatrist, the E&M

services are generally delineated in the general medical record along with documentation that psychotherapy took place. As defined by the AMA's *CPT,* E&M services include elements of assessment, medical decision making, and management of the patient.

At the beginning of a treatment relationship the treating clinician conducts a full evaluation of the patient according to the procedures of the clinician's discipline. An initial psychiatric examination would include a history of the present illness; past psychiatric history; family and personal histories; general medical history that includes use of tobacco, alcohol, and other drugs or chemicals whether prescribed or not; a detailed mental status examination; perhaps some elements of a physical examination; a differential diagnosis and formulation of the case; and a plan for further evaluation and treatment. This full examination becomes the cornerstone of the basic clinical record. If the patient is being transferred from another clinician and the information from past evaluation and treatment is available to the new clinician, the initial note may be less extensive. Because a psychotherapeutic relationship may begin with the very first moment with a patient, sensitive material from an evaluation session may appropriately be protected in a separate psychotherapy note.

The treatment plan is a central part of the basic clinical record which proceeds logically from the formulation of the case. Stated with varying degrees of elaboration, the formulation is a case discussion that includes a diagnosis but also an assessment of the patient's personality strengths and vulnerabilities in the context of the treatment history, current reality situation, biological variables, relationships and support systems, and any other relevant factors. The descriptive diagnosis is often less influential than the other elements in determining the selection and structure of psychotherapeutic modality. The psychotherapy treatment plan may include the treatment modality (e.g., psychodynamic, cognitive-behavioral, or interpersonal; individual or group), the frequency and duration of sessions, and estimated length of treatment. In some situations it may also state provisional goals, the means of assessing progress or determining the suitability of the psychotherapeutic approach after a trial period, and provisional prognosis. If the clinical note will be reviewed by others in a treatment facility or for managed care, it is especially important that the treatment plan make clear the rationale for selecting this mode of treatment, but such clarity would be highly desirable at all times.

Progress notes periodically update the psychotherapy treatment plan and its underlying rationale; they are usually sufficient for review of the treatment without raising the issue of disclosing intimate personal information from the ongoing psychotherapy. Likewise, sensitive material that warrants protection may emerge during a routine medication management visit in which only minimal psychotherapy is expected to occur.

Material from the actual course of psychotherapy, once under way, may optionally be recorded in the general clinical note, but it would not then be protected under the HIPAA privacy rule. Sensitive information would be difficult to redact if the record were circulated to other treating health professionals, called into court, or otherwise opened to others under the standard consent conditions of medical records. Medicare carriers specify that the goals of psychotherapy and themes of each psychotherapy session should be stated in the basic record and available for review. It is unclear whether this required disclosure will be superceded by the HIPAA privacy rule because the rule does not permit requiring authorization of disclosure as a condition of payment. Privacy advocates from the field of psychoanalytic psychotherapy consider even this degree of disclosure to be a violation of the principles underlying the *Jaffee* privilege.

The overarching principle of the basic clinical record is that it should be able to stand alone in documenting and justifying the rationale and course of diagnosis and treatment, without need for disclosure of information from psychotherapy notes. It is the basic, self-sufficient medical record of the care of the patient.

VI. PROTECTED PSYCHOTHERAPY NOTES

The 1996 U.S. Supreme Court decision in *Jaffee v. Redmond* established an absolute privilege for information disclosed in psychotherapy or counseling—absolute because it cannot be balanced against other interests in court proceedings in individual cases. Though strictly applicable to civil cases in federal courts, the decision has been influential throughout the U.S. judicial system. The issue is how psychotherapy information can be delineated from other clinical information. Segregation of information disclosed in psychotherapy is of course much more difficult if psychotherapy notations are sprinkled throughout a clinical record containing other medical information for which there might be a legitimate reason for access by the court. Third-party payers may appropriately, with the patient's consent, request the kinds of clinical information that are entered in the general clinical record, but they would have neither in-

terest nor entitlement to explore the details of psychotherapy sessions.

For such reasons many psychotherapists have traditionally kept separate records of the contents of psychotherapy sessions. These are sometimes called "process notes" because they detail the sequential unfolding of a psychotherapy session, often with the therapist's observations of not only the patient's communications and emotional states but also the therapist's reactions, associations and thinking about transference, countertransference, and the strategy of response. Such elaborate notes would have no justifiable usefulness outside of the work of therapy. They are commonly employed in training settings or consultations to allow the supervisor or consultant to understand the subtleties and nuances of a treatment, especially the transference and countertransference or other elements that the therapist might not have recognized. Therapists may use such notes themselves to reflect on the process of treatment or to develop research findings. Segregated notes also serve as a repository for important, highly sensitive factual disclosures by the patient in the course of treatment, that could potentially be injurious to the patient or other people if revealed. Less detailed notes may also serve as a reminder to the therapist of what transpired at recent sessions, to heighten continuity of contact with the material. However, separate notes have been controversial for reasons to be discussed later.

Psychoanalytic and psychodynamic psychotherapies, with their emphasis on free association, dreams, fantasies, and transference–countertransference, obviously generate the kind of material that belongs in a separate psychotherapy note. Therapists using other approaches may be less likely to write separate notes. However, in cognitive-behavioral therapy, a patient's daily, self-observing thought records may be key to documenting the patient's progress in treatment. If a thought record contained highly sensitive, potentially embarrassing material, a therapist would be more likely to retain it and thus keep the integrity of the treatment record if it could safely repose in a segregated record. In behavior therapy, the patient may need to work on controlling highly objectionable or embarrassing behaviors; will these behaviors be documented? Meaningful grief work or role realignments in interpersonal psychotherapy may entail working with potentially damaging information about the patient and/or close associates. If trust is established, patients bring highly troublesome aspects of their personal lives into psychotherapy, regardless of the formalities of the chosen treatment modality. If such information is to be documented at all, there must be a safe place for it.

Under the HIPAA privacy rule, keeping identifiable psychotherapy notes as a separate part of the record of treatment may become fairly standard practice, although it remains optional at the discretion of the therapist. The rule defines psychotherapy notes as "notes recorded (in any medium) by a health care provider who is a mental health professional documenting or analyzing the contents of conversation during a private counseling session or a group, joint, or family counseling session." The definition excludes "medication prescription and monitoring, counseling session start and stop times, the modalities and frequencies of treatment furnished, results of clinical tests, and any summary of the following items: Diagnosis, functional status, the treatment plan, symptoms, prognosis and progress." (The material excluded from psychotherapy notes belongs in the general clinical record.) Furthermore, "to meet the definition of psychotherapy notes, the information must be separated from the rest of the individual's medical record." However, the information remains identified as belonging to that patient's record, and it can be disclosed with the patient's specific written authorization for certain purposes. There are also very limited instances in which the notes may be accessed without authorization.

Controversy exists over the added, significant administrative burden of maintaining separate psychotherapy notes within the record, especially in institutional settings. As medical records are increasingly placed in central electronic databases, psychotherapy notes will have to be kept in paper form or in special, highly secure, segregated electronic files. On the other hand, privacy advocates hail the HIPAA privacy rule as a major advance in documenting psychotherapy while preserving strong protection of confidentiality.

VII. THERAPIST'S PERSONAL WORKING NOTES

Before *Jaffee* and HIPAA, the only way a therapist could record a completely confidential account of psychotherapy information was to maintain totally isolated, separate notes in a form that was devoid of all information that could indicate the identity of the patient. Such personal working notes are the sole property of the therapist, may be in any form, are often in a shorthand that would be unintelligible to anyone else, and may include personal

information about the therapist's own mental life as it pertains to the treatment process. They may be destroyed as soon as their purpose has been served, whether for supervision, consultation, research, or day-to-day continuity in the therapist's work with the patient.

Personal working notes are surrounded by controversy. On the one hand, they are immensely useful and, for many therapists, indispensable in treating, training, and research. On the other, they create a "shadow" record of which the patient is unaware. They are not totally immune to subpoena in litigation or child custody determinations or to oversight of the therapist by licensing boards, although such intrusions may be vigorously contested. Whereas some authorities on confidentiality of psychotherapy recommend that notes on sensitive material be kept apart from the official record, malpractice defense attorneys advise strongly against keeping any separate records. If the therapist does keep personal working notes, it is advisable to destroy them as soon as they have accomplished their purpose. However, they should never be destroyed after a subpoena has been served.

Will the HIPAA privacy rule end the practice of keeping personal working notes? Will they no longer be necessary? The rule applies only to identifiable records of patient care, so that personal working notes are outside its purview. Much that was previously recorded in personal working notes might now reasonably be documented in psychotherapy notes. In discussing psychotherapy notes, commentary on the HIPAA rule states that they could be comparable to what has often been called process notes. However, the strength of the privacy rule's protection remains to be tested in actual practice. Given that under certain conditions the HIPAA-delineated psychotherapy notes may be accessed with or without patient authorization, it is likely that therapists will keep at least some material out of the identifiable record altogether. For example, this may particularly apply to raw sexual or aggressive material, notes on the therapist's own emotional reactions, or potentially damaging factual disclosures about the patient or others.

VIII. CASE EXAMPLES

Following are brief examples of the kind of material in regard to psychotherapy that might be documented in the different kinds of records described earlier.

A. Medical/Clinical Record

Cognitive-behavioral therapy, initial phase, session 3 of 20, focused on recurrent self-deprecatory thoughts. Patient to keep thought record.

Or: Psychoanalysis, 50-min session.

Or: Psychotherapy re: marital problems, self-control, and assertiveness.

B. Psychotherapy Notes

Patient described a TV show with an infant tightly wrapped in blankets in a crib that prompted memories of a very restrictive early home environment and family stories about how she actually was swaddled as an infant. Father's passivity and disinterest contrasted with mother's very active direction that conveyed an expectation that women could not advance to positions of leadership. This was followed by self-deprecatory and fearful thoughts about her presumptuousness in thinking she could actually go to law school, and a fantasy that I would laugh at her. I said that she might still be influenced by the restrictiveness she grew up with, and she expected me to react as her mother might have.

Or: After much hesitation the patient revealed that he had started an affair with his secretary and was now very worried that he would be charged with sexual harassment.

Or: In cognitive-behavioral therapy, a file of the patient's detailed thought records as well as the therapist's strategies and observations.

C. Personal Working Notes

(No identification of the patient.) She is again railing against J. for his inattentiveness. I felt vaguely attacked. (Details of an elaborate dream involving plane crashes because pilots are inattentive to their duties.) Associations to the dream led to vacation spots, empty feelings she had when her mother was away, incidents when she had been nasty and bad things had happened. I raised the question whether she might be wanting to rail against me for going away next week and being inattentive to my duty to her, and maybe she was afraid harm would come to me because of her anger. She snorted and called me a lousy bastard, what right did I have to think I mattered that much to her! … Etc.

(This note, written for supervision, might be much longer and more detailed with undisguised specific

information about the patient's thoughts and behavior as well as the therapist's thinking, emotions, and interventions. It would also probably be in a more telegraphic style than depicted here, because it would not be read by anyone else and would be destroyed after its purpose had been served.)

IX. SUMMARY

With the advent of *Jaffee v. Redmond* and the HIPAA regulations, documentation of psychotherapy has achieved an unprecedented level of protection, although many practical questions remain unanswered about how these protections will be implemented. Most therapists prudently maintain a general clinical/medical record of treatment that is factual, legible, and complete insofar as the objective clinical status of the patient is concerned. Psychotherapy itself may be documented in abstract terms in the general clinical record without details that are personal to the patient. As an option, therapists may record more specific information about the process and content of psychotherapy in psychotherapy notes kept in a separate part of the patient's identifiable clinical record. These notes have a considerably higher level of protection from disclosure because specific patient authorization is required for disclosure. The therapist may also elect to keep highly sensitive or personal information in personal working notes entirely outside the clinical record.

See Also the Following Articles

Bioethics ■ Confidentiality ■ Informed Consent ■ Legal Dimensions of Psychiatry ■ Supervision in Psychotherapy

Further Reading

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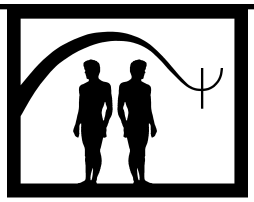

Dosage Model

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GLOSSARY

dose Number of psychotherapy sessions.

dose-outcome An extension of the dose–effect methodology that tracks psychotherapeutic progress across sessions for an individual patient.

effect Percentage of patients improved or probability of improvement for one patient.

HLM Hierarchical linear modeling. A statistical procedure that uses predictor variables to estimate the likely outcome of a criterion variable; actual outcome of the criterion may be checked against the predictions for accuracy of the model.

log-normal transformation A statistical procedure performed on non-normally distributed data to fit them into a normal distribution.

meta-analysis A methodology that statistically combines and compares the results of several studies.

patient profiling A statistical procedure that uses hierarchical linear modeling to predict a patient's expected course of improvement based on the patient's intake clinical characteristics.

probit analysis Linear regression analysis where the dependent variable is dichotomous and ordinal (e.g., improved versus unimproved). The statistical analysis used in dose-effect designs.

Mental health researchers are quantifying the effectiveness of psychotherapy to better understand its benefits and, very importantly, to justify reimbursement as a health care treatment. These scientists want to answer the following questions: How does psychotherapy work? How quickly does it work? How much works for each of the various psychological problems? The answers are especially important because third party payers (such as managed health care) want to know about the general value of psychotherapy as well as its value in comparison to psychotropic medication. This article describes the dosage model that is a guiding model being used to understand and investigate the effectiveness of psychotherapy. Methodological variations of the dosage model (i.e., dose–effect, dose–outcome, and patient profiling) are reviewed as well as findings relevant to understanding the effectiveness of psychotherapy.

I. PSYCHOTHERAPY IS BENEFICIAL

Mental health research has demonstrated that psychotherapy is a valid treatment for alleviating psychological suffering. For example, in a landmark 1977 study, Mary Smith and Gene Glass employed a meta-analysis that statistically combined and compared the effect sizes of treatment, placebo, and control groups. Based on data from 475 studies, the authors found that psychotherapy is more effective than no treatment as well as placebo therapy. Their study demonstrated that

patients receiving psychotherapy were better off than approximately 80% of those who were not in treatment. Since Smith and Glass' work, hundreds of studies have also shown that psychotherapy is beneficial beyond no treatment and placebo conditions.

Interestingly, Smith and Glass reported no significant outcome differences among the different types of psychotherapy (such as psychodynamic, behavioral, and cognitive). Although the different therapies were effective, none were more effective than the others in treating the variety of problems. Other researchers have reported the same results. This phenomenon is known as the "dodo bird verdict" after the dodo bird in *Alice in Wonderland* who proclaimed, after a race, "Everybody has won and all must have prizes."

II. THE DOSAGE MODEL: DETERMINING HOW MUCH PSYCHOTHERAPY IS ENOUGH

Today the effectiveness of psychotherapy is understood in the context of the dosage model. The dosage model proposes that the psychotherapy session is a natural quantitative unit or dose of treatment similar to a dose of medication in milliliters or milligrams. This analogy is derived from the generic model of psychotherapy. The generic model asserts that psychotherapy is comprised of nonspecific and specific factors that contain active treatment ingredients. Nonspecific factors, which are common to all psychotherapies, include interpersonal variables such as positive regard, genuineness, and empathy. There are also active ingredients unique to each specific therapy. Examples of these specific factors include empathic reflections (used by client–centered therapists), interpretations (psychodynamic therapists), and positive reinforcements (behavior therapists). The active ingredients to which patients are exposed during the course of a session produce psychological and behavioral change. Similar to taking medication, participating in psychotherapy over time exposes the patient to more active ingredients. Therefore, more psychotherapy consequently results in greater improvement. This outcomes process of the more, the better has been validated in several studies.

Two issues emanated from the aforementioned effectiveness research: What was the nature of the positive relationship between dose of psychotherapy (such as number of sessions) and benefit? How many sessions are necessary to achieve sufficient benefit?

III. DIFFERENT METHODOLOGIES OF THE DOSAGE MODEL

The Dose-Effect Relationship

In their 1986 landmark article, K. Howard, M. Kopta, M. Krause, and D. Orlinsky answered the first question and began the movement towards answering the second. The authors introduced the dosage model, using dose–effect methodology, where effect is the percentage of patients improved or probability of improvement for one patient. Employing a log-normal transformation of the data, they found that patients in psychotherapy improve in a statistically predictable manner. This recovery process follows a negatively accelerated curve; that is, the more psychotherapy, the greater the probability of improvement with diminishing returns at higher doses (see Figure 1).

Howard and his colleagues further examined the dose–effect relationship using a meta-analysis design for 15 samples of data (N = 2,431 patients) which spanned over 30 years of research. Traditional measures of improvement (such as patient self-report and clinician ratings) were collected at various times dur-

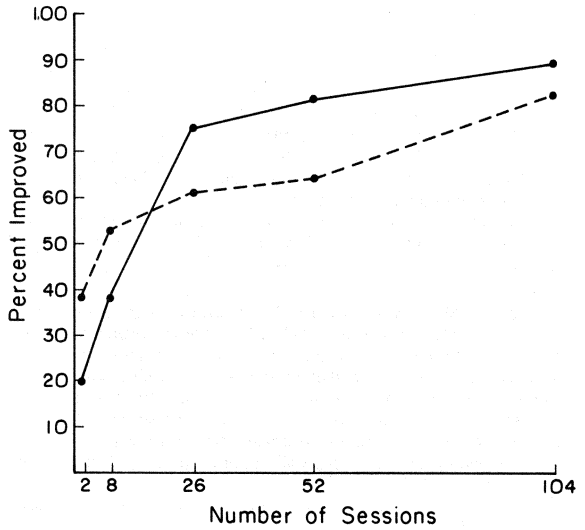

FIGURE 1 Relation of number of sessions (dose) of psychotherapy and percentage of patients improved (effect). (Objective ratings at termination are shown by the solid line, N = 151 patients; subjective ratings during therapy are shown by the broken line, N = 148.) From "The Dose-Effect Relationship in Psychotherapy," by K. I. Howard, S. M. Kopta, M. S. Krause, and D. E. Orlinsky, 1986, *American Psychologist, 41,* p. 160. Copyright 1986 by the American Psychological Association. Reprinted with permission.

TABLE I
Results of Probit Analyses of Three Diagnostic Groups for Two Outcome Criteria: Percentage of Patients Improved Across Sessions

		Number of sessions								
Diagnostic groups	*N*	*0*	*1*	*2*	*4*	*8*	*13*	*26*	*52*	*104*
					Criterion: Research ratings of closed clinical charts					
Depression	69	6	13	20	31	46	57	73	86	94
Anxiety	21	0	0	0	5	25	53	87	99	99
Borderline-psychotic	23	0	0	0	0	3	11	38	74	95
					Criterion: Patient ratings after each session					
Depression	974	22	31	37	44	53	60	69	77	84
Anxiety	425	15	22	28	36	46	54	64	74	82
Borderline-psychotic	402	3	8	13	21	33	42	60	75	87

N = Number of Patients. From Howard, K. I., Kopta, S. M., Krause, M. S., and Orlinsky, D. E. (1986). The dose-effect relationship in psychotherapy. *American Psychologist 41,* 163. Copyright 1986 by the American Psychological Association. Reprinted with permission.

ing therapy for each sample. The type of psychotherapy implemented was typically psychodynamic or interpersonal; patients presented with a variety of diagnoses. Data from each of the samples were analyzed with probit analysis. The results were then aggregated across samples to establish dose–effect estimates for specific amounts of psychotherapy—approximately 15% of patients improved simply by scheduling an appointment, 50% of patients improved by session 8, 75% by session 26, and 85% after a year of once-weekly psychotherapy. These figures continue to be used by administrators, clinicians, and researchers as treatment guidelines. For example, Howard and his colleagues suggested 26 sessions as a rational time limit for treatment or as a review point for cases that have not shown measurable improvement. Eight sessions are now considered the standard for establishing a treatment group for experimental clinical trials; that is, eight sessions are the dose at which a patient has been effectively exposed to psychotherapy.

Another finding was that different diagnostic groups demonstrated different dose–effect patterns. Dose–effect relations in Table I show that depressed patients responded quickest to psychotherapy, followed by anxious patients, and with borderline-psychotic patients responding at the slowest rate.

Subsequent authors have applied the dose–effect methodology to specific psychological symptoms, clinical syndromes, and interpersonal problems. For instance, Kopta and his colleagues in 1994 demonstrated that different symptoms respond differently to psychotherapy. Patient recovery (such as return to normal functioning) was assessed across sessions by self-report questionnaire for 90 psychological symptoms. Based on dose–effect relations for 854 patients, the symptoms were grouped into three distinct symptom classes—acute, chronic, and characterological. Each symptom class was found to respond to psychotherapy at varying rates (see Figure 2). For example, acute symptoms (such as temper outbursts, feeling fearful, and crying easily) were found to remit most quickly in therapy. Approximately 50% of patients recovered on these symptoms by the session 5. Chronic symptoms (such as feelings of worthlessness, worrying too much, and being low in energy) demonstrated a pattern where approximately 50% of patients had experienced recovery by session 14. Characterological symptoms were found to respond most slowly to psychotherapy; for the majority of these symptoms, more than 40 sessions were necessary for patients to achieve a 50% probability of improvement. These symptoms were related to hostility and interpersonal difficulties (such as feeling that others are to blame for your problems, frequent arguments, and being easily annoyed).

Dose-Outcome Design

In a 1995 chapter, Howard and colleagues introduced the dose–outcome method. A logical extension of the dose–effect methodology, it's of particular benefit to the practicing clinician and case manager. Whereas the dose–effect method addresses how much

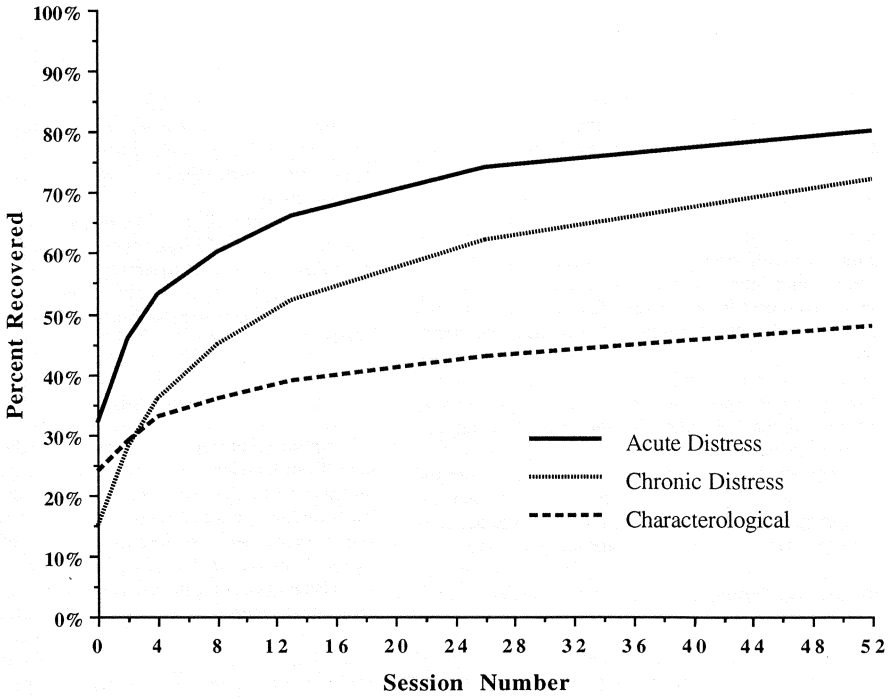

FIGURE 2 Dose-effect relations, averaged across symptoms, for acute, chronic, and characterological symptom classes. From "Patterns of Symptomatic Recovery in Psychotherapy," by S. M. Kopta, K. I. Howard, J. L. Lowry, and L. E. Beutler, 1994, *Journal of Consulting and Clinical Psychology, 62,* p. 1014. Copyright 1994 by the American Psychological Association. Reprinted with permission.

psychotherapy is needed to benefit the "average" patient, the dose–outcome design answers the question "How is psychotherapy benefiting this specific patient?" Here, instead of percentage of patients improved plotted against dose, it's measure of benefit for an individual patient (see Figure 3). With the dose–outcome design, the clinician monitors the patient's progress across time using valid, reliable measures similar to monitoring blood chemistry in medicine. The clinician can use this information to make treatment adjustments over the course of therapy for individual patients.

Patient Profiling

Patient profiling extends the dose–effect and dose–outcome methodologies from tracking patients' improvement to predicting improvement. In their 1996 article, Howard and associates introduced the strategy of using hierarchical linear modeling (HLM) to plot a patient's expected course of improvement based on seven intake clinical characteristics (such as level of symptomatology, duration of problem, and expectation of improvement). By giving differential weights to these characteristics, HLM produces an estimated improvement curve for each patient (see Figure 4). Actual patient progress, as measured by the self-report Mental Health Index (MHI), across sessions can be compared to predicted progress.

The dotted line in Figure 4 shows a patient's expected Mental Health Index (MHI) score, based on the HLM procedure, while the solid line shows actual improvement. In this figure, the patient's improvement was significantly different from the model's predictions until session 20. The discrepancies between predicted and actual improvement were likely due to issues specific to this patient and their treatment. By tracking this patient across sessions, the therapist was able to make therapeutic adjustments to best serve the client. Impressively, the patient did achieve the expected gains by the 20th session, thus lending support to the patient profiling methodology.

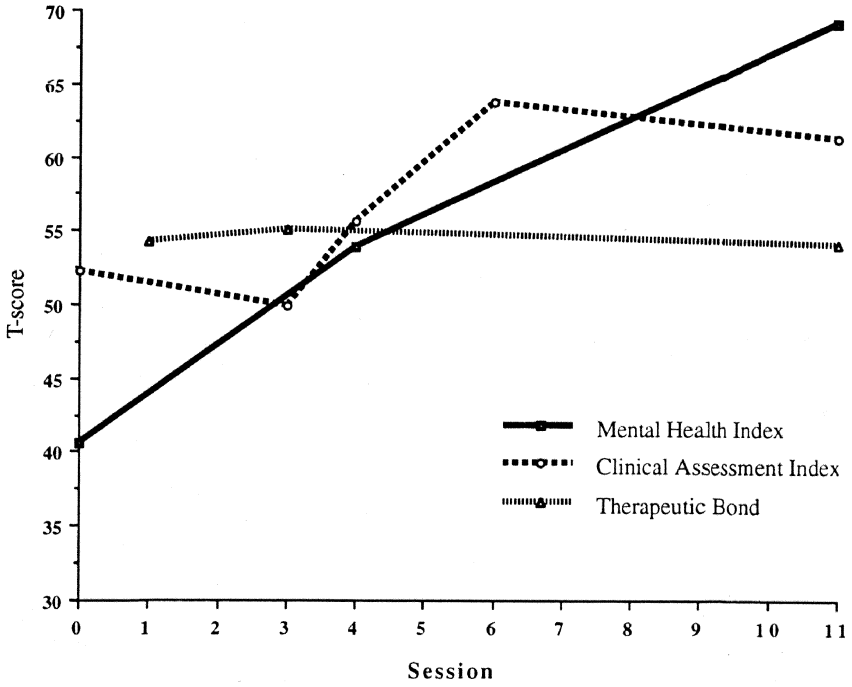

FIGURE 3 A dose-outcome design that illustrates the successful treatment of a short-term case. From "The Design of Clinically Relevant Outcome Research: Some Considerations and an Example," by K. I. Howard, D. E. Orlinsky, and R. J. Lueger. In M. Aveline & D. A. Shapiro (Eds.), *Research Foundations for Psychotherapy Practice,* 1995, p. 34. New York: John Wiley & Sons. Copyright 1995 by John Wiley and Sons. Reproduced with permission.

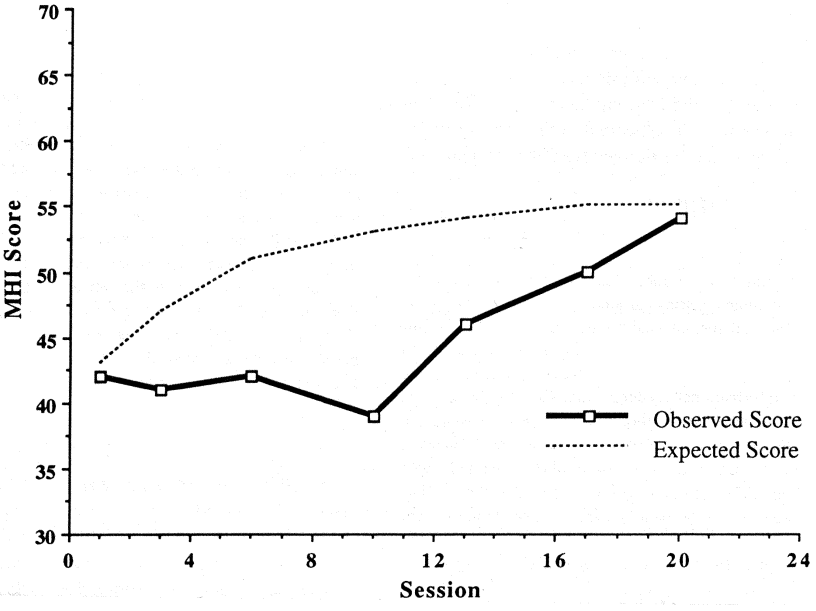

FIGURE 4 Course of the Mental Health Index (MHI): Patient responding to psychotherapy as expected after a change in treatment intervention at session 11. From "Predicting Patients' Responses to Psychotherapy: Are Some More Predictable Than Others?," by S. C. Leon., S. M. Kopta, K. I. Howard, & W. Lutz, 1999, *Journal of Consulting and Clinical Psychology, 67,* p. 699. Copyright 1999 by the American Psychological Association. Reproduced with permission.

Following the treatment of over 800 patients, Leon and colleagues reported in 1999 that patient profiling was overall 75% accurate in predicting patients' courses of therapeutic improvement, with a range of 94% for some patient types to 25% for others. Patient profiling provides information as to which patients may benefit from particular types of psychotherapy, whether therapy is progressing as expected for a given patient, and the likelihood that a patient has achieved maximum gains from therapy.

IV. SUMMARY

The dosage model has had a substantial influence on psychotherapy research. Howard and colleagues' seminal article in 1986 began a new era of naturalistic outcomes research, that is, researching psychotherapy as it's practiced in real clinical settings. We can now answer many questions that have long been proposed by professionals in the mental health field. For example, managed health care and other third party payers have information available on how much psychotherapy is enough. There are methods that allow clinicians and case managers to track patient progress across time, as well as predict how a given patient should respond to therapy based on initial clinical characteristics. Using dosage model methods, there is now the capability to answer a modified version of the compelling question asked by Gordon Paul in 1967, "How much psychotherapy is most effective for which patient with what type of problem?"

See Also the Following Articles

Cost Effectiveness ■ Effectiveness of Psychotherapy ■ Engagement ■ Objective Assessment ■ Outcome Measures ■ Relapse Prevention ■ Termination

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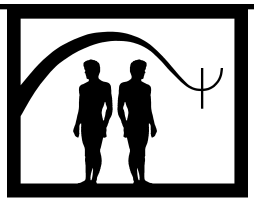

Dreams, Use in Psychotherapy

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GLOSSARY

amplification For Carl Jung, amplification is analogous to Sigmund Freud's use of free association. The patient attends to a part of the dream that is disguised and yet stands out to arrive at a deeper understanding of the dream.

archetype A personified or symbolic form of an inherited idea derived from the total experience of the human race that is present in the unconscious of all individuals.

condensation The fusion of two or more ideas or mental images that produce the composite figure found in the dream.

configuration approach An approach that combines a number of variables, including signs, overall pattern of signs, and the combination of both to describe and differentiate an individual's personality.

countertransference All unconscious feelings of a therapist toward a patient or the total feelings of the therapist toward a patient.

day residue The material from the 24 hrs preceding the dream that influences the formation of dream images.

disguise function Freud's belief that to prevent the gratification of unconscious wishes the dream content has to be changed by the dreamwork.

displacement The second essential mode of dreamwork operation. The result of the rapid transfer from one idea or image to another characteristic of primary process.

dream censorship The distortion or disguise of the dream to prevent the gratification of unconscious wishes.

dream diction The dream's use of language, especially figures of speech.

dream of Irma's injection, Irma dream, dream specimen The title Freud gave to his specimen or model dream in Chapter II in his *Interpretation of Dreams* that he used to demonstrate his dream theory.

dream instigators The external or internal stimuli that are the sources of dreams.

dream sources The elements or causes of dreams.

dream symbolism The symbols used in dreams to distort the latent content.

dream wish Freud's theory that the gratification of the unconscious wish was the function of the dream.

dreamwork The work of the dream mechanisms that disguise or distort the content of the dream in line with the dream censorship and transform the latent content into the manifest content.

exceptional or unique position The dream holds a special place in psychotherapy. It is considered the best means to the royal road to the unconscious.

first or initial dream The first dream after knowing one is entering into therapy or is in therapy.

latent content The unconscious wishes and other material that is disguised and distorted by the dreamwork to conceal its unacceptable aspects.

manifest content The dream content that is recollected.

means of representation The use of pictorial metaphors to express certain ideas.

primary process A repository of aggressive and sexual drives from all stages of development.

relationality Stress on the relationship between the patient and therapist rather than on the patient alone. Countertransference as well as transference must be analyzed.

REM Rapid eye movements, which indicate the person is dreaming.

secondary elaboration An alternative term for secondary revision.

secondary process Freud's term for the laws that regulate events in the preconscious or ego.

secondary revision A process that attempts to supply the dream with consistency and coherence. It fills in the gaps, creates order, and molds the dream into an intelligible whole.

shadow The inferior or dark side of the personality. The sum of personal and collective events, which are denied expression in life due to their incompatibility with the conscious attitude.

symbolization The universal primal language representing association between ideas having something in common, although the relationship is not easily discernible.

structural theory Freud's metapsychological theory that there are three divisions of mental functioning: the id, the ego, and the superego.

topographical theory Freud's metapsychological theory that the psyche or mind was divided into three systems: unconscious, preconscious, and conscious.

transference The displacement and projection of feelings toward early objects onto the therapist.

unconscious A reservoir for unacceptable psychic material.

UTD Undisguised transference dream in which the patient sees the therapist as the therapist appears in therapy.

Dreams have had an important place in psychotherapy since Sigmund Freud's proposal that dreams are the royal road to the unconscious in 1900. A change in the number of sessions from five to one per week and a move toward brief therapy modalities has coincided with a change in emphasis from the latent content to the manifest content of the dream. Some kind of schematic method like the configurational approach to the manifest content helps to make the use of dreams more feasible in today's world of psychotherapy. Dreams still offer a rich source for helping patients to achieve greater self-understanding, self-control, self-expression, and a more positive self-image.

I. INTRODUCTION

From antiquity the universal phenomena of dreaming has captivated human imagination, confused human logic, and controlled human endeavors. Dreams have been regarded as exceedingly important to a person's destiny, as messages from the gods, predictive of the future, expiatory of guilt, and the voice of conscience. Shamans, seers, and saints have used dreams to discern the source of sickness, or to set the course of nations. Poets, philosophers, and playwrights have sought to plumb the depths of dreams to lure audiences or readers into the world of fantasy, to play the strings of the emotions, and to recall the unthinkable. Cognitive, information processing, and neuroscientists find in dreams brain activity that can help understand REM, memory consolidation, and the "unconscious" state. But what about psychotherapy—how do psychiatrists, psychoanalysts, and psychologists of various persuasions use dreams to inform their work with patients?

II. THE LANGUAGE

Understanding the use of dreams in psychotherapy begins with seeing how the laws of poetic diction and the laws of dream diction, or dream formation, spring from the same unconscious source and have many mechanisms in common. Whereas the poet's task is to communicate experience that is accomplished by sound, the power to evoke imagery, and the use of figures of speech such as the simile, metaphor, metonymy, and onomatopoeia, the dreamer also uses figures of speech and will often employ words in which the sound of the chosen word will reflect the sense of the word. The psyche in its memory bank has many early personal experiences to chose from in which sound was fused with meaning. Words often have more than one meaning, have a history of displacement, are often connected to our first exposure to them (often their primary meaning), and may have a secondary or even a tertiary meaning. In our storehouse of words, the specific significance of our earliest use of a word is never lost. Words that sound alike, but are spelled differently, may be substituted for each other in establishing their meaning. This may also be true of words that rhyme with each other. Verbs that are very rarely distorted and

should be taken literally tell us about the dreamer's activities and date back to early life, whereas nouns are often ambiguous, idiosyncratic, or metaphorical with multiple meanings. The names of places can have special meaning when we break down the word into its parts (syllables). When deciding on the meaning of a specific word that has several meanings, the emotional impact of each word's meaning and how early it was first introduced to the dreamer will help determine its primary meaning in the dream.

III. THE VALUE

The major Greek philosophers, Plato and Aristotle, were among the early harbingers of a psychological approach to dreams. Plato was the first to see dreams as an expression of repressed unconscious wishes. For Aristotle, dreams were seen as essential in terms of their discharge function. However it was not until the beginning of the 20th century that the contributions of both Aristotle and Plato were combined by Sigmund Freud who came to the conclusion that unconscious wishes seek an outlet for discharge, which is unacceptable to the dream censor, and that if they emerge undisguised, sleep would be interrupted. Freud saw the dream as the guardian of sleep and felt that the deprivation of psychic discharge through dreaming led to derangement.

Later theorists said dreams were a reference to what is happening in the life of the dreamer, and what emotional problems and conflicts one is struggling with, or acting out. They claimed dreams provide insight into the repressed traumas of the past, offering clues to psychological and physical breakdown and how much stress the dreamer could take. Dreams tell us what is hidden, how it is hidden, and why it is hidden. They also tell us about present-day bodily experiences, and the forgotten experiences of childhood. They can express or sway opinion, under- or overvalue material, represent resistance, and may placate, control, manipulate, or assuage the therapist and therapy. They can also tell us how correct, valid, or wide of the mark our interpretations of the patient's associations may be, confirm or elaborate themes discussed in therapy, and tell us where we are in psychotherapy.

IV. FREUD

Within the field of psychotherapy the first major work that sought to address the use of dreams was Freud's *Interpretation of Dreams* published in 1900. The book contains the Irma dream (Chapter II), the specimen dream chosen to be analyzed by the new technique, and Chapter VII, the final chapter, which explains Freud's unconscious wish fulfillment theory. Freud lays out the sources or instigators of dreams, and that dream content may be in the present or past and concerns experiences, affects, hopes, fantasies, conflicts, and the like. When something in the day (residue) makes contact with some past wish, the connection may result in a dream.

Employing a topographical model of the mind and using clinically promising connections between dreams and psychological symptoms that he discovered mainly in his self-analysis, Freud proposed that dreams were expressions of unconsciously repressed psychic material that appeared in the psyche as wish fulfillment. The unconsciously repressed material, or the latent content, represents the primary processing activity of the mind, which consists of all parts of dreams discovered through interpretation including dynamically unconscious wishes, preconscious material, and sensory and somatic stimuli. To interpret the latent content and bring it to conscious awareness, the patient starts with the manifest content, which comes from the conscious secondary processing activity. The manifest content consists of all aspects of what the dreamer consciously remembers after waking up and is retained in any given form, whether as pictures, incongruous situations, contradictory emotions, or other forms. Then through freely associating whatever comes to mind in relation to these forms, the words of the associations bring the forms of the unconsciously repressed material into conscious awareness providing insight into the etiology of the patient's symptoms and pathology. Insight in turn helps the patient to "make sense" of symptoms and provides a mutative affect in relieving the symptoms and diminishing the pathology.

The movement from the latent dream thoughts to the manifest dream content Freud calls the dreamwork. The dreamwork utilizes a number of dream mechanisms: condensation, displacement, symbolization, visual means of representation, and secondary revision in the service of disguising or distorting the dream content for purposes of carrying out the work of the dream censor. The latent dream thoughts are disguised so the unconscious wish is blocked from conscious awareness. Condensation fuses and telescopes several images and ideas into one. With displacement the dreamer transposes, for example, a person into an object and may displace an affect that the dreamer feels toward the person onto the object. The

dreamwork may use reversal, a variant of displacement, to reverse the action, the affects, or the person thus further disguising the dream. Symbolization supplements the distorting work of condensation and displacement by making it more difficult for the dreamer to uncover the latent thoughts. Symbolization allows the dreamer to regress to the activity of the infantile unconscious mind which consistently pulls together objects that appear to have common aspects. Symbols are chosen from a large available number of objects and used with regularity. Although some dream interpreters translate the dream from symbols immediately, it should be pointed out that considerable knowledge of the dreamer should precede translation of symbols, and the accuracy of interpretation depends on the dreamer's free associations. The visual means of representation can result in distortions of latent thoughts by the use of pictorial metaphors. Relationships induced by prepositions, conjunctions, or punctuation require visual means of representation, and these words can be easily distorted. Secondary revision uses secondary process thinking and the ego in its attempts to produce coherence, order, and intelligence into the dream. In its use of secondary process thinking, and its attempt to make sense, secondary revision has many opportunities to disguise latent dream thoughts.

V. THE FUNCTIONS

The possible functions of dreams are many and varied. Freud put forward the idea that one of the most important functions of the dream is the preservation of sleep. He considered the dream to be the "guardian of sleep." Besides being viewed as guardian, other therapists propose that dreams may function to communicate important aspects of the transference to the therapist; to release secret wishes from repression in an attempt to understand, master, and gain pleasure from them; to represent the attempted fulfillment of our innermost desires; and to serve a discharge role as a release valve for repressed instinctual drives.

Some thinkers have proposed that dreams may have curative or restorative functions. They may help us (a) work through tensions and problems from the previous day, (b) restore balance lost when we feel threatened, (c) more realistically handle emotional problems, (d) recover a sense of competence, (e) insure mental health, and (f) relieve painful stimuli from traumatic experiences.

For some brain researchers, dreams form no useful human function because dreams are considered to be the result of randomly firing neurons, or at the most only help "clean house" serving as safety valves assisting the brain as it rids itself of unnecessary information (i.e., reverse learning). Some of these writers fear attempting to remember dreams may reverse this function causing harm. Other brain researchers find the function of dreams in the consolidation of that day's memories.

Rosalind D. Cartwright in 1993 pointed to an information-processing function for dreams. She states that the more unrecognized but encoded feelings and emotions from the day are examined by the sleeping mind to see how they fit one's most interior, intimate conceptions of one's self. For her, dreams also work on how to constructively solve interpersonal and other problems raised during the day.

VI. THE UPS AND DOWNS OF THE PLACE

Up until the publication of Erik Erikson's "dream specimen" paper in 1954 that commented on Freud's Irma dream, little attention had been paid by analysts to the usefulness of the manifest content of the dream or to the important place of the Irma dream as the point of the discovery of unconscious conflict. Freud had felt the manifest content was a "mere façade," "a piece of unscientific virtuosity of very doubtful value," and he could not understand how anyone could interpret on the basis of it alone. The followers of Freud equated manifest with the external layer and the most superficial layer, not deserving of serious consideration, while the latent was equated with the deepest layer, the *sine qua non,* or the unconscious and primary process.

The passage of time has seen within psychotherapy a move to fewer therapy visitations (once a week for most therapists), a move to briefer treatment modalities due to the pressure from HMOs, PPOs, and insurance companies, and a move to a more classificatory approach (i.e., *DSM-IV*) with the results that the manifest content has taken precedence in the handling of dreams in psychotherapy, especially in the 1980s and 1990s. Most authors of dream articles now agree on the importance of the manifest content, its helpfulness, and its ability to provide valuable information about the dreamer.

As the worth of the manifest content was once questioned, now the worth of the latent content is being questioned. Some authors have even gone so far as stating the manifest content is the dream, and desire to dis-

card the disguise function of the dream (nothing is hidden or latent), and to deny that a dream is an unconscious wish. The distinction between manifest and latent content of the dream is slowly disappearing. Often associations to the manifest dream are no longer required; it being interpreted in direct symbolic terms or at its face value.

VII. A LOVE–HATE RELATIONSHIP

U.S. therapists have had a love–hate relationship with the dream. *The Interpretation of Dreams* contained Freud's self-analysis, and following the publication of the book, dream interpretation became synonymous with psychoanalysis. The controversy whether the dream holds an exceptional and unique position in psychotherapy or whether it is just one of many types of material with which therapists deal in psychotherapy still goes on. One sees many types of material in doing therapy, all of which are important, but it is also true that dreams at times can give much insight into a patient's unconscious problems. Symptoms, defenses, affect, behavior, and other dimensions of therapy are all important, but the dream is still perceived by many as the best means to the unconscious. The decline in the position of the dream in psychoanalysis has been thought to be due to the increased popularity of the relationist/interpersonal school that places much less emphasis on dreams, to the development of the structural theory, to new views on narcissism, and to new theoretical approaches that place less importance on the id, primary process, and the unconscious, and more on the secondary process, the ego, the self, and adaptation.

VIII. THE CONFIGURATIONAL APPROACH TO THE MANIFEST CONTENT

In once-a-week therapy, the patient after describing his dream has little time for exhaustive dream analysis and free association to every part of his dreams. Robert C. Lane, Marvin Daniels, and Stephen Barber, who were influenced by a number of dream researchers, particularly Erik Erikson in his analysis of the manifest content of Freud's Irma dream in his "dream specimen" paper, recommended in 1995 taking a number of the patient's consecutive dreams and subjecting them to analysis using 20 categories. This then formed the configurational approach to the manifest dream content. They defined the 20 categories and then analyzed 11 dreams of a patient in analysis. Lane and Daniels independently analyzed the dreams by each category with high reliability then combined their contributions and compared them to the treating analyst's independent clinical observations about the 20 categories. The 20 categories of the configurational approach are style and quality, length, locale, nature of problems and intrapsychic conflict, activities, distortion, characters, relationship between characters, somatic or body references, sensory emphasis, spatial, temporal, affect, transference, resistance, communication to the therapist, fixation points, and diagnostic indicators and prognostic indicators. Although the configurational approach has been criticized for being like a projective technique, there is little doubt that it offers a great deal of material to the therapist using only the manifest content.

IX. ONE-PERSON VERSUS TWO-PERSON APPROACH

In the 1950s, 1960s, and 1970s, the emphasis in dream theory was on the application of the structural theory to dream analysis, the role of the growth of ego psychology in the understanding of dreams, how one affected the other, and the application of the principle of multiple functioning to dreams, what is called a one-person approach to dreams. In more recent years, the relationists (object relations, interpersonal/intersubjective theorists, self-psychology) have stressed a two-person psychology, bringing into dream analysis the role of the therapist, countertransference, the therapist's dreams, and the UTD (occurrence of the undisguised transference dream). The relationists were following the lead of Sandor Ferenczi who was the first among Freud's early disciples to stress the communicative function of the dream. Ferenczi, in 1913, the innovator who became a model to follow, emphasized "mutual therapy" or the analyst sharing his thoughts, feelings, impulses, dreams, fantasies, and traumatic memories with patients. His work served as a launching pad for a number of interpersonal and relational therapists who wrote papers on the dream. In contrast to Ferenczi who highlighted self-disclosure by the therapist, Freud, highlighting non-disclosure, felt that the therapist should remain opaque to the patient, sharing nothing but what is shown to the therapist.

The relationist movement emphasized that the patient's dreams are related to the therapist's needs,

countertransference, counterresistance, and counteranxiety; can serve as unconscious supervision of the therapist; and help the therapist become aware of unconscious countertransference needs and other material that may be interfering with the patient's progress. Dreams are said to function as both disguisers and communicators. They are a reflection of both intrapsychic process and interpersonal communication. Dreams help therapists to gain knowledge of the patient's transference, but also of the therapist's countertransference feelings, to make the patient's unconscious conscious, but also to make the therapist's unconscious conscious; both therapist and patient serve a teaching function.

One form of countertransference occurs when the patient has an UTD. There are few papers on this subject as few therapists have the wish to have patients write about them as therapists. Therapists eschew references to countertransference as they feel it implies something wrong about the therapy. The relationists criticize the idea that the dream is a "disguise" to be penetrated, that the material contains a "hidden wish fulfillment," and dispense with the idea of "latent" content, that is, the manifest content is the dream language to be understood, "not a nut to be cracked open and discarded." They view countertransference as crucial and find it in many different situations, while claiming the traditional school (classicists) wish to deny and bury it.

The two opposing groups differ when we examine the therapist's dreams about the patient. The traditional Freudian would treat this dream as a neurotic conflict in the therapist, to be worked through internally so as not to interfere with neutrality and anonymity, while the relationist would use the dream to attempt to better understand the patient. The classicist feels all countertransference reflects unresolved problems, while the relationist feels countertransference is ubiquitous to all relationships and can be positively or negatively utilized in the service of treatment.

Many classical analysts have commented on the communication function of the dream and stressed the countertransference and supervisory aspects of the dream, as well as the psychodynamic. They feel the dreamer needs to communicate with the therapist and does it through the dream. There is both the wish to communicate with the therapist and the resistance against doing so. The desire to communicate brings about recall of the dream while resistance renders it unintelligible. Several researchers have examined how resistance results in patients' failure to report, associate to, respond to, or connect to their dreams.

Today's revisionists view the dream as a whole, rather than having the dreamer associate to its various parts, the dream organization, how adaptive and creative the dream is, its self-regulation, and communicative function are all stressed. These various approaches to the dream remind us that whatever one's metapsychological stance, dream interpretation can be enriched through openness to new ideas, whether the stance stresses the intrapsychic or the interpersonal, the transference or countertransference, or concepts such as the unconscious supervisory aspect of dreams.

X. DIAGNOSTIC OR PROGNOSTIC SPECIFICITY

The question has been raised whether dreams can be used diagnostically or prognostically. Whereas one can learn much about a person's personality by submitting a number of the person's consecutive dreams for careful study using a configurational approach (to the manifest content), there seems to be some agreement that dreams can neither diagnose a patient nor predict an accurate prognosis. Disturbed dreams can be produced by normal individuals and healthy dreams by disturbed individuals. Every type of possible dream can occur in any nosological category. Therapists shy away from risking a diagnosis on the strengths and weaknesses of a person based on a dream protocol. Those writers on specific nosological categories have pointed out some general clinical findings (e.g., fear of intimacy and sense of alienation in borderline and schizophrenic patients), but clearly distinguishable specific diagnostic signs do not seem to be recognizable.

XI. THE INITIAL OR FIRST DREAM

The initial or first dream may be very transparent and often points to the patient's problem in a nutshell. The dream may occur very early in therapy when, the patient is relatively naïve in the language of the dream, the therapeutic alliance is not firmly established, and the capacity to free associate is still not developed. The patient at this point in time is not prepared for a deep interpretation. The therapist hardly knows the patient and the wisest way of responding to the first dream is to deal with the obvious, such as the patient's anxiety about and resistance

to the new experience of therapy. On the one hand, to say too much might lead to the loss of the patient, while to say nothing might cause the patient to feel the therapist is frightened of the patient or the patient's products, and lead to loss of the patient also. We should offer something or the patient might feel we're on the side of prohibition or repression and do not wish the emergence of material. We must be concerned not to encourage dreaming as this might lead the patient to feel we overvalue the patient's production, or being gullible, the patient may keep supplying dreams in a dependent manner. We should be careful not to shock the patient causing the patient to stop dreaming or to discontinue treatment.

XII. COLOR

The percentage of dreams in which color appears varies from 14% to 83% depending on how the inquiry is handled. Color has been found to represent a complex multiple function in dreams, and the implication of color in dreams shows a tendency toward multiple meanings. It may be used by the ego for both camouflage and communication purposes. It can both conceal and reveal and has been claimed to have a defensive screening purpose, to be related to the expressed affect, and have aesthetic considerations. Still others see color as representing a manifestation of the superego, a variety of id strivings including scoptophilic and exhibitionistic impulses, exposure to primal scene material, and repressed anal contents, as well as ego identifications. Colors have been said to have symbolic meanings, for example: black—death, evil, or financial stability; white—purity, chastity, virginity; green—envy, money; red—blood, financial instability; yellow—urine, cowardice; and blue—sadness.

XIII. TYPICAL DREAMS

Freud devoted part of Chapter V in his dream book to typical dreams. The most frequent dream is the pursuit or attack dream. Second most frequent are dreams in which a love object is in danger; third, dreams of embarrassment and nakedness; and fourth, dreams of falling and flying.

Freud felt that the third most frequent typical dream, embarrassment and nakedness dreams, represented the wish to be little again when one ran about without shame, a regression and return to the happy carefree time of childhood, as well as representing infantile desires of exhibitionism. In the embarrassment dream itself though, Freud felt observers do not notice the lack of clothing or involvement of the dreamer. Other writers have denied this conjecture.

Some authors feel the embarrassment dream represents guilt, inferiority feelings, the wish to be one's natural self, and the fear of disapproval from others. Still others feel that "nakedness" and "body exposure" were only one of a number of ways embarrassment can be represented in dreams. When nakedness and embarrassment appear, both must be understood.

Today we still feel embarrassment can stem from the patient's internal impulses such as infantile exhibitionism, or from external situations such as the patient's voyeuristic inclinations. These dreams are common in psychotherapy and most often concern the therapist's felt invasion of privacy (therapist's voyeuristic component), or the patient's embarrassment about revealing certain material in therapy (patient's exhibitionistic component).

XIV. OTHER THEORIES

As with the work of any pioneer, those who followed Freud were in many ways footnotes of agreement or disagreement, of continuity or discontinuity, of accommodating Freud with new understandings of dreams or of offering alternative understandings of how to use dreams in psychotherapy. Those who followed developed numerous theories on dream interpretation, however only the most publicized dream theories believed to offer a systematic and outlined approach to dream analysis are considered. These include the existential-phenomenological, Gestalt (not discussed), and Jungian in addition to Freud. All four theories note key concepts, the principal dream themes, and state major conflicts. Where they differ is in how the dream is handled.

The existential-phenomenological view on the dream is found in Clark Moustakas' book written in 1994. Moustakas deemphasizes pathology and not viewing the dreamer as an "object"—a case, a patient, or a client—but rather as a human being whose suffering is a unique experience and who is trying to come to terms with the problems in his relationships and life. Thus in line with his philosophy, Moustakas emphasizes the positive aspects of dreams hoping to help the individual to overcome the existential angst and therefore plays down the negative aspects. He pushes to the forefront the positive side of polarities such as success

versus failure, enchantment versus disillusionment, zest for life versus neglect of self and others, and commitment versus abandonment. He wants each person to achieve a happier and healthier lifestyle through self-expression, accomplishment, realization, fulfillment, and growth. Moustakas self-discloses, and personalizes, in the belief that it humanizes the therapy process. He rejects the classical analytic understanding of dream analysis and believes the dream is not a symbolic disguise, nothing is hidden or latent, and dreams are not wishful distortions of impulses. He sticks specifically to the manifest content eschewing the wish, disguise, distortion, symbolization, latent, and unconscious functions of dreams.

Carl Jung in 1974 in his book on dreams focused on the purpose of dreams and viewed dreams as attempts to achieve further growth, self-understanding, and individuation. The goal was for the integration of the hidden and unrevealed aspects of the personality (the shadow), with the waking personality. He rejected Freud's unconscious wish fulfillment theory, felt Freud's theory to be too narrow, and that Freud asked the question, "Why," rather than, "What for." He believed too much concentration on the past neglects the present, whereas too much concentration on the present tends to neglect the past. The dream to him was not a façade behind which lies hidden unconscious wishes. He saw dreams as part of nature, with no hidden deceptions.

Like Moustakas, Jung saw the manifest content as holding the whole meaning of the dream. The dream needed the dreamer to associate to the dream images, and he referred to this process as "amplification." He thought association would lead to an underlying "archetype" rather than an unconscious wish, and this would eventually provide the principle source for the explanation and resolution of the dream. He, like Freud, believed that the dream images were tied to the day residue, except he did not limit the residue to the preceding 24 hours.

He felt the material in the dream held successive layers and, if analyzed, would lead back to our cultural history and reveal the collective unconscious as well as the personal unconscious. For Jung, the unconscious was not a storehouse of evil, but rather a natural unity that maintains a neutral and not negative position, and is not dangerous, although the more it is thought to be, the more it will be. Symbols were given no uniform meaning to Jung, who felt all dream images to be important, each having its own special significance. Dreams to him did not conceal secret material; they taught both dreamer and therapist.

He also felt dreams seek to regulate and balance, the night and dream personality and the waking personality, the conscious and unconscious, the two parts of the shadow, and therefore saw a compensatory function in the dream. To Jung, the dream was an attempt to balance the two sides of the self, to establish equilibrium, and homeostasis.

He looked to future growth and achievement toward individuation, and therefore he saw a "prospective" function in dreams, He offered a large range of dream ingredients including the whole history of the race, myths, and legends from the past, fairy tales, and the origins of archetypes in our racial unconscious.

XV. THE BIOLOGICAL CHALLENGE TO DREAM THEORY

The biggest challenge to the dream theory that dreams have psychological meaning and are the fulfillment of unconscious wishes came from the brain researchers and neuroanatomists written in 1977 by J. Allan Hobson and Robert W. McCarley. Since the discovery of REM nearly 50 years ago, many brain researchers feel that Freud's theory of dreams is no longer in tune with the laboratory findings on sleep physiology. They play down past psychological traumas as psychological meaning in favor of memory consolidation and feel that dreams are "mental nonsense," have no psychological references, and should not be taken seriously. Thus, the biological conception of dreams is at odds with the psychological, with a tendency to neglect the nonbiological explanation.

The activation-synthesis explanation of dream formation of Hobson–McCarley challenged all psychoanalytic theories of dreams stating clearly that dreams are "inherently meaningless," random mental activity occurring due to chemical changes accompanying movement from non-REM to REM sleep. They state the dreamer and therapist create meaning to what is essentially random brain static.

In views similar to Hobson–McCarley, some neuroscientists propose that dreaming occurs when the brain stem stirs up emotions, mainly anxiety, anger, and elation. Neural gateways to the external world, memory, and rational thought shut down resulting in bizarre, internal visions that "speak" to the dreamer. In contrast to the Hobson–McCarley theory, and similar to Freud's concepts, Mark Solms in 2000 and others portray dreams as products of complex frontal brain activity that seek out objects of strong interest or desire depicting deep-seated goals in veiled ways to not arouse the

dreamer. A third position considers the data as inconclusive and views the way dreams function in different societies as socially constructed.

Whatever the position taken, as Michael Gazzaniga points out in the 1990s in his split-brain research, the human brain inherently seeks to make sense of all stimuli, including dreams, through the work of what he calls the "interpreter." The interpreting, sense-making activity of the brain helps explain why psychotherapists and patients have found dreams very rich in meaning. Many therapists believe Hobson and McCarley have overextended their findings, and that whereas the wish may not cause the dream, it does not mean that dreams do not disguise unconscious wishes, or that wishes cannot influence dreams. Suffice it to say that there is still so little understanding of the relation of brain function to dreaming that no theory conclusively invalidates Freud's. For psychotherapy, these theories neither replace nor supercede the usefulness of understanding dreams, nor do they deny the fact that dreams will always require interpretation.

XVI. CONCLUSION

In an age of brief therapy modalities, once-a-week sessions, the pressure from HMOs to limit treatment length, and a shift in emphasis from discovering the latent content to using the manifest content of the dream, today's therapist may wonder whether dreams continue to take their lofty position alongside other material helpful to psychotherapy. In answer to this question, it is proposed that the use of dreams can function to broaden and enhance the therapeutic value of psychotherapy by providing useful data about the patient's life, traumas, conflicts, relationships to significant others, resistances, symptoms, defenses, affect, and behavior. Effective use of dreams in psychotherapy can augment the therapeutic process enabling the patient to acquire greater strength to inhibit, restrict, select and criticize, spend less time in defensive functioning, and more time at work, play, and love.

See Also the Following Articles

Emotive Imagery ■ History of Psychotherapy ■ Jungian Psychotherapy ■ Neurobiology ■ Psychoanalytic Psychotherapy and Psychoanalysis, Overview ■ Virtual Reality Therapy

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Eating Disorders

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GLOSSARY

anorexia nervosa A psychological and physical condition of semistarvation in which individuals weigh 85% or less of what would ordinarily be their healthy body weight, resulting in physical impairments and, in the 90% of patients who are female, cessation of menses. This condition is due to highly restricted food intake, often accompanied by excessive exercise and sometime purging by self-induced vomiting, laxative use, or other means. These behaviors are usually related to obsessional and perfectionistic thinking that focuses on a distorted body image and undue fears of becoming fat.

binge eating disorder A condition in which individuals binge eat large quantities of food in very short periods of time, often 1000 to 2000 calories or more at a time beyond their nutritional needs, at least several times per week for months on end, and have accompanying feelings of shame, disgust, and being out of control. In contrast to individuals with bulimia nervosa, they do not purge. As a result, these individuals often tend to be obese, some severely so.

bulimia nervosa A condition in which individuals binge eat large quantities of food in very short periods of time, often 1000 to 2000 calories or more, and then purge themselves of what they have eaten, usually by forcing themselves to vomit, and sometimes by means of laxatives, diet pills, diuretic pills, or excessive exercising. These behaviors occur at least several times per week for months on end. The condition is usually related to overconcern with one's weight and shape, and is accompanied by feelings of shame, disgust, and being out of control.

eating disorders not otherwise specified (EDNOS) A mixed group of disorders that include psychological and behavioral elements of anorexia nervosa and bulimia nervosa but that, technically speaking, do not fully meet the strict criteria set forth in the diagnostic manuals. For example, this category might include individuals who have dieted down to only 12% below healthy weight, or who may still be having scant menses, or who may be binge eating and purging only once per week.

obesity A group of medical conditions marked by being at least 20% above recommended weight for age, height, and frame. Obesity is thought to result from a combination of genetic predispositions in the presence of excessive food intake and inadequate exercise. Except for individuals with severe obesity (e.g., 100% or more than 100 pounds overweight) types and levels of psychopathology in obese individuals tend to resemble that in the rest of the community at large.

Psychotherapeutic approaches to the treatment of eating disorders are varied. Different strategies have been used to treat anorexia nervosa, bulimia nervosa, and binge eating disorder depending on the specific disorder being treated, the severity and stage of the disorder, concurrent comorbid conditions, available treatment studies that address specific problems, and the

theoretical disposition of the clinicians. Systematic clinical trials that examine the efficacy of specified, manualized psychotherapies in the treatment of eating disorders have increased in number and in quality in recent years. These studies, typically involving cognitive-behavior therapy (CBT) and interpersonal therapy (IPT) for bulimia nervosa or binge eating disorder, have generally involved treatment studies that have sometimes been relatively uncomplicated with respect to comorbid conditions. Although the results of these studies merit serious attention, in practice many clinicians favor other psychotherapeutic approaches to the treatment of eating disorders that have not yet been subject to rigorous study, but that by virtue of the accumulated clinical experiences of diligent clinicians, also deserve careful consideration. This article will examine the useful information provided by the evidence-based studies thus far available, but also integrate the clearly helpful insights from accumulated clinical approaches that have not yet been subject to systematic study.

This article will discuss only the treatment of the primary eating disorders (anorexia nervosa, bulimia nervosa, binge eating disorder, and eating disorders not otherwise specified [EDNOS]). These disorders are thought to have a significant psychological component. In contrast, garden variety obesity is considered to be a general medical condition and not to be a psychiatric disorder, since, except for some individuals with severe obesity, rates of psychological disorders are no different among obese individuals than among the population at large. Even among those with severe obesity (e.g., 100% or more overweight) the psychological problems encountered appear primarily to be the results of obesity (e.g., self-disparagement and self-loathing due to being so obese).

In addition to the primary eating disorders, several other conditions occur among individuals with psychiatric disorders that may markedly affect eating behavior and weight. To list a few, individuals with severe depression often suffer a profound loss of appetite (true medical anorexia, not anorexia nervosa) and may not uncommonly lose 10 to 30 pounds. Some patients with so-called atypical depression actually experience an increase in appetite and food cravings ("hyperphagia") and may gain 10 to 30 pounds or more. Occasionally patients with psychotic delusions due to schizophrenia or other conditions may think that their food is poisoned and refuse to eat on that basis, losing weight in the process. Some patients with particular forms of brain damage may eat huge amounts of food and seem insatiable, gaining a great deal of weight in the process. Many patients receiving antipsychotic or mood-stabilizing medications to treat conditions such as schizophrenia or manic-depressive illness (bipolar disorder) may gain weight as a side effect of these medications. Pharmaceutical companies are actively trying to find new types of medications with fewer weight-related side effects. Beyond these psychiatric conditions, a variety of serious general medical conditions need to be considered by clinicians evaluating patients with changes in appetite and weight. These include conditions causing poor appetite and weight loss such as cancers, HIV infections, tuberculosis, and diabetes as well as conditions causing weight gain, such as hypothyroidism and other endocrine problems and conditions causing the retention of fluids. Although all of these psychiatric and medical conditions are important and merit active treatment, discussion of their psychotherapeutic management is beyond the scope of this article.

I. DESCRIPTION OF TREATMENT PROCESSES

Comprehensive treatment for eating disorders generally requires attention to four distinct features of these disorders: (1) biological aspects, particularly nutritional status and the deleterious consequences of semistarvation and undernutrition on the one hand, or serious obesity on the other; (2) eating disorders related behaviors including restrictive and idiosyncratic eating patterns, eating binges, purging, ordinarily by means of vomiting or use of laxatives, and excessive, compulsive exercise; (3) eating disorder related thoughts, attitudes, and emotions, which may include distorted self-perceptions, overvalued ideas, and self-disparagement, all related to shape and weight, diminished cognitive complexity and increased obsessionality and perfectionistic thinking accompanying malnutrition, and increased nutrition-related emotional fragility with mood and anxiety symptoms; and (4) associated psychopathological and interpersonal problems, the frequent comorbid conditions of mood, anxiety, obsessive–compulsive, trauma-spectrum, personality and substance use/abuse disorders, and sometimes difficult family, interpersonal, and social situations accompanying many clinical eating disorders.

Treatment, accordingly, varies with the age, stage, severity, and chronicity of these conditions, with the family and social context, and with the presence and severity of comorbid medical, psychiatric, and interpersonal conditions. Current considerations suggest

that the initial treatment of the undernourished patient with anorexia nervosa and bulimia nervosa must focus on nutritional rehabilitation. Once that aspect of treatment is well under way, patients are usually more agreeable to participating in psychotherapy, and psychotherapy per se is usually much more effective.

A. Theoretical Bases for Psychotherapeutic Treatment Strategies

Several theoretical streams feed contemporary thinking about psychotherapeutic strategies for patients with eating disorders. These streams include an increased appreciation for biological influences on cognition, the importance of motivational state on patient participation in psychotherapy, developmental and psychodynamic perspectives, particularly those concerning early adolescence and early adulthood in women, learning theories, and a variety of family systems theories.

There are several reasons for thinking about biological issues when planning psychotherapies for patients with eating disorders. First, studies examining semistarvation in normal volunteers demonstrated that these subjects developed significant cognitive and emotional impairments. At 25% below their healthy weights these individuals showed significant psychopathology including loss of complex thinking, obsessional thinking (mostly about food), mood disturbance, irritability, fragmented and disturbed sleep, and social withdrawal. Furthermore, even after regaining the weight they lost, their cognitive and emotional impairments persisted for many months to a year or more. These observations suggest that the malnutrition itself contributes significantly to cognitive impairment and exacerbates many psychopathological features characteristic of anorexia nervosa (and some bulimia nervosa patients) including obsessional thinking, perfectionism, and other eating-disorder related attitudes as well as symptoms of anxiety and depression. Many of these psychopathological features improve substantially simply as a result of refeeding and better nutrition. Accordingly, current views hold that the psychotherapies for anorexia nervosa and bulimia nervosa should be tailored to the patient's degree of malnutrition and cognitive functioning.

Genetic, temperamental, and development issues inform theories concerning psychotherapy for eating disorders. Individuals who develop anorexia nervosa and bulimia nervosa may be more likely than others to show certain premorbid vulnerabilities such as familial tendencies regarding weight and energy expenditure, obsessionality, perfectionism, and/or proneness to anxiety, depression, low self-esteem, and uncertain sense of self. In some patients the co-incident occurrence of substance abuse problems may contribute to the initial appearance of eating disorders.

The clinical observations of Hilde Bruch underscored key features seen in patients with eating disorders that demand attention in psychotherapy, particularly distorted perceptions and misconceptions of body size awareness, interoception, bodily functions, hunger and satiety, and issues regarding control of body functions. Bruch also emphasized the diversity of psychological and family features to be found in these disorders. Her observations and ideas have endured and have formed the theoretical basis for therapeutic conceptions and interventions of decades of therapists using psychodynamically oriented and cognitive-behavioral techniques. The eating disorders inventory and the influential cognitive analyses of David Garner and colleagues, which identified common examples of "all or none" thinking in eating disorders patients, was heavily influenced by Bruch's formulations. These conceptions have, in turn, influenced the systematic cognitive-behavioral psychotherapies for patients with anorexia nervosa, bulimia nervosa, and binge eating disorder developed over the past two decades by David Garner, W. Stewart Agras, Katharine Halmi, Christopher Fairburn, Hubert Lacey, James Mitchell, Janet Treasure, G. Terence Wilson, and others.

Families of eating disorders patient display great diversity in dynamics and systems issues, ranging from reasonable health to extreme dysfunction. All parents with a child displaying the self-destructive behaviors and emotional turmoils of serious eating disorders will be upset by these events and display various signs of distress and emotional reactions about and toward that child. In addition to these expected responses, certain dysfunctional patterns have been thought to further contribute to the pathogenesis and maintenance of some patients' problems. Many of these dysfunctional family patterns are not specific to eating disorders but are thought to exacerbate a wide range of psychosomatic conditions and other psychiatric disorders. Salvador Minuchin and his colleagues described some families characterized by parental enmeshment with and overprotectiveness of patients, rigidity in maintaining the status quo, and avoidance of conflict resulting in lack of conflict resolutions in these families. Other difficulties have been attributed to psychological, physical, and/or sexual abuse, high degrees of negative expressed

emotion (in which one or more family members is highly critical and blaming of the patient), teasing, the perverse influences of competitive or narcissistic parents, parental intrusiveness and lack of respect for privacy or autonomy, and colluding with or enabling pathological behaviors in a family member. These observations have led to recognition that family assessment and family education, counseling, and/or psychotherapy may be very important in treating patients with eating disorders, particularly children, adolescents, and young adult patients who may still be living at home and/or be heavily involved with their families of origin. For adults in marriages or committed relationships, issues such as those described above may merit couples therapy.

Clinicians have increasingly appreciated the importance of the patient's motivational state for engagement in treatment and recovery. These views in turn have led to the development of psychotherapeutic strategies for eating disorders based on the transtheoretical models and motivational enhancement strategies based on the work of James Prochaska and Carlo DiClemente and, more recently, of William Miller, approaches that have been primarily used with patients suffering from alcoholism and substance abuse. These strategies try to move patients from what often appears to be a precontemplative state (denial, avoidance, minimization) to contemplative states, in which they may at least acknowledge the existence of a problem, to deliberative states in which they seriously consider the need for treatment, to action states in which they actually engage in treatment. Research studies currently under way focus on the potential value of motivational enhancement strategies at the beginnings of psychotherapy for eating disorders patients. Conceivably, motivational state will be found to correlate strongly with the brain's nutritional status. Individuals with starved brains may be less capable of self-awareness or "insight" and therefore more likely to appear unmotivated than those whose brains are receiving adequate nutrition.

B. Empirical Studies and Review of Treatment Efficacy

Most authorities agree that psychotherapies work best in the context of comprehensive care. This requires that treatments first attend to restoring good nutrition, then to reducing pathological behaviors, and finally, with those aspects of treatment well under way, to dealing with the psychological and emotional aspects of care. The patient's motivation to change and psychological experiences in relation to behavioral challenges require careful attention throughout the course of treatment.

1. Anorexia Nervosa

Few controlled trials of psychotherapy for anorexia nervosa have been published, in part due to the tremendous difficulties of conducting such trials with this population, especially during phases when the patients are seriously underweight. Consequently, recommendations regarding the role of psychotherapy in early phases of treatment rely strongly on consensus opinions of experienced clinicians and clinical researchers. Investigators increasingly appreciate just how much malnutrition in anorexia nervosa contributes significantly to cognitive impairment and to increases in many characteristic psychopathological features including obsessional thinking, perfectionism, and other eating-disorder related attitudes, as well as symptoms of anxiety, depression, and emotional lability. With nutritional rehabilitation alone, many of these psychopathological features improve significantly. Accordingly, current views suggest that the initial treatment of the undernourished patient with anorexia nervosa must focus on nutritional rehabilitation and that the psychotherapy of anorexia nervosa should be tailored to the degree of malnutrition and level of cognitive functioning of the patient.

Decades of experience showed that classic psychoanalytic approaches were often futile and even harmful for patients ravaged by semistarvation states. It appears that anorexia nervosa patients are most capable of engaging fruitfully in psychotherapeutic discussions and processes only after their severe malnutrition has been reversed. For seriously undernourished patients, those whose weights are 25 to 30% or more below their healthy weights, nutritional rehabilitation often requires skillful nursing care, usually in the setting of an inpatient or day hospital program. Staff members on these units should be psychologically empathic, informed, and sensitive. Their day to day, sometimes moment to moment, interactions with the anorexia nervosa patients are best informed by our understanding of the nature of the psychopathological processes common to patients with these conditions. However, during this initial phase, while psychodynamically and cognitively informed empathic discussions and education with the patients are useful, the value of formal psychotherapy is uncertain, as patients are often not really able to commit to or engage in psychotherapy in a meaningful manner. Furthermore, several authorities

have described that group psychotherapy for patients with anorexia nervosa during this phase may actually be counterproductive, as patients sometimes compete for who can be thinnest or sickest, and sometimes learn maladaptive tricks from one another.

Once weight gain has started, and especially after weight has been restored to a healthy level, psychotherapy appears to be very helpful to help patients make sense of their experiences, come to understand how their symptoms may constitute maladaptive efforts at emotional self-regulation, explore their prior vulnerabilities and the antecedent life circumstances that led to the illness, deal with their families and peers, and learn to cope more adaptively with developmental issues, conflicts, and emotional regulation in their futures. At this point many clinicians use psychodynamically oriented therapies individually and in group settings.

Several psychotherapy trials for anorexia nervosa patients have been undertaken at the point when patients have regained some weight and are ready to leave the hospital. One notable result of CBT studies with anorexia nervosa patients has been a high dropout rate among patients enrolled in these studies. However, recent research with weight restored anorexia nervosa patients by Kathleen Pike and colleagues has also shown that CBT-based psychotherapies can be helpful in preventing relapse. CBT-based programs developed by Thomas Cash, focusing on distortions concerning body image, may be very helpful for patients recovering from anorexia nervosa and patients with other eating disorders as well.

Gerald F. Russell, Ivan Eisler, and colleagues have conducted controlled trials of family versus individual psychotherapy, starting with patients just being discharged from hospital treatment. Their results suggest that if only family therapy or individual is to be administered, for patients who are under the age of 18, family psychotherapy is of more benefit than individual psychotherapy; for older patients individual therapy appears to be more favorable. In actual practice clinicians combine family therapy and individual psychotherapy depending on the patient's circumstances and needs. The critical point suggested by this research is that for younger patients, still living with and/or heavily involved with their families of origin, assessing the entire family and involving the family in psychotherapeutic and psychoeducational activities is essential. Incorporating strategies based on many earlier observations of family-oriented clinicians, James Lock and colleagues have developed a manual for active family treatment aimed at acutely ill children and adolescents with anorexia nervosa and are in the process of testing it empirically.

A randomized controlled trial by Christopher Dare and colleagues showed that although results were modest, a year's treatment with focal psychoanalytic therapy and family therapy were each significantly superior to low-contact "routine" treatment with respect to weight gain and other measures for outpatients with anorexia nervosa. Many of the patients in the trial remained underweight at the end, although a number no longer met strict diagnostic criteria for anorexia nervosa.

Recent research underscores the fact that although good recovery is common for younger onset anorexia nervosa patients who receive good initial and ongoing care, recovery takes a long time even for such individuals, on the order of 5 to 7 years. General clinical consensus suggests that psychotherapy during the period of recovery, particularly during the first several years, may be very helpful for enabling patients to better deal with and make sense of their current and ongoing illnesses; recognize and work through prior vulnerabilities they may have had resulting from their early temperaments and life experiences with family and peers; regulate their emotions, particularly mood and anxiety; contend with personality issues concerning perfectionism, self-confidence, and self-esteem; and anticipate how to deal successfully with future challenges with which they will be forced to cope. A variety of psychodynamic, feminist, and relational themes may be addressed in these therapies.

For difficult-to-treat patients with refractory or chronic anorexia nervosa, much more research will be necessary before we can fully assess the potential benefits of various psychotherapeutic approaches. At present, many authorities believe that a humane, compassionate, supportive psychotherapeutic approach may be most helpful for such patients. Nonverbal, experiential therapies such as art therapy and movement therapy may be of adjunctive benefit.

2. Bulimia Nervosa

Initial assessment of the patient with bulimia nervosa for psychotherapeutic readiness, to assess comorbid psychiatric states and attend to them, and to determine what approaches are likely to be most helpful for the given individual is of critical importance to maximize the likelihood of successful treatment. For patients with comorbid substance abuse or dependence disorder, successful treatment of bulimia nervosa ordinarily requires that the substance abuse disorder be attended to first, or at least concurrently. The odds of successfully treating bulimia nervosa in the presence of untreated substance abuse or dependence disorder are

extremely small. As with any psychotherapeutic treatment, the clinician must remain alert to resistances and negative therapeutic reactions, some of which may result from patient factors and some from therapist insensitivities or errors in assessment or judgment. Quick attention to problems as soon as they are identified may be necessary to save treatments that might otherwise end prematurely and unsuccessfully.

The fact that binge eating and purging episodes are relatively easily counted has stimulated and facilitated psychotherapy research for this disorder. Accordingly, a large number of studies have examined the efficacy of several different types of individual and group psychotherapies for bulimia nervosa. Cognitive-behavior therapy (CBT) has been most extensively researched, and is the approach for which most substantial evidence for efficacy exists. Twelve to 20 sessions of CBT treatments, often manualized to permit reliable duplication from center to center, have proven to be highly effective in reducing the number of binge eating and purging episodes and in changing dysfunctional attitudes regarding weight and shape. The treatment is usually conducted in several distinct phases. Initial sessions are usually devoted to helping patients restore healthy patterns of eating and nutrition, enabling them to consume sufficient food without purging so that periods of hunger are avoided. Because hunger pangs are thought to trigger more than 50% of eating binges, reducing hunger often reduces binge eating. The initial phases of CBT involve careful quantitative assessments and diary keeping concerning eating patterns; the types, quantity, and time-course of food consumed during the day without purging; eating binges; *purges;* exercise; and associated antecedant, concurrent, and consequent thoughts, emotions, and associated behaviors. By the very act of keeping these diaries, patients already indicate their compliance, acknowledge concern about their problems, and show sufficient motivation to invest necessary time and psychological energy into recovery. Diary keeping promotes increased awareness of symptoms, so that eating binges and purges are less likely to occur "automatically" in semidissociated states, and also signifies that patients will share their behaviors publicly (at least with their clinicians). These factors may both contribute to the therapeutic benefits derived from this simple procedure.

The middle sessions of CBT are devoted to explicating and dealing with eating disorders related thoughts and emotions—to recognize, elicit, label, examine, and counter the underlying negative and pathological cognitions concerning eating, weight, and shape in relation to self-evaluation and self-esteem. The late phases of CBT focus on helping patients better cope with the frustrations related to interpersonal and intrapsychic events that often trigger binge eating episodes. About 60% of patients with uncomplicated bulimia nervosa obtain substantial symptomatic relief from this treatment, even without the concurrent use of medications. After the initial series of CBT sessions have concluded, booster sessions, usually scheduled on a monthly basis for a year or two, have been helpful for maintaining improvements and preventing relapse.

Research suggests that for those patients for whom CBT will be an effective intervention, clear-cut improvements should be seen within 6 to 8 weeks. The absence of improvement during that time frame suggests that the patients will require an additional or different modality, for example, the addition of medication such as selective serotonin re-uptake inhibitors (SSRIs) such as fluoxetine to obtain substantial improvement. Some research suggests that adding SSRIs to CBT results in overall better outcomes in bulimia nervosa.

The extent to which complete abstinence from binge eating and purging is achieved varies from study to study, with remission reportedly averaging about 36% for CBT-based psychotherapy alone versus 42 to 49% for studies in which CBT is combined with medication.

Bulimia nervosa has also been successfully treated with interpersonal psychotherapy (IPT), based on the approach of Gerald Klerman and colleagues. Studies have shown that initial posttreatment responses to IPT are not as robust as those to CBT, but that over longer term 2 to 5 years follow-ups, the outcomes for IPT and CBT are similar with respect to reducing binge eating symptoms. Furthermore, since the forms of IPT used in these research studies were intentionally and systematically stripped of all reference to eating problems that could confound them with CBT, they were artificially devoid of subject matter that clinicians treating these disorders would ordinarily discuss and consider with their patients. Taken as a whole, these studies suggest that although CBT principles are more effective than IPT in reducing disturbed attitudes toward shape, weight, and restrictive dieting, a proper integration of IPT strategies in treatment may also be helpful. These strategies may afford reduced emotional tension and better ways of coping with IPT-related concerns of loss, disputes, role transitions, and interpersonal deficits, and thereby contribute to sustained and enduring improvement.

After symptom remission, traditional psychodynamic psychotherapies may be helpful for exploration of longstanding issues concerning development, enduring

psychological conflicts, repetitive self-destructive patterns, and enduring maladaptive aspects of the personality.

Studies of purer forms of behavior therapy without cognitive components have yielded conflicting results. In these studies, for example, researchers have utilized exposure and response prevention techniques, in which individuals who binge eat are prevented from purging. Results are conflicted, but some studies suggest that this treatment does not add to a solid core of CBT.

Several studies have shown CBT in group settings to be moderately effective. Group CBT programs requiring diary keeping, dietary counseling, and dietary management are more effective than those without such components, and programs requiring more frequent sessions at the beginning of treatment (e.g., several times per week) and longer sessions are more effective than those meeting less extensively. In practice, many clinicians favor combining individual and group psychotherapy for bulimia nervosa.

A sizable minority of patients with uncomplicated bulimia nervosa, on the order of 20%, may achieve significant benefit from working through structured, self-guided CBT-based manuals on their own. A number of self-guided programs have been devised and are widely available. For several of these manuals accompanying guides for therapists have been written as well.

Some research suggests that for some patients with bulimia nervosa certain forms of intense psychoeducation may be as effective as CBT. Anecdotal reports hint that some patients with bulimia nervosa may benefit from 12-step oriented programs and that programs such as Overeaters Anonymous may serve as useful adjuncts. Several investigators report that 12-step programs have generally not been successful for patients with anorexia nervosa.

Because large numbers of patients with bulimia nervosa suffer from concurrent mood disorders (primarily recurrent major depressive disorders, dysthymic disorders, and bipolar II disorders), and substantial numbers suffer from anxiety disorders, personality disorders (often demonstrating cluster B and C traits and qualities), histories of psychological, physical, and sexual traumas, and substance abuse disorders, treatment planning must take the comorbid features into consideration, and psychotherapy and psychosocial treatments must be modified to deal with these problems as well. Experimental psychotherapy programs directed by Stephen Wonderlich and colleagues are being tested for difficult to treat so-called multi-impulsive bulimia nervosa patients, that is, patients who in addition to having difficulty regulating eating behaviors also exhibit difficulties regulating emotions (particularly anger, irritability, and depression) and a variety of behaviors including sleeping (chaotic), shopping (overspending and shoplifting), sex (often impulsive, sometimes promiscuous), and substance use (abuse and/or dependence is common). For such patients, in addition to using traditional eating disorder-related CBT programs and medications as indicated, treatment programs may employ elements of dialectic behavior therapy (DBT) developed by Marcia Linehan and colleagues for patients with parasuicidal behaviors and borderline personality disorder, and intensive outpatient psychotherapies in which patients may be seen even several times per week as well as on a crisis basis.

As with anorexia nervosa, at some stages of treatment incorporation into psychotherapy of more traditional psychodynamic, feminist, and relational themes may be helpful.

3. Binge Eating Disorder

Psychotherapy research involving binge eating disorder has been largely based on treatments for bulimia nervosa and, because substantial numbers of binge eating disorder patients are overweight or obese, on psychotherapy treatment research for obesity. Because obesity is a common comorbid condition, researchers have been concerned with how to relate treatments designed to reduce binge eating behavior with those designed to enhance weight loss. Based on available studies, most experts agree that initial therapeutic aims should focus on reducing binge eating episodes. Once binge eating has been controlled weight loss programs may be more effective. Nevertheless, when results are examined at 5 years after treatment the enduring impact of weight loss programs is not very impressive. For obese patients, "non-diet" approaches that stress self-acceptance, improving body image, and improving health and fitness through exercise and better nutrition, are being developed as alternatives to unsuccessful weight loss programs.

While treatment continues, CBT, behavior therapy, and IPT all reduce rates of binge eating frequency by up to two thirds; however, these improvements tend to deteriorate after treatment is concluded. Denise Wilfley and colleagues conducted a well-executed group psychotherapy study for binge eating disorder using an IPT approach and showed this intervention to rival the effectiveness of CBT in both short and long term across multiple domains. Further, effect sizes for both IPT and CBT were comparable to the best results reported for

individual treatments. As for bulimia nervosa, in practice, elements of CBT and IPT are all useful for treating binge eating disorder, and some patients achieve benefit from self-help programs using professionally developed CBT-oriented manuals. Although no systematic research exists on this point, many patients with binge eating disorder anecdotally report that they receive considerable help from 12-step model programs such as Overeaters Anonymous.

II. CASE EXAMPLES

A. Anorexia Nervosa

Patsy was a 17-year-old high school student who had been suffering from anorexia nervosa since the age of 13. She was characterized by her family as a tenacious and diligent student, and she had been an excellent athlete in middle school and earlier in high school. Starting at ages 9 and 10 she clearly excelled in track and appeared to be headed for the State championship team. However, at age 13, shortly after she first started to menstruate, she started to diet severely in response to a casual remark by a friend at practice concerning her weight. At first her parents thought little of it, but within a few months she had lost considerable weight and the family took her to her pediatrician, who diagnosed anorexia nervosa and referred her to a child psychologist. The pediatrician also thought she was depressed and obsessional and started to treat her with paroxetine (Paxil), a selective serotonin reuptake inhibitor used to treat depression and obsessive–compulsive disorder.

Patsy started weekly individual psychotherapy but her psychotherapist paid relatively little attention to her eating or weight, and within a few months her weight fell further. She minimized the seriousness of her problem, and basically tried to write it off as normal for teenagers. She was at best ambivalent about admitting that her intermittent fatigue was due to undernutrition. Patsy also minimized her interactions with her family around meals, so that they were less likely to observe her very restricted dietary choices and ritualistic food habits. At her pediatrician's insistence she was hospitalized on a medical unit where under the pediatrician's direction and the help of a nutritionist she was required to eat a set number of calories or face gastric tube feedings. With this regimen she managed to gain enough weight to pull out of the danger zone, and she resumed outpatient treatment, adding regular visits to a dietician to her weekly psychotherapy and medication program. For the next year and a half Patsy basically maintained her status quo, still minimizing her problem and not gaining additional weight. At this point, at about age 16, she was referred to an eating disorders specialist who made the following determinations: (1) Patsy would benefit from the addition of a structured cognitive behavior therapy program; (2) since Patsy was still living at home and highly involved with her parents, and her parents were at their wits end as to how to contend with her, family therapy was necessary; (3) developmental issues concerning her earlier childhood and budding adolescence, and interpersonal issues concerning her family and social life were all pertinent and merited ongoing discussion.

To help enhance her motivation at the start of this new therapeutic push, a bone densitometry test was ordered, which revealed that the amount of calcium stored in Patsy's bones was considerably less than average for young women her age. This piece of concrete information made quite an impression on her. Her motivation to improve increased, although the fears and obsessions that governed her restricted eating patterns were relentless.

With considerable effort, Patsy agreed to keep a diary of her food intake and exercise, and to also record the related thoughts and emotions that preceded, accompanied, and followed her meals. She agreed to try to limit the amount of exercise in which she regularly engaged, although at times, especially when she felt that she overate, her urge to exercise was very strong. Individual sessions consisted of a regular review of her eating patterns and exercising, and also left room for discussion of earlier and current events in her life. In particular, developmental issues focused on her dealings with inconsistent mothering, a somewhat absent and unpredictably angry father, and a difficult and competitive older brother. Current issues concerned her pining for a boyfriend (initially in a somewhat preadolescent manner, because thoughts of physical contact and intimacy were revolting to her), and problems in dealing with a very cliquish group of girlfriends, from which she often felt excluded, in part because her anorexia nervosa resulted in her standing out as deviant in her crowd.

In addition to weekly individual sessions, Patsy was seen together with her mother every other week; occasionally her father, a busy professional, would join these sessions. When her older brother came home from his out-of-town college, he, too, would occasionally join the family meetings. During the initial family meetings Patsy and her parents were able to air and discuss a number or chronic tensions and conflicts that never seemed to get addressed at home and that often

were swept under the rug. The parents were instructed to schedule family meals at which Patsy would be expected to eat, and to lovingly and without rancor or recrimination make sure that she ate a sufficient number of calories and increased her food choices. They were carefully instructed to avoid criticizing, belittling, or blaming her for her anorexia nervosa.

These efforts resulted in a slow, modest, but steady weight gain of 12 pounds, so that by the end of 20 to 30 weeks of outpatient treatment her menstrual periods resumed, accompanied by an increase in typical teenage pimples and thoughts about boys. She still had some obsessional thoughts about food, but she found that as her weight increased, and especially after her periods resumed she was less preoccupied and found it easier to drop her eating rituals. She maintained this progress during her senior year of high school and has been able to successfully go off to an out-of-town college where she is continuing in psychotherapy, but symptomatically much better.

B. Bulimia Nervosa

Jill was a 23-year-old administrative assistant who had been binge eating and purging since the age of 16. Although her mother was slim and even glamorous, her father's side of the family tended to be obese and Jill seemed to have inherited those tendencies. Throughout Jill's teen years her mother constantly urged her to watch her weight, to avoid getting too chubby, so that she would be socially popular. Jill did everything she could to diet, and she exercised rigorously. However, all of her efforts seemed inadequate to prevent a gradual increase in her weight, and she become demoralized at the seeming futility of her battle with the scale. When she was 16, discovering that she could keep her weight down by purging seemed an easy out. Over the next few years the binge eating and purging pattern increased, and she became progressively ashamed and secretive about her eating patterns. Gradually, binge eating and purging seemed to take on a life of their own and Jill became demoralized and depressed, aware that her symptoms were causing social impairment and physical problems. She suffered constant heartburn from gastric acid bathing her esophagus and was alarmed by serious and expensive dental problems.

Jill came for treatment when she first met a man she really cared about, who seemed to care about her as well. She realized that the odds of getting into a serious relationship with him would be jeopardized by her disorder; she feared that telling him about her bulimic symptoms would result in his dropping her, and she knew that she did not want to threaten or destroy her chances with him by continuing her disorder in secret.

Jill and her therapist started by conducting a full review of her past history and current symptoms. Together they used a cognitive-behaviorally oriented treatment manual designed for individuals with bulimia nervosa. They started with twice-weekly sessions and gradually moved to weekly sessions. Highly motivated at this point, Jill dutifully completed her homework assignments, which focused on keeping a diary of her regular meals and binge eating episodes, together with records of her associated thoughts and emotions. She discovered that she was actually restricting her food intake somewhat, and that when she increased her regular meals the hunger pangs that often triggered her eating binges diminished considerably, making it progressively easier for her to eat normal meals without overeating.

As the initial phase of treatment worked well, over a period of about 2 months, therapy focused on her negative self-concepts regarding body shape and appearance, how she had come to deal with emotional issues concerning her mother by "stuffing my face," and on suggesting other ways that she might be able to cope with negative emotions and difficult family members. Jill also brought up ongoing events with her boyfriend, hoping that the therapist would "check me out" with respect to how she was handling new interpersonal and intimate experiences.

Over the next several months Jill's binge eating and purging episodes subsided considerably, to the point where they would occur rarely, and then only in situations where family conflicts and stress would erupt, usually during visits to her parent's home. She and her therapist worked on relapse prevention techniques, learning to identify circumstances and contextual triggers to which she was still vulnerable, giving her ways of dealing more effectively with these situations. Her therapy sessions were now scheduled on a monthly basis. Over the course of the next year Jill's weight increased by about seven pounds. Although she was not happy about this, she was much better able to tolerate the weight gain than would have been the situation in the past—and since her now fiancee did not seem to mind at all, she even seemed able to laugh about it.

III. SUMMARY

Although some progress has been made in psychotherapy studies for eating disorders, particularly for bulimia nervosa, substantial work remains to be done. We know little about what forms of psychotherapy might make a

meaningful difference at what stages for which types of patients with anorexia nervosa. Much research remains to be done on improving psychotherapies for patients with complex bulimia nervosa (e.g., those with substantial concurrent personality, "trauma spectrum," and/or substance related disorders). Additional studies are required on integrating psychotherapies with other components of treatment (e.g., nutritional rehabilitation and medications among others).

Future research is likely to follow several directions. First, investigators are likely to unbundle some of the current manualized CBT, IPT, and family psychotherapies and better integrate treatment components that seem most helpful. Research on the effectiveness of psychodynamic psychotherapies for eating disorders, including supportive-expressive therapies and therapies based on various theoretical models including self-psychology, are likely to be extended. Psychotherapies based on feminist and relational principles are likely to be subject to more systematic study as well. Finally, strategies based on computer and information technologies are already being applied to the assessment and psychotherapy of eating disorders. Treatment advances will undoubtedly evolve from these modalities, including individual and group formatted e-mail and web-based communications for administering or enhancing professionally guided and self- or peer-guided psychotherapy programs; personal digital assistants (PDAs) to help record and to remind patients to perform certain behaviors; and even virtual reality-based sensory stimulation to facilitate desensitization to certain behavior-inducing cues. We have much to learn about the psychotherapeutic treatment of eating disorders, and the future promises to be very instructive.

See Also the Following Articles

Avoidance Training ■ Behavioral Weight Control Therapies ■ Cognitive Behavior Therapy ■ Controlled Drinking ■ Cultural Issues ■ Feminist Psychotherapy ■ Sports Psychotherapy ■ Substance Dependence: Psychotherapy ■ Women's Issues

Further Reading

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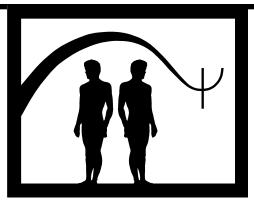

Economic and Policy Issues

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GLOSSARY

assignment A voluntary acceptance or rejection of an agreement to settle for payment by Medicare and Medicaid of 80% of a provider's customary fee. If a provider refuses assignment, he or she may bill the patient for the remainder, called *balance billing*. In 1986 Congress placed severe limitations on balance billing.

benefit design The delineation of all the covered services, procedures, and their costs that a health plan agrees to reimburse, as well as the exclusions, limitations, co-payments, and deductibles in the health plan contract. It is often used to make the health insurance more attractive than that of the competition.

capitation A type of prospective payment for health services based on the rate for each of a large number of covered lives rather than the units of service delivered. Because it is paid in advance at the beginning of each month, it is also known as the pm/pm (rate per member per month). This is the usual method of payment to HMOs and PPOs that go at risk (guarantee to deliver the contracted services).

carve-out A contractual arrangement by a health plan (insurer) with an independent behavioral care company to assign to it the delivery and risk of all mental health/chemical dependency care. The company assuming the risk is called a carve-out.

case management The direct supervision of cases assigned to providers on a network, with final decision making over the practitioner. Usually conducted by telephone.

case rate The payment to a provider of a fixed fee to cover all services to a patient regardless of their nature or number. The case rate is sometimes fixed in relation to the severity of the patient's problem.

CPI The Consumer Price Index compiled by the Bureau of Labor Statistics (BLS) giving a value to all the goods and services. This is used as a measure of inflation. The BLS also compiles a MCPI (Medical Consumer Price Index) that is not widely used because of its inherent flaws.

deductibles First dollar amounts that the patient must assume before there is reimbursement for the covered costs by the insurer. For example, a policy may pay for a surgical procedure beyond the first $300.

DRGs Diagnosis Related Groups, a method of payment to hospitals approved by the Congress for Medicare and Medicaid in 1983. There are almost 400 diagnostic groups, each of which has its limited length of stay in the hospital which, if exceeded, is not reimbursed by the federal government. Rapidly the DRGs were adopted by the private sector. There are no DRGs in psychiatry.

HMO Health Maintenance Organization. The major type of managed care company that may provide all the services to its subscribers directly (e.g., Kaiser Health plan), or

contract with hospitals and other providers to deliver the services (e.g., Foundation Health plan).

indemnity coverage Health insurance that reimburses the policy holder for covered services used and paid for.

NHI National Health Insurance, sometimes referring to the Canadian Plan, but more often alluding to one or more U.S. proposals for a one-payor (government) sponsored universal health care plan, the most recent of which was the ill-fated Rodham-Clinton Plan of 1993.

parity Proposals more or less mandating equality in expenditures between physical and mental health care, a number of which have been enacted into state and federal laws.

PPO Preferred Provider Organization, a group of physicians that contracts (usually with HMOs by way of an at-risk capitation) to provide comprehensive health care services.

precertification The requirement that a provider receive advance authorization before providing a health care service or admitting a patient to the hospital. This is very common in psychotherapy and psychiatric hospitalization.

provider Profiling The comparison of every provider's practices with those of his or her peers. An unfavorable comparison often has a sentinel effect, causing the provider to conform. A practitioner who does not conform may be excluded from a network.

RVS code Relative Value Scales originally designed by Dr. L. Hsiao of Harvard for Medicare and Medicaid reimbursement, but widely used in the private sector. The RVS determines how much will be reimbursed for a particular service.

service benefit Payment for covered services made directly to the hospital or other provider by the health plan. This differs from *indemnity* payments that reimburse the insured individual.

third-party payor This is an insurance term (payor, not payer) meaning the entity responsible for paying for an individual's health care bills, be it indemnity insurance, HMO, PPO, or government.

utilization review The ongoing evaluation of the practices of a provider with the intent of determining and curtailing unnecessary services.

I. A BRIEF HISTORY OF PSYCHOTHERAPY IN HEALTH CARE DELIVERY

Health policy regarding psychotherapy prior to the late 1950s was simple and straightforward: It was regarded as too economically elusive to be calculated in health insurance and was, therefore, universally excluded as a covered benefit. In fact, it was not until the mid-1960s that health insurance policies began in any noticeable number to include what was at first limited psychotherapy benefits. Prior to that time all psychotherapy was out-of-pocket, making the ability to pay rather than need the determining factor of who received the services of a psychotherapist. It did not matter whether it was with a psychiatrist or a psychologist, as the economic situation was the prevailing factor. But it must be remembered that medical/surgical services were not covered by health insurance until the 1930s, and then not in impressive numbers until the 1940s. How health care came to be part of an insurance benefit, and how eventually psychotherapy was included in such coverage, deserves our consideration as it is part of the evolution of public policy that continues to this day, with ongoing change extending well into the future.

A. American Health Care in the 1930s: The Robin Hood Model of Economics

This decade in history is known as the Great Depression, characterized by hunger, high unemployment, and economic stagnation. It was also the decade when medicine ascended fully to the stature of a profession, having established A and B grade medical schools, replacing the apprenticeships by which characteristically one became a physician in the 1910s and 1920s. Soon all but A grade medical schools were closed, upgrading the profession even more. The physician of the 1930s was proud, altruistic, well-educated, and dedicated. The Hippocratic Oath was taken seriously, and in spite of a shortage, the physicians saw everyone who wanted to see them, even if it meant a consistently 16-hour work day. A request for a house call was never denied. It was unthinkable to press a bill for payment, and no physician would even consider using a collection agency. Patients were seen and house calls were made even when a patient had not paid the accumulated bill for 3 or 4 years. Physicians knew people were strapped financially, and they saw themselves truly as caregivers without regard to compensation. The physicians of the period were overworked, never wealthy, and looked old before their time.

What about the patient who was financially well off? The physician simply doubled or even quadrupled the bill, depending on the patient's wealth, explaining it was up to those who could to pay for those who could not pay. This was an accepted practice, without exploitation or greed on either side. So there was remarkable availability of outpatient health care, regardless of ability to pay, whereas health insurance premiums would have been beyond the reach of most Americans in the 1930s. The system was not perfect, especially in

rural areas that required considerable travel to the nearest physician. Furthermore, some persons were too ashamed to see a physician if they owed money. What about the matter of hospitalization, however?

B. The Birth of Blue Cross and Blue Shield

For decades prior to the 1960s no one thought of a hospital as making a profit or even breaking even. Almost all were nonprofit and most were owned by religious (Catholic. Jewish, Presbyterian, Methodist, Seventh-day Adventist) and other charitable organizations, or were community sponsored. At least twice a year each hospital held a fund-raising drive to make up the shortfall. No one who needed hospitalization was turned away, regardless of ability to pay. The now ever-present insurance card demanded at the reception desk of every hospital was nonexistent.

To create a much-needed revenue stream the hospitals organized into an entity named Blue Cross. For those who could afford the monthly premium, small by today's standards, any needed hospitalization was prepaid. In defense, the physicians organized into a parallel organization named Blue Shield that paid for their services. However, "the Blues" Plans were hospital oriented and covered care only when it was hospital related. The joke of the era was that if you needed to have a hangnail removed you would first need to be hospitalized.

It was important to the policy makers that the hospital doors be kept open during the Great Depression, and a number of concessions were made to Blue Cross and Blue Shield, collectively known as "the Blues." They were separately incorporated in each state, with some states having more than one set of Blues Plans, and they were tied together by membership in the National Association of Blue Cross and Blue Shield Plans. Special legislation designated them to be medical services corporations (nonprofit) that were not only exempt from federal and state taxes, but had other competitive advantages, such as relief from the large financial reserves required of insurance companies and guaranteed discounts for their hospitalized patients. Hospitals and physicians survived, but the seeds for certain negative economic factors were sown in that era. For the first time a two-tiered system emerged in health care between those who could afford the inexpensive membership in Blue Cross and Blue Shield and those who could not and who increasingly were remanded to the county hospital. In addition, for the first time a third-party payor intruded into the previously simple Hippocratic relationship between doctor and patient. It was the beginning of economic complexities that could not have been anticipated at the time.

C. The History of Capitation

A method of reimbursement for large populations that is based on a set amount of payment per member (enrollee) per month (known in the industry as pm/pm) also had its beginnings in the 1930s. The Ross-Loos Group in Los Angeles and Doctor Callan and Staff in the San Francisco Bay Area solicited subscribers from the general public, as employer-sponsored health insurance was still almost a decade away. This fact, with ready access to health care in spite of an inability to pay, made prepaid health care not very compelling, or even financially attractive. Consequently, the Callan plan suffered an early demise, while the better financed and more aggressively marketed Ross-Loos group survived to the present era.

Concurrently capitation was launched in a big way, but out of necessity, on the Mojave Desert. A then unknown industrialist, Henry J. Kaiser, had won the bid to build the aqueduct from Hoover Dam to Los Angeles, but he was unable to hire enough construction workers to do the job in spite of the high unemployment at the time. These workers were reluctant to take their families to the desert where only dirt roads existed and the rough terrain made the nearest health care facility 15 to 20 hours away. Just as Kaiser was about to fail, a young physician named Sidney Garfield approached him with an offer he could not refuse. For just 5 cents a worker hour he would build and staff the outpatient and inpatient facilities that would guarantee treatment for both his employees and their families.

That day in the early 1930s capitated health care, embodying both the management of care and the acceptance of financial risk, was born in a big way and for all time. While the facilities were being built Garfield launched a prevention program, spending a significant part of the capitation dollars to educate the workers and their families on the avoidance of hazards in the desert: rattlesnake and tarantula spider bites, scorpion stings, heat stroke, and heat exhaustion. He strongly believed this would pay off in reduced treatment costs in the future. He was right, of course, but by implementing this aspect he defined the concept that capitation, which allows for spending the money as the provider sees fit, includes prevention. It was not long before his ideas expanded to include wellness, an integral part of the most successful capitated programs today.

After the aqueduct was completed, Kaiser transported what was still called Sidney Garfield and Associates to Northern California to provide capitated health care to his thousands of shipyard workers during World War II. Then, following the end of that war, Kaiser invited Garfield to offer capitated health care to the general public. In 1946 the Kaiser Permanente Health System was founded as the prototype of the modern health maintenance organization (HMO), a name that was not to be coined by Paul Ellwood for another 15 years. Because capitated care did not have the deductibles, limitations, and exclusions common to health insurance at the time, the Kaiser Health Plan grew rapidly in the next few years to over five million enrollees in California, Oregon, and Hawaii.

The success of the Kaiser Health System eventually caught the attention of the policy makers in Washington, and in 1974 the Congress passed the HMO Enabling Act which provided start-up money to encourage the formation of new HMOs. Most of the new HMOs did not survive beyond the federal funds, but those that did were integral to the rapid rise of managed care in the 1980s.

D. The Rise of Employer-Sponsored Health Insurance

Once the United States plunged into World War II, a hidden enemy was inflation resulting from the overheated economy of total mobilization. The Congress quickly passed wage and price controls, inadvertently hampering the recruitment of workers from the farms to the war economy. Moving literally millions of rural workers to the large cities required incentives, and since higher wages were not permitted, offering complete health care was an acceptable alternative. Emerging from the Great Depression, these workers who flocked to the shipyards, munitions plants, and aircraft factories liked the security that employer-paid health care gave them. After the war the labor unions made it a centerpiece in their collective bargaining, and employers found the tax and other advantages preferable to granting higher wages. By 1950 employer-paid health care was a part of the fabric of our society, and the third-party payor was here to stay.

E. Outmoded Public Policy and Psychotherapy

While access to medicine and surgery was changing rapidly, making physical health care available to most employed persons, mental health remained mired in an outmoded public policy that believed psychotherapy was not feasible under third-party payment. The development of the Blues had made available hospital care for acute mental conditions, but outpatient care continued to be excluded. For the most part mental conditions were treated in the ever-burgeoning state mental hospitals from which most persons who had been committed did not emerge.

In the meantime, the private practice of psychotherapy was growing rapidly as an out-of-pocket endeavor. The American public emerged from World War II with an insatiable interest in popularized psychotherapy, and especially psychoanalysis. New York, Boston, Chicago, San Francisco, and Los Angeles were the places where scores of psychoanalysts with heavy accents who had relocated from Europe flourished. In addition, doctoral-level psychologists who were trained under postwar government funding were flocking to private practice. This training in large measure was made possible by both V.A. stipends and National Institue of Mental Health (NIMH) training grants that graduated an increasing number of psychiatrists, psychologists, and social workers. NIMH also launched paraprofessional training, erroneously believing there would never be enough trained professionals to meet the post–World War II demand for psychotherapy. Universities took advantage of training grants and stipends and developed programs that included research in psychotherapy along with clinical training. Steadily the focus was shifted from psychoanalysis to brief psychotherapies because of a growing body of research that demonstrated the importance of behavioral and other treatment modalities. The usual arrangement for these newly trained psychologists was to affiliate with a practicing psychiatrist, add psychological testing to the services offered, and assume the psychiatrist's overload of patients. Fees were generally 10 or 15 dollars a session, and there were far more patients than there were practitioners. Eventually this had to change, and it was generally recognized that the private practice of psychotherapy would be severely limited without its inclusion in prepaid health care.

The first comprehensive prepaid psychotherapy benefit was written at the Kaiser Health System. Having discovered in the 1950s that 60% of all physician visits were by patients who either had no physical condition but were somatizing stress, or who had a physical condition exacerbated by stress or emotional factors, the physicians at Kaiser instituted a psychotherapy system in-house to which they could refer. Research on these somatizing patients revealed what has been termed the

medical cost offset phenomenon: The provision of psychological interventions interrupts the somatization cycle and reduces medical care by 65%, with a significant net saving over the cost of providing the psychotherapy. These experiments led the Kaiser system to make the courtesy physician referral-only psychotherapy a covered benefit available to all Kaiser enrollees. By the late 1960s the federal government sponsored a number of replications of the Kaiser studies, all of which led to the general acceptance that psychotherapy is feasible under third-party payment. In the passage of the HMO Enabling Act (1974) there were mandated 20 sessions of psychotherapy for federally chartered HMOs, and most private health policies had included a psychotherapy benefit. Private health plans emulated the 20-session benefit, renewable every year, while others went as high as a 50-session annual benefit. The outmoded policy had been changed, brought about by the public clamor for psychotherapy, coupled with the medical cost offset findings that such coverage was economically possible.

II. TOOLS AND PRINCIPLES FOR DECISION MAKING IN HEALTH ECONOMICS

Expenditures for health care services have risen more rapidly than expenditures on most other goods and services in our economy. In 1965 health care accounted for only $35.6 billion, or 5% of the gross national product (GNP), which rose by 2000 to over $1 trillion, or 12% of the GNP. Part of the increase is the result of increases in the population receiving such services, but much of it is the result of price increases for health care. The rapid and continuing increase in the amount of the nation's resources being devoted to health care raises important policy questions, especially since the government now pays over 40% of the total health care expenditure. Are these increases justified? Should the government continue spending so much on health care when there are competing needs in education, social security, and defense? If the resources were allocated differently, could a greater amount of health services be provided? These are the kinds of questions that are the subject matter of health economics.

A. Health Economic Tools

Health economics utilizes two basic tools, along with a set of criteria, for analyzing efficiency and distribution. The first tool is the use of the techniques of optimization, which seek to maximize efficiency and minimize costs in the allocation of scarce resources. Economists prefer to use the word allocation rather than rationing for obvious reasons, but the fact remains that in every society today there is a scarcity of health care resources, making rationing ubiquitous. Some economists argue that use of the term rationing would require public policy to come to grips with the realities, as has the state of Oregon. In a uniquely direct method the state listed all of the health conditions in terms of priority, from the most important (life threatening) to the least, and assigned a cost and frequency to each. In going down the list, when the cumulative costs exceeded the dollars available, the state drew a line and everything thereafter was not covered by Medicaid. Thus stroke is very high on the list, whereas anencephaly (a condition in which a child is born without a brain) is not covered. Most mental health services did not fare well beyond those needed for acute psychosis, and psychotherapy was all but eliminated. This is a very dramatic application of optimization in response to scarcity and costs, and no other government in the world has had the determination to so squarely face the issue. Economists continue to use the word allocation, with some going so far as to name as "silent rationing" such common health care optimizations as the criteria for medical necessity, waiting lists, benefit exclusions, deductibles, limitations, precertification, utilization review, provider profiling, and many other devices. In fact, managed care itself is regarded by many as a more humane form of rationing than the long waiting list for services common in the Canadian plan.

The second economic tool is the determination of equilibrium situations by which economics can predict such things as the final result in the demand for services. This is not easy to do, and health economics is replete with errors. For example, for years it was axiomatic that adding a new health profession creates new demand and increases costs. This was the argument used for many years to restrict mental health services to psychiatrists only, to the exclusion of psychologists and social workers. This axiom was true in indemnity insurance, but in HMO and other managed care settings, the appropriate replacement of physicians by nurse practitioners, orthopedic surgeons by podiatrists, ophthalmologists by optometrists, and psychiatrists by psychologists reduced costs, increased efficiency, and did not lower quality. Now, in the same vein, doctoral-level psychologists are being replaced in appropriate situations by practitioners with master's degrees.

Much of the effort in forecasting (i.e., equilibrium situations) has been the attempt to predict growth and costs in government entitlement programs, such as Medicaid and Medicare. Whether the application of the method has been less than precise, or whether politicians seek out economists who will say what the advocates want to hear, there has been a consistently large-scale underprediction of costs in every government health program. Macroanalysis, which relies on aggregate data most often derived from large-scale statistics gathered by various government agencies, is open to considerable interpretation, whereas microanalysis applied to smaller-scale outcomes research can be more precise.

B. Basic Health Care Decisions and the Criteria for Decision Making

Implicit in the use of the foregoing analytic tools is a set of criteria for evaluating the economic welfare of the patient. Health economics is driven by scarcity, so that basic choices must be made in output, production, and distribution, all toward achieving optimal health possible with limited resources.

1. Determining the Output of Health Services

The first set of health care decisions that must be made is the determination of the amount of money to be spent: How much should be allocated to, and what should be the composition of, health care services? Using a price system, what services and in what allocation would the health of the consumer be best served? For example, recently Medicare increased psychotherapy services in cases of bereavement and other conditions particularly affecting older adults, but curtailed as grossly ineffective the provision of psychotherapy to advanced Alzheimer's patients in nursing homes. Medicare has gone so far as to require the return of payments previously made for such services, resulting in millions of dollars in paybacks owed by a large number of psychotherapists.

2. Determining the Best Way to Produce Health Services

Health services can be provided (produced) in a variety of settings, from HMOs to solo practice, and in a number of financing strategies, from capitation to fee-for-service. Even within the same kind of setting there can be considerable disparity in efficiency and quality. Recently public policy has shifted toward the increasing use of HMOs and other managed care arrangements by Medicare and Medicaid, with considerable cost savings to the government and advantages to the recipients, such as drug prescription coverage which did not exist in previous arrangements. However, a number of HMOs could not produce the required services with the capitation given them, one that resembled that of the general (employed) population rather than reflecting the higher costs for the care of the elderly or the indigent, and many have unilaterally pulled out of the program. The Health Care Financing Administration (HCFA) is in the process of adjusting the capitation rate to more realistic levels in an effort to halt the exodus of the HMOs from Medicare and Medicaid. From HCFA's point of view, these programs are a success because they have saved the government millions of dollars. On the other hand, patient satisfaction has been low. In the process of readjusting the rates, HCFA is seeking to learn from the handful of HMOs, such as Kaiser-Permanente, which consistently show strong patient satisfaction.

3. Determining the Distribution of Health Services

The third criterion is deciding on the distribution of health services. This may range from giving all persons all services, which is not possible in an environment of scarcity, or limiting services only to those who can pay, which is not in keeping with optimizing consumer health. Somewhere in between these two extremes is a wide range of options, and these run the gamut from NHI to medical savings accounts. A recent national debate has focused on the issue of *parity,* whether mental health expenditures should be equal to those for physical health. This concept, which has resulted in the enactment of a number of federal and state laws, will be more fully addressed in the discussion of supply and demand.

C. Values Inherent in Health Economics: Output versus Input

Health care can be viewed as an output of the health care industry, or it can be seen as an input to health. This is an important distinction that will determine much of public policy, but the resulting debate with its questioning of theoretical assumptions often stems from the fact that these two views are not mutually exclusive. The first of these sees health care as the output produced by physicians, hospitals, and all other providers in the industry. It is therefore important to measure how efficient is the output, and to determine

the combination of resources that will result in the best trade-off between cost and quality.

An alternative does not view health care as a final output, but as one input among many others that contribute to a final outcome termed "good health." In this view improvements in health can be the result not only of treatment services, but also prevention programs such as health education, lifestyle change, pollution reduction, and even research and improved training of providers. There is no doubt that the good health that has resulted in the tremendous increase in longevity in the last hundred years is not only the consequence of improved medical care, but also the result of such factors as a safe food and water supply and inoculations. At the present time most poor health and disability results from lifestyles reflecting stress, poor eating habits, lack of exercise, alcohol and drug abuse, tobacco use, and automobile accidents.

The problem for the decision makers in allocating scarce resources is the difficulty in measuring cost efficiencies when expenditures are increased in an area that may or may not prove preventative. For example, money spent in health education to improve lifestyles may not appear as a saving in reduced cardiac and cancer diagnosis and treatment for years or even decades. Likewise, behavioral health programs to reduce stress require allocation of limited money now, whereas the benefit to the system in medical savings may be in the distant future.

In the present era of cost containment, with its fierce competition in managed behavioral care, the emphasis is on output rather than input. Managed behavioral care companies (MBCOs) are operating at a loss or, at best, on thin margins. It is likely there will be continued effort to reduce costs by limiting access and by reducing production costs (i.e., an ever-decreasing fee paid to providers). In a well-planned system, however, input must be balanced with output, otherwise the deficiencies of the present will be perpetuated. This is why in behavioral care the medical cost offset phenomenon, to be discussed later, is so important, as it demonstrates how output can be affected almost immediately by input.

D. The Complexity of the Health Care Market

Rather than being a single market, the health care sector is a complex of a number of interrelated, and often competing markets. The definitions of producer and consumer are not as simple as they are in the usual economic sequence, for producers are also consumers, and vice versa. Let us take the situation found in managed care as an example. A managed care company (MCO) is at once a producer of services to its covered population, and a purchaser (consumer) of services from PPOs, hospitals, and other providers. There is, therefore, a series of health services consumers, with the patient ultimately designated the *end consumer.*

The MBCO that consumes hospital services is in competition with the hospital with which it contracts, inasmuch as the MBCO is in the business of diverting inpatient (hospital) care to outpatient care because it is more cost-effective. Nurse practitioners, as less expensive providers, replace primary care physicians (PCPs) where feasible and, in turn, many PCPs do the work of specialists. Each of these is a market, and each is competing for a market share in an environment of scarcity. Competing markets are throughout health care: orthopedic surgery versus podiatry, ophthalmology versus optometry, nurse practitioners versus physician assistants, and psychiatry versus psychology (and now psychology versus social work and other master's level practitioners). Some of these markets at times seem to resemble open warfare toward each other. But the economic trend is unmistakable: The health care sector is pushing knowledge downward, using wherever appropriate less expensive providers to do the routine diagnosis and treatment, while using the highly trained providers for the extraordinary diagnosis and treatment. This is accomplished by upgrading the less trained practitioners to recognize the limits of their training and to know when to refer upward.

There can be identified within the health care sector of our economy the education market, the research market, and the prevention market, all competing for a share of the limited dollars. The expectation that nonprofit entities will cost less than their for-profit counterparts does not hold, as many nonprofit hospitals and other providers have a different agenda than efficiency of production, and ultimately cost much more. In fact, the last decade has demonstrated that nonprofit hospitals, accustomed to the traditional Medicare and Medicaid cost-plus-two-percent reimbursement, went bankrupt when they lost this subsidy and had to compete on the open market. This is why the nonprofit hospital has all but disappeared, having been sold to its for-profit counterpart.

In recent years the pharmaceutical market, not thought by many as part of the health care sector, has emerged as a significant cost center. Newer drugs, especially in the psychiatric area, are remarkably effective

with few if any tardive side effects, but they carry a high price tag. Again it is difficult to assess immediately the eventual cost of these newer medications when weighed against potential savings in lengths-of-stay in psychiatric hospitals or duration of outpatient psychotherapy. Managed care for drug costs have emerged, with volume buying for HMOs and mail-order purchases for individuals becoming the trend.

Health economists have pointed out that the efficiency of the separate markets and their interrelationship affects the efficiency with which health care is produced, the cost at which it is produced, and the growth of expenditures. The continuing evaluation of each of these markets, therefore, is of significant concern for public policy.

III. SUPPLY AND DEMAND IN AN INDUSTRIALIZED HEALTH CARE ENVIRONMENT

Some economists would base demand solely on the need for health care, assuming that utilization of physician and hospital services reflects only the care that is actually needed. However, a number of factors determine demand, or even perceived need, and experience has shown that planning based solely on health care need is likely to result in either too few or too many resources.

A. Errors in Demand Based on Perceived Need

An example of the inaccuracy of using only need-based planning is the Hill-Burton federal legislation initiated in the late 1940s. The economists advising the Congress at that time estimated the need to be 4.5 hospital beds per one thousand population as the standard, with 5.5 beds per one thousand for rural populations where distance from home would be a factor. Federal funds were made available for building new hospitals and expanding older ones with the intent of achieving this standard thought to reflect actual need. The results were unfortunate, as this legislation inadvertently fueled a noncompetitive health economy. The hospital beds created far exceeded need, but since hospitalization is an expensive and often a lucrative procedure, the hospital industry saw to it that the beds were all utilized. The slogan of the time became, "A built bed is a filled bed," and the nation experienced its first government-induced inflationary health spiral. It was not until the Health Reform Act of 1986, which eliminated guaranteed cost-plus reimbursement for hospitals and the DRGs that accompanied that legislation that the truth of the matter came to light: We had created literally twice as many beds as were needed. Not only that, hospitals had been routinely running up expenses since their margin was a percentage of costs: The higher the costs the greater the margin. The incentives were all in the wrong direction, a situation that is not an uncommon characteristic of well-meaning public policy.

The Hill-Burton legislation increased physician costs as well as hospital costs, although to a lesser degree. Physicians were offered various incentives by hospitals to help them fill the surplus of beds, the most frequent of which was the opportunity to have a hospital-based practice. As this was more lucrative than a solely ambulatory practice, many physicians seized the opportunity, thereby increasing overall physician costs.

During his administration President Lyndon Johnson sought to increase the number of dialysis machines in hospitals. The National Academy of Sciences, which lacks expertise in practice matters, was asked to estimate the need. Their recommendation was put into effect, and at the expense of the taxpayer, there was such duplication of available kidney dialysis machines that many were idle most of the time. But the cost of kidney dialysis did not come down, as the per-unit cost was increased to pay for the idle time.

In defense of health economists, perceived need is often different than actual need, or a perceived need may be correct but public policy creates incentives in the wrong direction. In behavioral care this became apparent shortly after the Congress enacted DRGs in medicine and surgery, leaving psychiatry without these restrictions. Almost overnight medical and surgical beds were emptied all over America. A number of hospitals, used to cost-plus reimbursement with no restrictions, went bankrupt before some astute hospital administrators saw an opportunity in the absence of DRGs in psychiatry. Empty hospital beds, as many as 50% in some general hospitals, were quickly converted to psychiatry and substance abuse treatment. These were huckstered on television, educating the public that the hospital was the appropriate place for a wide range of life's problems, and especially the usual difficulties of adolescence. Mental health/chemical dependency (MH/CD) hospitalization costs soared. Government was helpless in curtailing the new inflationary spiral in MH/CD, which was now driving up overall health costs after medical/surgery costs had been tethered. Public policy shifted toward allowing the private sector to bring MH/CD costs

in line. Restrictions on the corporate practice of medicine and other laws and regulations were rendered moot, and the managed behavioral health care industry was launched in the mid- to late 1980s.

The spillover to outpatient psychotherapy, particularly in after-discharge counseling and treatment, created a new industry for psychologists who heretofore practiced on an outpatient basis. Going to the hospital to prepare a number of patients for ambulatory care often required only an hour, while billing reflected individual therapy sessions with each of a number of patients. Surveys began to reveal for the first time the existence of substantial six figure annual incomes for some privately practicing psychologists. A behavioral health boom clearly had been created, which rendered behavioral care less likely to foresee the shift in public policy that would bring severe restrictions on outpatient psychotherapy, along with those for hospitalization, by the new MBCOs.

B. The Nullification of the Supply and Demand Relationship

It has long been recognized that the "laws" of supply and demand have not operated in the health care sector as they do in the general economy. This is because the physicians (and therefore the hospitals and other providers) have traditionally controlled both the supply and demand sides of health care. It is the doctor who determines what treatment the patient needs, what procedures should be rendered, and how long the treatment should last.

On the *supply side* the government subsidized the education and training of health care practitioners not only to relieve the critical shortage of a few decades ago, but also to create a surplus of providers. It was widely believed that once there was an ample supply of doctors, costs would go down. This is true in every other industry; a glut of workers results in cheaper wages. As the number of physicians increased beyond the number needed, costs went up instead of down. And the greater the glut, the greater the costs. Physicians, being in control of both supply and demand, merely rendered more treatment, and particularly more procedures, to a declining number of available patients. In practice-building seminars physicians were taught that it is not the number of patient visits, but the number of costly procedures that these visits generate, that enhance physician incomes.

In health economics such practices are termed *demand creation,* which nullify the effects of oversupply (i.e., too many physicians). Of all of the health professionals, behavioral care specialists (including psychiatrists, psychologists, social workers, marriage and family counselors, master's level psychologists, and substance abuse counselors) are in the greatest oversupply. It would be expected, therefore, that demand creation would be a prevalent practice among psychotherapists and others who treat behavioral disorders. Examples abound, but some of the most widely recognized include the following, although most of these have been curtailed in the new health care environment (see Section IV).

The most obvious example of demand creation is to place the declining numbers of patients available to each practitioner in increasingly longer psychotherapy. One patient seen for 3 years is equivalent to three patients seen for 1 year each. MBCOs have eliminated this practice for all but the relatively few patients willing to pay out-of-pocket.

When the American Psychiatric Association, which publishes the *Diagnostic and Statistical Manual of Mental Disorders* (DSM), changed the definitions in DSM IV of attention deficit disorder (ADD) and attention deficit hyperactivity disorder (ADHD), it quadrupled the number of patients, especially children and adolescents, who would be eligible for treatment. The widespread medication of children and adolescents with psychotropic/stimulant drugs now includes increasing numbers of preschool children, prompting two White House Conferences on the subject in the year 2000.

Another form of demand creation is to create a syndrome for which the psychotherapist already has a treatment. Until recently multiple personality disorder (MPD) seemed to be increasing exponentially. Investigations by payors revealed that the number of patients ostensibly suffering from MPD was directly related to the number of therapists specializing in the therapy of MPD. Patients who had never shown a multiple personality in previous therapies suddenly developed the same when they began seeing a therapist who likes to treat MPD. Also, patients who changed therapists in the opposite direction (from one who specializes in MPD to one who does not) no longer complained of multiple personalities. The question is not whether MPD actually exists as a syndrome, but whether it exists in the sudden explosive numbers in which it was suddenly seen. It eventually became apparent that certain kinds of impressionable patients who want to please the therapist, and especially borderline patients, are highly suggestible and respond positively to all kinds of prodding, such as those designed to elicit the symptoms of MPD.

Another instance of demand creation, which disappeared as rapidly as it had emerged, was the so-called recovery of repressed memories of childhood sexual abuse, especially when it ostensibly involved incest. Many authorities believe the recovered memory was actually created by the hypnosis and other techniques designed to elicit it. During its heyday psychotherapists treating recovered memories proliferated and a significant number of accused persons (many of them the ostensible victims' fathers) went to prison, only to be subsequently found innocent on appeal, or to have their sentences commuted. Several psychotherapists have lost their licenses, and the courts have effectively put an end to the treatment of this syndrome.

The diagnostic criteria of depression are constantly shifting toward including more and more of what has previously been regarded as usual, normal mood swings experienced by all individuals as part of daily living. Undoubtedly much of clinical depression is missed by the physician, but some estimates that at any given time 40% of individuals seeing a physician may be suffering significant clinical depression requiring psychotherapy seems high to most observers. The movement to increase the awareness of depression has gained important advocacy from the wife of the Vice President of the United States, who herself suffered a depression when her daughter was killed in an automobile accident. It has yet to be determined how much may be an important unrecognized demand for which the health care system must develop means of identification, and how much might be demand creation being fostered by providers. In either case, depression that is real and undiagnosed will reveal itself in the health care system under a different guise that will, nonetheless, increase health care costs.

Economists would stress that even though the provider may be in a conflict of interest at times with efforts to control demand, few practitioners would cynically set out to inflate costs. Their avowed intent is that the patient should receive all necessary health services. Nonetheless, one authority has referred to a process of "unconscious fiscal convenience" in describing the conflict between providers and the health system.

C. Parity

There is a movement among providers and other advocates to equate physical and mental health in importance, and to devote equal resources to each. This call for parity has resulted in a number of federal and state laws mandating an equal allocation of resources, but none has resulted in any significant reallocation in favor of mental health. The federal law would exempt any health plan for which compliance with parity would raise the premium by more than 3%, effectively rendering the law inconsequential. State laws, too, have not had a significant change in resource allocation.

If parity were a serious consideration, either the $1 trillion annual health budget would have to be doubled, or the existing expenditure would have to reallocate half a trillion dollars each to physical and mental health. Both are seen by health economists as very unlikely events even though legislatively the concept of parity is gaining momentum.

One of the problems is that whereas medicine and surgery are more or less measurable, mental health can encompass an ill-defined range from the vicissitudes of daily living to mute psychosis. Of what is termed "mental health" treatment in the United States, 85% is reportedly provided by primary care physicians. This includes the prescribing of psychotropic drugs and the dispensing of advice and reassurance. How much of this primary care should be credited to the mental health side of parity? Until these problems are resolved, the implementation of parity will be elusive.

D. Mutually Misperceived Demand: The Importance of Medical Cost Offset

In the mid-1950s the Kaiser-Permanente Health System in Northern California discovered that 60% of its patient visits to a physician were by patients who had no physical disease, or whose physical problem was not of sufficient severity to warrant the magnitude of patient debility or discomfort. In that era the relationship of stress to physical symptoms was not readily understood. Today we regard these patients as somatizing: the translation of emotional problems (including stress) into physical symptoms. The 60% of patients' visits to physicians were by persons who were manifesting the physical concomitants of stress, or whose stress was complicating and exacerbating an existing physical illness. This finding was verified in 1967 by testimony to Congress from the American Medical Association that set the figure at 65% to 70%. The reason this phenomenon was discovered at Kaiser-Permanente is because that early HMO did not require that a diagnosis be rendered in order for the physician to be reimbursed. The Kaiser physicians were on salary, while in indemnity insurance the physician must submit a reimbursement form that bears a diagnosis. If one is not established, the physician provides a provisional diagnosis, while in the Kaiser system no diagnosis had to be submitted when

there was none. Thus, after repeated visits yielding negative findings in spite of extensive investigation (laboratory procedures, x-rays, MRIs, and other tests repeated several times), the physician could enter in the patient's chart the finding of "no significant abnormality." The patient then characteristically seeks out another physician and repeats the cycle.

This is both a patient and provider misperception. The patient is convinced a physical disease exists and will eventually be found. With the repetition of tests the patient, rather than being reassured, is increasingly convinced that the next round of examinations will reveal the disease. This is in keeping with what would be expected under psychological reinforcement theory. The physician, who is trained to pursue physical illness until it is found, becomes an inadvertent accomplice in the somatization cycle.

Initial research at Kaiser-Permamente found that brief psychotherapy (5 to 8 sessions) reduced medical utilization by 65%, and that the patient did not resume somatizing. The National Institute of Mental Health (NIMH) has sponsored dozens of replications of this research and has found medical cost offset, more than sufficient to cover the cost of the psychotherapy, present in a variety of settings. However, the more organized the delivery system, and the more primary care and behavioral health are integrated, the greater the medical cost offset. Why, then, after 40 years of research is there not a greater implementation of psychological interventions with the somatizer?

The answer lies in the inelastic barriers found in the health care system. In most health plans data are not obtained in a way that can connect the necessary cause and effect (i.e., tracing back medical visits for those who received psychotherapy). Furthermore, most behavioral care currently is being provided by carve-outs, separate companies that do not connect at all with the computers gathering data on medical and surgical visits.

For this and other reasons, the policy makers at NIMH and the Substance Abuse and Mental Health Services Administration (SAMHSA) are actively encouraging through research and demonstration projects the integration of behavioral health within primary care, and the inclusion of medical cost offset as an economic tool.

IV. THE NEW COMPETITIVE ENVIRONMENT: WINNERS AND LOSERS

The delivery of health care services in the United States changed dramatically in the 1980s. Public policy in the 1970s favored increased regulation, with a trend toward rate regulation of hospitals, and even the serious consideration of giving hospitals public utility status. The advocacy for national health insurance (NHI) had gained more momentum than at any time in the history of health care. Senator Edward Kennedy was chairing the U.S. Senate Subcommittee on Health that was holding highly visible hearings on a developing plan for single payor, government-sponsored universal health care termed NHI. Then suddenly the political climate did an about face, but not because of any change in the Democrats' control of the Congress. Rather, the shift was the result of an economic crisis discussed below. Senator Russell Long, chairman of the U.S. Senate Finance Committee and a fellow Democrat, replaced Senator Kennedy with Senator Herman Talmadge, a foe of NHI.

A. Why NHI Failed: The Economist's View

NHI would constitute a wide-scale, comprehensive redistribution of health care services. Because there would be no aspect of the health care sector that would not be significantly affected, its potential implementation galvanizes every stakeholder to adopt a strong pro or con position. The AMA opposed it because in the 1970s physicians held virtual monopoly status. The private health insurance industry opposed it because it was burgeoning, and it wanted no increase in a federal health bureaucracy that might impede its growth. The welfare sector favored it because it would bring universal health care to every citizen, and would guarantee the continuation of a welfare system that was already under fire and threatened with cutbacks.

Most health economists opposed NHI because the very nature in which it was proposed would ensure it would go the way of Medicare, Medicaid, and other federal health programs that from their inception were designed to be inefficient. All proposed NHI plans had the incentives in the wrong direction, encouraging higher costs, waste, and even fraud. The American public seemed to agree with the warnings of most health economists since they were seeing firsthand the inefficiencies of such government services as the post office, and hearing daily in the media how the welfare system, Medicare, and Medicaid were out of control financially. The ultimate reason was the fact that the inflationary spiral in health care was considerably higher than that of the general economy, and most authorities pointed to the federal government as the culprit causing the almost out-of-control costs increases. For these

reasons President Nixon's efforts to expand the private health sector through such initiatives as the HMO Enabling Act (1974) were enacted by Congress, while President Carter's request that the Congress enact strong government restrictions on hospitals as a way of reigning-in costs was rejected. In both cases there was clearly a bipartisan public policy in favor of private initiatives rather than government interference.

Rising inflation in the 1960s stimulated the demand for private health insurance. With inflation employees moved into higher tax brackets, and the unions began to bargain for larger health benefits as these were not taxable. The inflationary economy enabled business to pass on increased health costs to consumers. In the meantime, with sharply increased health benefits employees ceased to worry about health costs and the interest in NHI all but disappeared. During this time, however, private health insurance increased 10-fold from $31 billion annually in 1965 to $370 billion in 1990.

It should be noted that NHI surfaced again as a serious, but aborted consideration in the first term of the Clinton Administration. The First Lady led the widely publicized Rodham-Clinton Task Force, chaired by Ira Magaziner. It was hampered because it operated in secrecy and no one was certain what the objectives were. There was more than one published version, and a complete list of the five-hundred-plus task force members was published much later and only in response to a court subpoena. Violation of the "sunshine laws" provoked a number of lawsuits, and several of the prominent health economists who had been invited to participate eventually defected. When the courts forced a publication of the members of the Task Force, it was discovered that most were government employees. Unlike the movement for NHI during the 1970s, this most recent plan was short-lived.

B. Other Factors Encouraging a Competitive Health Care Market

From an economist's standpoint, the massive increases in medical expenditures by both the public and private sectors were equivalent to a huge redistribution of wealth, from the taxpayer to the health sector. The forces pushing events in that direction were all but out of control, and in such instances an economy will inevitably seek to tether them. The trend, as it continued to evolve, was clearly in the direction of market competition rather than government regulation.

The supply of physicians had been increasing steadily for two decades, especially since the enactment in 1963 of the Health Professions Educational Assistance Act (HPEA). New medical schools were built and existing ones were significantly expanded. This did not have an immediate effect on costs, for the virtual monopoly status of medicine continued until other factors curtailed its influence. Once this happened, the effect of supply (increased number of physicians) on demand (lower costs) became apparent.

The HMO Act of 1974 has already been discussed as a precursor to the emergence of a competitive market. At the time the Kaiser-Permanente Health system, almost alone among HMOs, was the prototype used to draft the legislation. Edgar Kaiser, the son of the late Henry J. Kaiser, decided that the Kaiser Health plan would give away the technology in the interest of creating as many HMOs as the economy would need. Kaiser physicians were assigned to mentor the fledgling HMOs, and the HMO industry was launched.

HMO hospitals were needed to service the new HMOs, and in 1979 the Congress amended the laws that were inhibiting the building of new hospitals. The existing hospitals opposed the new legislation as it would threaten their revenue. On the other hand, the HMOs needed hospitals that would operate on the new capitated health economy.

Two provisions of the HMO Act deserve mention, as these further enhanced the market effects intended in the creation of the HMOs. The first required all employers to offer as a choice to their employees at least one federally chartered HMO plan. Secondly, these HMOs were exempt from restrictive state practices. Without these two provisions the fledgling HMOs would undoubtedly have been stifled.

The elimination of "free choice" of provider in Medicaid in 1981 opened the door for the states to put their Medicaid services out to bid. Under the guise of patient sovereignty (i.e., freedom to choose a provider), the AMA bitterly opposed this legislation initiated by the Reagan administration as it threatened the core of medicine's monopoly status.

Again during the Reagan administration, in 1983 a new method of paying hospitals for Medicare was introduced. Called DRGs (diagnosis related groups, previously discussed), this had a profound effect on lengths of stay in hospitals. By the time this legislation was enacted, market competition had already advanced in the private sector, and the two initiatives (public and private) ended forever the hospital as a source of runaway health costs.

The introduction of lower-cost health care substitutes by employers enhanced market initiatives. For

the first time outpatient surgery, outpatient detoxification, partial hospitalization, and a number of other alternatives to costly hospitalization became part of the benefit package. Manufacturing had become increasingly concerned with how many dollars health insurance was adding to each unit of production. This was of particular concern to the automotive industry that had become engaged in fierce competition with Japanese car manufacturers. The addition on the average of $800 in health insurance premiums to the cost of every automobile placed American carmakers at a disadvantage. This was only the first of a number of steps taken by American business, not the least of which was the formation around the country of "business groups on health" that educated business leaders and pressured the health care sector for financial accountability.

A necessary step to foster competition was the enforcement of antitrust laws for the first time in the health sector. Professional societies and state practice acts inhibited market competition by limiting advertising, fee splitting, corporate practice, and the delegation of tasks. Providers could engage in boycotts, essentially ending competition where they chose. Up until 1975 when the Supreme Court ruled against the American Bar Association, it was generally believed that so-called "learned societies" (which included the health professions) were exempt from antitrust laws. Encouraged by this decision, the Federal Trade Commission (FTC) began that same year to enforce the antitrust laws in the health sector, and it charged the AMA with anticompetitive practices. The courts ruled against the AMA in 1978, and on appeal in 1982 the Supreme Court upheld the lower court decision. This completed a steadily growing public policy in favor of market competition in the health sector.

C. The Jackson Hole Group

During the 1970s and early 1980s a group of health economists concerned with the inflationary spiral in health care met regularly at Jackson Hole, Wyoming. They included such notables as Alain Enthoven (Stanford), Paul Ellwood (Minnesota), Stuart Altman (Brandeis), and Uwe Rinehardt (Princeton). Their influence was largely through their writings and lectures, particularly the widely read articles by Enthoven, and their message was clear: Health care needed market competition to tame the inflationary spiral. They also believed the time was right inasmuch as the Congress, the courts, the FTC, and the business community had paved the way over the past decade and a half. It was Enthoven who gave their concept the name of managed competition.

The influence of the Jackson Hole Group on public policy was profound, although little known by the public at large. Enthoven had been a consultant to the Kaiser-Permanente Health System in its earlier years, and Ellwood was prominent in the HMO movement in Minnesota. California and Minnesota, until recently, were the states with the greatest HMO membership concentration.

The Jackson Hole Group in various ways continued as advisors to government as well as to the emerging managed care industry. What is generally forgotten is that in the Rodham-Clinton plan for government-sponsored universal health care, the concept of managed competition was the centerpiece. Several members of the Jackson Hole Group were members, initially, of the Rodham-Clinton Task Force. They became disenchanted and left the task force after seeing the plan's determination to include market competition alongside incompatible, severe government regulations.

D. The Present Competitive Market

Managed care companies began to emerge in rapid succession alongside HMOs in the early 1980s, gained rapid momentum by 1990, and by 2000 there were 175 million Americans receiving their health care through some kind of managed care. In a little over one decade the health sector had emerged from a series of cottage industries to full industrialization. Those stunned by this unprecedented growth have asked why health care had to industrialize in the first place. Economists would point out that is not the question. Any sector of the economy that accounts for 12% of the GNP must inevitably industrialize. The real question is why it took so long, when manufacturing industrialized in the early 1900s, retail in the 1950s, and transportation in the early 1960s.

E. The Industrialization of Behavioral Care

Industrialization occurs when an economic endeavor emerges from individual, family, or small group proprietorship with limited production (known as cottage industries) to large-scale production employing large work forces and utilizing innovations in technology, organization, and consolidation resulting in increases in both productivity and its resulting lower cost to consumers. Examples of industrialization are

manufacturing (1900s), mining (1930s), transportation (1950s), and retailing (1970s). The industrialization of the automobile is illustrative. Previously hand-built in "garages" at high cost and low productivity, Henry Ford's introduction of the assembly line resulted in the manufacture of the automobile within the affordability of most Americans. However, industrialization results in a shift of control of the product from the worker (or craftsperson) to a capitalistic structure, often resulting in labor strife. When health care was the last major economic sector (14% of the GNP) to industrialize from solo practice and individual hospitals to HMOs, PPOs, and hospital chains, labor strife was revealed in the large-scale dissatisfaction on the part of providers who seemingly lost control of the dispensing of health care.

Of particular significance to psychotherapists is the industrialization of behavioral care, which occurred separately, but in parallel to the industrialization of medicine and surgery. This resulted in the carve-out, discussed earlier, and the reason for that separate entity. DRGs had tethered medical and surgical costs so drastically that hospitals experienced as much as 50% bed vacancies. They converted these to adult and adolescent psychiatric hospitalization and the seemingly ubiquitous 28-day substance abuse hospitalization. Behavioral care costs soared, and at a time DRGs reduced medicine and surgery to an 8% annual inflation rate, behavioral care was driving the entire health spiral upward with its own annual inflationary rate of 16%. With the absence of DRGs in MH/CD, third-party payors felt helpless in the face of this inflationary spiral and began dropping the MH/CD benefit. In time the MH/CD benefit might well have disappeared were it not for the emergence of carve-out managed behavioral care, which offered to increase benefits, lower costs, and cap the benefit package for 3 to 4 years.

During the rapid growth of the managed care industry in general, managed behavioral care also grew phenomenally from zero in the mid-1980s to 75% of the insured market by 2000. This was also the era of the mega-merger in American business, and the health care industry became part of what economists have termed "merger mania." At one point in time there were literally hundreds of small MBCOs. By 2000 mergers and acquisitions had greatly reduced their number. One MBCO (Magellan) achieved a 40% market share, and when added to Value/Options and United, the top three companies accounted for 60% of market share. Even more startling is the fact that the top 10 companies account for 95% of the managed behavioral care market.

F. Who Are the Economic Winners?

Those who pay the bills for health care are the undisputed winners. This includes employers, insurers, the federal government (which is the largest purchaser of health care in the world), state governments, and ultimately the taxpayer. In 1996 both health care and behavioral care had been reduced to an acceptable annual inflation rate of 4%, the lowest it had been since 1960. Unable to design and implement DRGs for MH/CD, the government had left the problem to the private sector. It paved the way by removing outdated laws and regulations, and then stood back while the MH/CD inflationary rate was tethered by the competitive market and without government interference.

The health care system is also a prime winner, because industrialization saved the health care economy from the bankruptcy predicted by many health economists. It also preserved the MH/CD benefit when otherwise it would probably have disappeared by 1990. When revenues in medicine and surgery dropped precipitously with DRGs, hospitals substituted significant increases in MH/CD services in an effort to recapture income and avoid losses. There resulted a brief spike in the inflation rate of MH/CD to an annualized 16%, prompting a trend by insurers to drop the MH/CD benefit. This was quickly interrupted when the behavioral care carve-outs demonstrated they could go at-risk for these services, relieving the insurers from what they feared would be out of control psychological/psychiatric costs.

G. Who Are the Economic Losers?

The psychiatric hospital, which in 1985 was regarded on Wall Street as a growth industry, is undoubtedly the major loser in the new health care economy. In the mid-1980s it was experiencing a financial boom when psychiatric hospitalization increased markedly. The boom was short-lived because the MBCOs directed their immediate attention to the runaway psychiatric hospitalization rate. Draconian measures quickly brought the rate down by as much as 85 to 90%. The attempt to make up the loss of medical/surgical income through the conversion of empty beds to behavioral care, as much as 50% in a few hospitals but generally about 25%, quickly vanished. For several years thereafter hospitals, and especially psychiatric hospitals, remained in financial difficulty. Some hospitals had to close their doors, but most sought relief through consolidation and mergers with

for-profit hospital chains. This strategy was successful, in that by 1998 the hospitals were less subject to extreme price pressures previously exerted by the managed care companies. Also, by that time they had learned to be competitive.

The impact on the independent solo practice of psychotherapy took somewhat longer to be apparent, but it was no less devastating. The psychotherapist had ample time to heed the warnings, but psychology and social work practices were experiencing their greatest boom and economic hard times just ahead seemed unlikely. Psychiatry had just remedicalized, placing emphasis on biological treatments, which enabled psychologists and social workers to proffer themselves the preeminent psychotherapists. By 1997, however, the private practitioner of psychotherapy was well aware of the tenuous nature of practice following the implementation of stringent measures to tether outpatient psychotherapy costs. These included a series of reduced negotiated fees, utilization review, case management, precertification, treatment plans, and provider profiling. Therapist accountability was introduced into the system, which spurred psychology to significantly increase the empirical study in effective psychotherapies. The MBCOs had the capacity, but little inclination to initiate outcomes research. They left it to federal agencies, predominantly NIMH and SAMHSA, to fund such research that ultimately demystified psychotherapy for the buyers and to some extent the consumers. Henceforth payors, having a greater understanding of the treatment process, did not hesitate to disagree with the unsubstantiated recommendations of the provider. Furthermore, network panels were filled to capacity and were closed. By 2000 nearly 40% of those who had been in the private solo practice of psychotherapy had changed occupations because they could no longer earn their livelihoods in their chosen career.

H. A Critical Retrospective: What Went Right?

The tethering of health care inflation is undoubtedly managed care's greatest accomplishment. Managed care demonstrated that there could be unprecedented cost containment by merely introducing management into a previously undisciplined practitioner cottage industry. That there were also untoward side effects to such an industrialization will be discussed below.

The growth of managed behavioral care to the point it encompassed 75% of the insured market by 2000, in just a little over a decade, reveals an unprecedented economic need. The managed behavioral care industry accomplished in 10 years what the auto industry required 50 years to accomplish, and the airline industry 30 years.

Accountability was introduced into psychotherapy for the first time, and the era of data-based treatment has just begun. The mechanisms for evidence-based treatment are in place, and soon there will emerge standardized treatment protocols and eventually even practice guidelines. In the meantime, psychotherapists must justify and document treatment plans and outcomes, and goal-oriented therapy has become standard.

There is for the first time a potential for a real continuum of care. It is a little recognized fact that managed behavioral care has resulted in the expansion of services as well as an appropriate substitution of services. Not only have both the numbers of persons seeking services and the number of practitioners providing services increased, but psychiatric hospitalization and private practice psychotherapy have both declined in favor of a continuum of care with expanded services. These have included increases in psychiatric rehabilitation, day treatment, consumer-run peer support, residential treatment, and crisis intervention. Since these services are cost effective when compared to full psychiatric hospitalization or long-term psychotherapy, this expansion of services has resulted in less money expended for behavioral care in 1998 than in 1988, a fact that many authorities find disturbing. Although solo practitioners of psychotherapy may experience the decline in demand for their services as painful, economists see the expansion of care into a continuum as desirable.

In contrast to the previous system, managed care has provided for the first time a nationally organized system of care. This could become the vehicle for the coordination of care on a national scale, something never before possible. So far, however, the industry has demonstrated only lip service, with no notable efforts toward coordinating such care.

The industry has made rapid strides toward self-regulation, with the National Council for Quality Assurance (NCQA) and the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) taking the lead. Voluntary regulation undoubtedly will make unnecessary some government regulation, but it will not be sufficient to deter all statutory regulation. No industry goes from zero to 75% of the market without incurring outside regulation.

Value, defined as price plus quality, has been difficult to address in health care, and particularly in behavioral care. The American people have come to believe that

more is better, permitting the system to provide too much hospitalization, too many prescriptions, unneeded surgeries, and millions of unnecessary procedures because the patient so demands, it benefits the practitioner, or it quells the fear of malpractice in a litigious world. These do not add up to value. Now that health care is organized and competitive, the buyer for the first time has the opportunity to address value pricing and the clout to defend it in the legislature, the courts, and the marketplace.

I. A Critical Retrospective: What Went Wrong?

The loss of clinical focus resulted in managing costs, not care. Managed behavioral care began as a system that managed care through efficient and effective psychotherapy and thereby contained costs through improved care. In such a clinical system the practitioners were highly trained in both short-term and long-term therapy, with the skill to know when the patient needs one or the other. Once practitioners lost their initial leadership in managed behavioral health care, it was inevitable that the baton would pass to business interests. It is not expected that business interests would appreciate and comprehend the clinical process, but it does not follow that they should be rejecting of it. Perhaps because of fierce hostility from the practitioner community, perhaps out of sheer expediency, or probably a combination of both, the industry disregarded the available techniques that contained costs through clinical effectiveness and relied instead on the familiar "bean counters," as insurance actuaries and financial managers are known.

As competition mounted, the managed behavioral care companies gave in to pricing pressure. The companies began underbidding each other until the inevitable happened: More and more contracts were signed that were below cost, with no hope of delivering a quality service as agreed. Insurers, employers, and government, elated that inflation was curbed, joined in the frenzy to ratchet down prices even more, while the MBCOs took the public criticism for their poor access and unreasonable denials. The buyers escaped without blame for their part in the price squeeze.

Just as hospitals and practitioners began accommodating lower payments, price pressures on the MBCOs forced them to pass the losses by squeezing the providers. The timing could not have been more disastrous. Outraged providers joined with consumer groups and national anti–managed care coalitions were formed. With fees already at unprecedented lows, the practitioners seemingly felt they had little else to lose. The disgruntled bear was transformed into a ferocious grizzly.

Managed care lost the public relations battle. Patients are grateful and loyal to their doctors, not to the health plan. In patient satisfaction surveys the health plan often gets the halo effect from satisfaction with the doctor who is part of that health plan. In surveys where the health plan and the physicians are clearly separated on the questionnaire, doctors are rated high while health plans are rated low. So when practitioners conveyed their rage at managed care to their patients, the latter became a potent, angry constituency that put pressure on employers, legislators, and insurers. A series of television exposés followed, as well as a number of successful movies that portrayed managed care as evil (e.g., *As Good As It Gets,* starring Jack Nicholson). The loss of the public relations battle has resulted in mounting pressures on the Congress and the state legislatures to increase the regulation of the managed behavioral care industry.

J. A Critical Retrospective: What Are the Surprises?

The failure to change practice patterns is surprising in view of the profound impact managed care has had on the health sector. All kinds of practitioner behaviors have been altered, but practice remains a fragmented system where collaboration is still essentially referral from primary care to specialty care and back again. As a nationally organized system it might be expected that managed care would seize the opportunity to make behavioral health part of primary care. A few HMOs are slowly moving in that direction, with most perpetuating a system wherein psychotherapy remains essentially specialty practice. There is one notable exception to the general lack of interest in the integration of behavioral health with primary care. The Kaiser-Permanente Health Plan, with its 4.4 million enrollees in Northern California, has announced its goal that behavioral health and primary care will be integrated into teams and co-location by 2002. In the meantime, lacking the inclusion of behavioral health within primary care, prescriptions for psychotropic drugs (especially SSRIs) have skyrocketed, neutralizing the cost savings derived by ostensibly having eliminated long-term therapy.

In every series of industrialization, the industry found itself initially at odds with its own workforce. Whether it was the automobile, shipping, transportation, or retail industries, their early history was fraught with militant union movements and paralyzing strikes.

As these industries matured, characteristically there was an accommodation between management and labor. Perpetual warfare with its own workforce, the provider in the case of health care, seems to be modulating in medicine and surgery, but increasing in managed behavioral care. This is unfortunate because through the therapeutic transference relationship the psychotherapist's stated hostility toward the managed care company can have a profound impact on the patient's perception of the care received. The MBCOs have to do much more to rectify the rift that exists between themselves and their own providers.

The most surprising glitch has been the extent of the merger mania that characterizes the managed behavioral care sector. In preceding instances of industrialization there has been a period of consolidation, where the successful companies swallow up the unsuccessful. As has been discussed earlier, three companies have a 60% market share and 10 companies have a 95% market share. The merger mania has far exceeded the need to consolidate, suggesting instead an economy of scale. The competition is too fierce to allow for monopoly control, but there is a monopsony that drastically limits the product(s) available to the buyer. This will be discussed in Section V.

V. ECONOMIC PRESSURES ON HEALTH CARE, PSYCHOTHERAPISTS, EDUCATORS, AND POLITICIANS

There are indications that the next several years will result in changes in the health care sector even more dramatic than those seen in the last decade. The pressures of change are already impinging on the behavioral health care system, the psychotherapist, the education establishment that trains behavioral care providers, and the politicians who have a constituency composed of a vast health industry on one side, and the consumers of behavioral care services on the other. Each of these will have its own set of problems as it makes its particular contributions to the future health care system.

A. Economic Pressures on the Behavioral Care Industry

Quality, access and the concept of good enough treatment are all issues challenging the behavioral care carve-out industry at a time when financial margins are thin and their stocks are in disfavor on the NASDAQ. Pricing pressures have resulted in practices that health economists have termed "low-balling," purposely below cost just to get the market share, and having no intention of providing the contracted services. Similar to this is "bottom-feeding," the seeking out of contracts with entities that provide substandard services, or merging with competitors that are known to provide substandard services. Such practices will not only have a devastating effect on the financial bottom line, but also they make the delivery of a quality product improbable or impossible. Caught in an economic vise, the carve-outs resort to more stringent definitions of what is to be treated and what constitutes sufficient treatment. Inevitably this will lead to complaints of poor quality, denial of access, and a lack of adequate treatment.

It is costly when a patient reenters a managed care system because the previous treatment has been inadequate. Savings generated by shorter treatment than had been necessary are wiped out by relapse, and especially by relapse requiring more costly treatment (e.g., failed short-term psychotherapy that now requires hospitalization of the patient). The carve-out has the right to limit therapy to that which is necessary, the concept of good enough treatment, but the industry needs better measures of determining the economics of "good enough" that go beyond mere savings per initial episode. A unit cost of production extends far into the future before it can be declared that the unit has been successfully delivered, with the desired beneficial effect on health, and at the cost anticipated.

The industry is currently too competitive to be classed as a monopoly even though a few companies control the market. However, since they are all essentially providing products indistinguishable from one another, the buyer has limited choice. Such a state where product differentiation does not exist is known in economics as a monopsony, and was seen in the auto industry when only oversized, gas-guzzling V8s were available to the buyer until the Japanese invaded the American market with budget-sized cars. Those companies that apply sound economic policy to the determination of the good enough treatment will succeed in balancing cost, quality, and access and emerge with a truly differentiated product.

The decreased behavioral health costs reflect the success of the MBHOs in bringing about cost containment, but the dollars available to MH/CD keep shrinking and they may have passed the critical level

necessary to sustain the good health of the patient (consumer). A healthy outcome at the right cost is the ultimate measure employed by most economists. It is doubtful that substantially more resources can be allocated to behavioral care in response to cries for parity without significantly raising costs. The next wave in the economic evolution of health care must be the integration of behavioral health with primary care, the anticipated "carve-in," which can give true parity (a seamless system between the physical and the psychological) while at the same time producing medical cost offset. Where all of the fat has been taken out of the behavioral care system, the medical/surgical system still suffers an overload of patients who are somatizing. The potential savings in the health system that can be realized by treating the somatizer in an integrated setting are impressive. Most medical cost-offset studies report savings of 5 to 15%. The problem is that the present carve-out arrangement cannot address meaningfully the somatizer. The medical/surgical sector "dumps" the psychologically troubled patient on the carve-out in order to save money, while the carve-out, in turn, does not care what the somatizing costs are as these are absorbed by the medical/surgical capitation, not its own. Consider an integrated system that adequately addresses the source of medical overutilization: A 7% savings in medical care would exceed the total dollars spent annually today on all mental health and chemical dependency treatment costs.

The carve-out pays lip service to the concept of integration, but it is one of the forces opposing change. It is an entrenched industry covering 175 million lives and it is loath to enter a market for which it has lagged in developing the necessary technology. It remains for one large system, such as the current retooling at Kaiser-Permanente in Northern California, to prove successful before integration becomes attractive. At such a time as the concept proves to be both financially and medically viable, large employers and perhaps even the federal government will demand it. At the present time selling integration to the current health industry is about as difficult as selling an electric car to an automotive industry and public committed to the internal combustion engine.

The year 2000 saw again the consistent figure of 25% of Americans who do not have health insurance or have it only intermittently. This group is bimodally distributed, reflecting two distinct groups. There are those who are above the poverty line and are not eligible for Medicaid, but cannot afford private health insurance. The second group is composed of young couples and individuals in the 25 to 45 age range who have made a decision to rely on the good health associated with younger ages and use what would be health care premiums to grow their small business. Some in the second group have reached a compromise by setting aside in a savings account a portion of what health insurance would cost. It may be a matter for public policy to address the health care needs of the group that cannot afford health insurance. However, a challenge to the managed care industry is the design and implementation of a product that would be attractive to the entrepreneurial-minded small business owners in the second group, the owners of the so-called mom and pop store.

B. Economic Pressures on the Provider (Psychotherapist)

The rage experienced by providers is understandable, but it is time they acknowledged the enduring nature of the changes that have occurred in health care, abandoned their fierce opposition in favor of constructive engagement, and became part of the solution.

This does not mean that providers, having lost their virtual monopolistic status, must abandon their drive for regulation and legislation as a way of regaining that monopoly. But while they pursue redress and restoration of some of their former prerogatives the professions cannot afford to be outside the decision-making arena of the health system upon which they rely for their livelihoods.

Continuous quality improvement underlies much of what managed care is all about. This demands evidence-based, standardized treatments evolved through ongoing outcomes research. It is up to the providers to develop the database and the feedback loop to establish what now must intuitively be accepted as good enough treatment. When the appropriate database has been developed, resulting in protocols and treatment guidelines, the industry will be on firmer economic ground with expectations of good consumer health, reduced relapse rates, and value (cost plus quality). The challenge to the provider is to set aside animosities and join the health care arena in order to improve it.

The managed behavioral care industry will continue to rely on master's-level therapists for the majority of the treatment process, especially after more protocols and manuals are in place. To justify in the future the place of the doctoral-level psychologist, there will have to be a paradigm shift from the Ph.D. psychologist as a psychotherapist to a greatly expanded role. This will include such expertise as clinical supervision

of subdoctoral therapists, outcomes and quality improvement research, program planning, and the ability to understand business from the clinical side and contribute as a provider to important economic decisions. This necessitates an *overhaul of the curriculum* in the education and training of providers, which will be discussed below under challenges for education.

The next wave in the evolution of behavioral care will be its *integration with primary care*. Behavioral care providers will have to learn to function in a primary care setting where the emphasis is on the group management and treatment of chronic diseases. The behavioral care specialist will need considerable education in health psychology, and the training to function as part of a primary care team. This will require a substantial paradigm shift, and the current education and training curriculum will have to be overhauled accordingly.

It must be noted that the profession of psychology has dedicated its resources to obtaining prescription authority for licensed psychologists. This is fiercely opposed by the medical profession, and especially by psychiatry. Practicing psychologists are hoping that the ability to prescribe medications will save their solo practices by mitigating the effects of managed behavioral care. Most health economists believe such prescription authority for psychologists will occur because it is part of the general trend in the health economy to push knowledge downward. Thus, nurse practitioners are doing much of the work of primary care physicians (PCPs), while the PCPs are doing work that traditionally was part of specialty care. When and if such prescription authority is granted to licensed psychologists is not clear at this time. But even if it occurred tomorrow, it would not obviate the necessity of the paradigm shifts necessary for the Ph.D. psychologist to become a participant in the future health system.

C. The Economic Pressures on Education and Training of Behavioral Care Providers

One of the reasons why there have not been more capitation arrangements with providers is the fact that most practitioners lack the knowledge and expertise to design, price, and implement a capitated contract. Those provider groups that have learned to do so have gained considerable freedom from intrusion into their treatment decisions. But in exchange for this autonomy they have accepted risk, and all of the responsibility that comes with that. The present curriculum trains providers for a traditional third-party indemnity insurance system that is fast disappearing in favor of capitated arrangements. An appropriate curriculum would acquaint the psychologist with the changes in the distribution and expected frequency of modal problems to be treated in a capitated arrangement as opposed to the traditional fee-for-service system. The assumption of risk, and risk management are integral parts of this training, as are many entrepreneurial aspects integral to the new delivery system.

A significant part of the curriculum involves business training, and it will be argued that the modal graduate student in psychology may not be interested in that aspect. This may or may not be true, but the 40% drop in applications to clinical psychology doctoral programs in the 3 years of 1998 to 2000 suggests that potential students are already expressing concern with the diminishing job market in doctoral-level psychology. When the field of doctoral-level clinical psychology and its curriculum are redefined, with an attendant response by the job market, a different type of applicant will be attracted.

In the year 2000 there are two major university doctoral programs undertaking a complete curriculum overhaul, and to a greatly redefined doctorate they are adding a certificate in the business administration of health. The latter would be a postgraduate program open to psychiatrists and social workers as well as psychologists. This might well replace the discernible trend in psychiatry and doctoral-level psychology to pursue the master of business administration (MBA) degree in schools of business, as the new postdoctoral program in graduate schools of psychology would be tailored to their career needs.

D. Economic Pressures on the Political System

The political system has experienced concerted efforts by providers and other constituencies to more stringently regulate HMOs and managed care. Among the legislation under serious consideration have been parity laws, a Patients' Bill of Rights, and laws to inhibit incentives to providers for cost containment. All of these and others are under active consideration by the Congress and state legislatures, and although some laws have been passed, advocates are expressing disappointment in the progress to date. The reluctance on the part of politicians is that public policy at the present time is in favor of the free market forces that have tethered the inflation rate of health care, in general, and the costs of Medicare and Medicaid, in particular. By transferring much of the programs to managed care,

with the subsequent savings in Medicare and Medicaid, the federal budget in these government programs was balanced.

Politicians at the present time are trying to balance the complaints about HMOs and managed care with the inevitability that the industry must be part of the solution if there is to be one. Along with the professional societies exerting pressure, by 2000 the National Alliance for the Mentally Ill (NAMI) emerged as a potent force advocating the strengthening of the 1996 mental health parity law. The bill under serious consideration in the year 2000, called the Mental Health Equitable Treatment Act, would require full insurance parity for schizophrenia, bipolar disorder, major depression, obsessive–compulsive and panic disorders, posttraumatic stress syndrome, autism, anorexia nervosa, and ADD. It takes its lead from the states that have passed some kind of parity law, and cuts directly to parity only for a list of disabling disorders, eliminating the diffuse nature of much mental health diagnosis and treatment. Thirty-four states had passed some kind of parity law by 2000, suggesting the federal government would follow suit, within a reasonable time, especially since current Congressional efforts are bipartisan.

There is not as much agreement on the Patients' Bill of Rights bill. Although some form of the law seems destined for passage, absent the right of the patient to sue the HMO the law would have no teeth. Consumer groups and the trial lawyers' associations are pushing hard for the patient's right to sue, but Congress seems reluctant to turn health care over to the lawyers. Economists argue this would result in a renewed inflationary spiral, threatening to create an insurance premium too costly for most employers. They further argue that the wrong parity legislation, along with opening the system up to a plethora of lawsuits, economically might spell the end of employer-sponsored health care.

An idea currently debated is the option of creating one's own tax-free medical savings account. This puts the patient squarely in charge of her or his own health care, with complete patient choice and the restoration of the doctor–patient relationship as it was before the intrusion of the third-party payor. This idea has proved intriguing to many economists, business leaders, consumer groups, and some few members of Congress, but it still lacks widespread support. On the opposite end of the spectrum are those economists who advocate the greater involvement of the federal government, and call for the renewal of proposals for government-sponsored single-payor universal health care.

VI. SUMMARY

This century, and especially the last 15 years, have seen profound changes in the way health care, including behavioral health care, are delivered in the United States. During that time health care rapidly evolved from a cottage industry to full industrialization.

Prior to World War II diagnosis and treatment were an out-of-pocket, fee-for-service transaction between the patient and a solo practitioner. Blue Cross and Blue Shield were founded in the 1930s to create a revenue stream during the Great Depression for the beleaguered hospitals and the overworked and often not paid physicians. Hospitals were charity-owned or community-based and were never expected to come near breaking even financially. Semiannual fundraisers kept the hospitals afloat for the benefit of the citizenry. But once "the Blues" were formed, the third-party payor intruded into the doctor–patient relationship, and for the first time there was a lowered sensitivity on the part of the patient to health care costs.

World War II saw the rise of employer-sponsored health insurance as a way of attracting workers to the defense industry at a time when wages were frozen by law. After the war consumers liked the concept of the employer paying for health care, and the employers saw certain tax and financial advantages to such an arrangement. Unions made health care a prime issue in collective bargaining. Soon employer-sponsored health insurance was an accepted notion in society, with its increased erosion of the patient's sensitivity to rising costs. More became better.

In the late 1950s through the Hill-Burton hospital funding legislation, and in the 1960s with Medicare and Medicaid, the government stepped into health care in a significant manner and inadvertently began to fuel a noncompetitive medical economy. The inflationary trend in health care began to worry the government and economists. But the government's efforts to contain it seemed to only fuel the inflation further. During this time it must be noted that psychotherapy was not part of health insurance coverage, and such services continued to be out-of-pocket. The demand was still sufficient to support ever-increasing numbers of psychologists joining psychiatrists in the independent practice of psychotherapy. Patients were limited to those who could pay.

By the 1970s the government was becoming alarmed at the rapidly accelerating inflation in health care and took active steps to curtail it. At first there were strong efforts toward government-sponsored universal health

care, but this notion died because neither the practitioners nor the consumers wanted it. In 1974 the government went in the opposite direction with the HMO Enabling Act, thus signaling that it was encouraging free market solutions rather than government-sponsored universal health care. A number of economists known as the Jackson Hole Group persuaded the decision makers that managed competition could bring down inflation. This legislation was patterned after the Kaiser-Permanente Health system established on the west coast right after World War II. It had attracted a great deal of attention, but it had not been emulated up until that time. The government, therefore, launched in the mid-1970s the HMO industry not only with start-up funds, but also with legislation granting the HMOs a competitive edge.

During this same period the attitude of the health insurance industry toward psychotherapy as a covered benefit began to change. This was because of consumer pressure on the one hand, and the experiments at Kaiser-Permanente with the first comprehensive prepaid psychotherapy benefit. Their medical cost offset research discovered that brief psychological interventions could reduce medical costs with the somatizing patients, who comprised 60% of medical visits to physicians, more than sufficient to pay for the psychotherapy. Prepaid psychotherapy became a standard benefit by the end of the 1970s, resulting in large numbers of psychologists and social workers entering the independent practice of psychotherapy.

In the late 1970s to the mid-1980s the government accelerated its efforts to foster managed competition in the health field. Free choice of provider in Medicaid was eliminated in 1981, and the way Medicare paid hospitals was drastically altered in 1983. Payment was by number of days allotted to nearly 400 conditions, called diagnosis related groups (DRGs). This emptied medical surgical beds, but the government did not know how to institute DRGs in psychiatry where now the inflationary spiral existed, fostered by the transfer of empty beds to psychiatric and substance abuse hospitalization. It took the path of unleashing the private sector. It began applying the anti–restraint of trade laws against the health professions, removing prohibitions to advertising, the corporate practice of medicine, and other impediments to the free market. The managed behavioral care industry was born in the mid-1980s and now, along with managed health care, covers 170 million Americans.

The annual rate of inflation in health care was reduced from 12 to 4% by 1993, the lowest it had been since 1960. Behavioral care had the same low rate of 4%. The winners were those who pay the bills: insurers, employers, the federal government (which is the largest purchaser of health services in the world), and the taxpayers. The losers were the psychiatric hospitals and the private solo practitioners of psychotherapy. The beleaguered professionals were understandably enraged and have adopted an aggressive posture against managed care. The Congress and state legislatures are being pressured for a change in policy from the present market economy to increased regulation of the HMOs and managed care companies. In behavioral care the lobbying is for mental health parity, already passed in 34 states, and a Patients' Bill of Rights with provisions allowing patients to sue their HMOs.

See Also the Following Articles

Alternatives to Psychotherapy ■ Bioethics ■ Collaborative Care ■ Cost Effectiveness ■ Education: Curriculum for Psychotherapy ■ Efficacy ■ Informed Consent ■ Outcome Measures ■ Supervision in Psychotherapy

Further Reading

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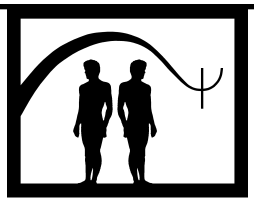

Education: Curriculum for Psychotherapy

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GLOSSARY

didactic learning Educational experiences that focus more on the acquisition of specific content knowledge than on the experiences or behavior of the student.

evaluation Structured assessment of a learner's knowledge, skills, and attitudes that become part of the learner's official academic record.

experiential learning Educational activities in which the learner must use the experience of the learning situation itself (in contrast to those that focus on learning specific content).

feedback Educational exchange in which the learner is presented observations about his or her performance but those observations do not become part of the learner's academic record.

I. OVERALL CURRICULUM DESIGN

The development of psychotherapeutic competence requires the same basic elements common to many other educational processes. There must be goals and objectives that guide the overall educational plan and determine specific curricular components. Students must be provided a set of organized and sequenced learning experiences to enable progressively more sophisticated mastery of content. These experiences include didactic introduction to basic concepts, supervised experiential learning, and opportunities for progressively independent practice of psychotherapy. Along the way, steady feedback of information about the educational progress and attainments of the students enable them to make "in-flight" alterations of their professional development. An evaluation process (distinct from feedback) assures the student, institution, and public that the psychotherapist is competent to practice independently at the conclusion of the educational process.

In a way that is more quantitatively than qualitatively different from other types of professional education, the person of the psychotherapist changes dramatically during successful psychotherapy education. Even though the same is true to varying degrees in many professional and clinical educational programs, this change of the sense and use of the self as a psychotherapist is especially profound. For this reason, the development of competence in psychotherapy involves a prolonged period of personal vulnerability on the part of learners. The educational process and educational institutions involved in psychotherapy education must therefore pay attention to the potential for hurtful shame and the stifling of creativity,

which occurs if this vulnerability is not recognized and taken into account in constructing educational experiences. There are parallels between being a learner of psychotherapy and being a patient in psychotherapy. Psychotherapy educational programs must strike a balance between treating its learners as mature adults mastering the elements of a respected profession, while also providing a "safe enough" environment for students experiencing disturbances of their internal sense of themselves preceding the development of confidence and affirmation arising from the mastery of a profession.

II. DIDACTIC LEARNING

Most educational systems for psychotherapy begin with didactic learning situations in which basic concepts of psychotherapy are presented. The main mental health disciplines in which psychotherapy is practiced are psychiatry, psychology, and social work. Each of these core disciplines has a wide variety of subspecialties. Each provides subspecialty training in different conceptual models for psychotherapy, such as psychoanalysis, cognitive therapy, interpersonal therapy, and behavioral therapy. Each conceptual model informs therapy based on the constellation of participants in the therapeutic enterprise, such as individual, group, family, and marital therapy.

Psychotherapy may also become an important endeavor of individuals from other disciplines, such as family medicine or religious education. Psychotherapy-like endeavors can also be part of disciplines such as human relations (employee assistance program services) and business administration or management (group or employee relations consultants).

Based on the above diversities of pathways leading one to do psychotherapy, those with administrative responsibility for psychotherapy education (a) can have a wide variety of primary disciplines and (b) must not assume the core competency of their learners in the "basic sciences" of psychotherapy. Even the so-called basic building blocks of psychotherapy education vary depending on the educational context in which psychotherapy education takes place. For example, psychotherapy practiced by medical professionals is more likely to consider neuroscience and studies of brain function as a basic science on which psychotherapy education is built. In contrast, social work professionals are less likely to see the study of the brain as fundamental to psychotherapy and are more likely to consider psychotherapy built on principles arising from sociology, anthropology, and other behavioral sciences.

What then can be considered basic concepts that should inform all psychotherapy education? This chapter will proceed with the basic assumption that individual psychotherapy is the fundamental cornerstone for developing broad psychotherapy competence. Other therapeutic constellations, such as group, family, or marital therapy will be considered subspecialty applications of that basic competency.

Didactic experiences in psychotherapy education should expose learners to the major conceptual models that inform approaches to understanding and helping patients. Although these very basic concepts can be described in lecture format, it is important that psychotherapy students also have interactive seminars in which basic readings are assumed to have been read by participants. The educational exchange in seminars emphasizes a discussion of abstract concepts leading learners beyond memorization of presented material towards an ability to discuss concepts (the unconscious, cognitive schemata, role conflicts, desensitization, etc.) that are of essential importance to the respective basic conceptual models. Neither lectures nor seminars give learners an in-depth appreciation of the concepts, however. A transition from book learning to experience must be accomplished in a manner that is safe for the public while providing "real" learning experiences for the developing psychotherapist.

III. EXPERIENTIAL LEARNING AND THE DEVELOPMENT OF SELF-AWARENESS

Experiential learning of basic concepts in psychotherapy education includes the use of role-playing, simulated patients, and structured experiential learning activities. In 1978, Dr. Jerry M. Lewis of the Timberlawn Foundation in Dallas, Texas, developed one of the best elaborated structured approaches to learning psychotherapy in *To Be a Therapist*. His work has influenced psychotherapy education in many psychiatric settings. In *Learning Psychotherapy*, Dr. Bernard Beitman advocated a specific evolution of the combination of structured experiential and didactic learning. Lewis focuses more on the internal experience of the learner, especially empathic understanding and patience to organize specific educational components. In contrast, Beitman focuses more on the technique of

the psychotherapist/patient interaction and utilizes educational research studies. Both of these specific models have greater influence in psychiatric education than in other mental health disciplines thus far. In general, however, psychotherapy education in psychology graduate education is more tied to research in psychotherapy outcome and process.

In addition to learning conceptual models for structuring the content of a psychotherapeutic process, the therapist must learn how to structure and use a relationship for therapeutic purposes. To a casual observer psychotherapy may seem to be like an ordinary conversation. In fact, there is nothing magical about psychotherapy. Although there are predictable and repeated elements of psychotherapeutic relationships, formalized rituals (customary in relationships between individuals involved in religious-based relationships) are generally assessed as unhelpful in psychotherapy. As rituals, they become end points instead of a means to accomplish a specific psychotherapeutic goal. In psychotherapy, the therapist does make particular and purposeful use of an interpersonal relationship.

Psychotherapeutic relationships are, therefore, both artificial and transcendent. They are artificial in that the elements of naturalistic human interactions are structured for a particular purpose of human design. They are transcendent in that the therapist abstains from the use of relationships for ordinary human purposes. His or her actions or activities are used for the purpose of helping another individual to achieve the agreed upon goals of the relationship. This does not mean that a therapist tolerates personally abusive activities from a patient. It does mean that a psychotherapist responds with equanimity and therapeutic intent to the patient's behaviors or communications, which in ordinary relationships would likely lead to retaliatory aggression or the pursuit of personal gratifications on the part of the therapist.

In didactic and experiential settings, the psychotherapist learns a type of active listening that is part of all psychotherapeutic relationships. The listening is "active" in that when the therapist is silently listening, he or she is also recording and conceptualizing the content of a patient's communications and is also steadily attempting to experience what is being described *by* the patient *from* the patient's perspective (empathic understanding in the psychodynamic frame of reference). This "vacillation of ego states" within the mind of the therapist, from a dispassionate scientific observer of information to intimate vicarious immersion with the person of the patient, is fundamental for psychotherapeutic activity.

The therapist's availability at both the emotional and cognitive level also requires progressive self-awareness on the part of the therapist. That awareness involves attention to the personal, private, idiosyncratic mental contents of the therapist, *and* observation of moment-to-moment exchanges between patient and therapist. The former self-observations are important steps in empathic understanding of the patient and learning from countertransference reactions. The latter observations provide clues about the degree of engagement, genuineness, and authenticity of the therapeutic alliance. The use of audiotape or videotape recordings of interviews and therapy sessions is indispensable in developing therapist self-awareness. Actual observed interviews are helpful for learners who are not involved in the therapeutic relationship being observed, but the opportunity to review recorded therapeutic relationships of one's own therapeutic encounters is a different dimension of learning, which is essential for developing therapeutic competency.

IV. SUPERVISED CLINICAL WORK WITH PATIENTS

Very early on in psychotherapy education, supervised clinical experiences with patients are necessary to transform concepts learned from books or classrooms into actual human encounters. At least some of the aforementioned experiential learning activities in a situation without clinical responsibility should precede attempts at psychotherapeutic relationships with patients. Psychiatry residency programs take as a fundamental aspect of physician behavior the dictum *prima non nocere,* or "first do no harm." In psychiatric practice, patient care is somewhat artificially but commonly separated into general psychiatric care (providing medications and general management for a patient's psychological difficulties) and psychotherapeutic care. Videotaped encounters of interviews with patients for whom the learner is providing general psychiatric services, but not psychotherapy, are often viewed in interviewing seminars for first-year residents prior to their assuming psychotherapeutic responsibilities with patients. The videotaped interviews are subsequently viewed in a classroom setting. The emphasis in such settings includes obtaining information in order to make a diagnosis. Attention is also paid to the resident's ability to listen and to gather information in a sensitive,

tactful, and well-timed manner. These activities are seen as building blocks for learning psychotherapeutic relationships. Discussions of how the resident subjectively responds to the patient communications and observations of verbal and nonverbal communications and their consequences begin the development of therapist self-awareness. For most psychiatry training programs, these very rudimentary skills are all that is expected for first-year residents.

The student psychotherapist should also have the opportunity to observe more senior practitioners actually doing interviews and psychotherapy. Seminars often employ videotaped therapy of the senior practitioner, but one-way mirror viewing of therapy may also be useful.

Many programs offer an experiential conference to help students identify and enhance their empathic abilities and learn to listen to the way in which a patient moves from topic to topic in an unstructured interview (the associative process). These conferences were a major contribution of Dr. Lewis's model of psychotherapy education mentioned previously. Learning experiences for the psychotherapist must eventually include observed and supervised therapeutic relationships involving brief and longer-term individual psychotherapies utilizing psychodynamic, cognitive, interpersonal, and behavioral conceptual framework to organize the therapy. Analogous experiences should take place for conducting group, family, and marital therapy. The brief therapies learned should be both those that are brief because of a clinical decision to employ a focal or targeted psychotherapy and those therapies that are brief because of external limitations or constraints on the treatment relationship. These different determinants for pursuing brief therapeutic relationships involve very different issues for the therapist–patient relationship.

Individual supervision is a special learning context for psychotherapy education. This format arose out of the earliest attempts to structure learning about psychotherapy. There are several analogies between the supervisor–supervisee relationship of individual supervision to the patient–therapist relationship of psychotherapy, but there are also important differences. The notion of individual supervision came out of the Berlin Psychoanalytic Congress in 1922, when the first requirements for formalized training in psychoanalysis were developed. In individual supervision, the supervisee (psychotherapy learner) and supervisor meet on a regular basis over a defined period of time–at least a one-year duration in most psychotherapy programs. The purpose of these meetings is to learn about both patients and the therapist. Both the therapist's self-awareness and the therapist's awareness of the therapeutic process are objects of scrutiny. The various analogies to the therapeutic relationship are most poignant when what is described as a "parallel process" emerges. This concept was well articulated by R. Ekstein and R. Wallerstein in 1972 to describe situations in which problems being reported by the patient to the therapist emerge in the relationship between the supervisee and supervisor.

A variety of theories exist about why this extraordinary process occurs. Nonetheless, it is a common occurrence in the psychodynamic psychotherapies and a source of powerful learning for the supervisee. It is also considered an indicator of the supervisor's competence to be able to identify and make use of such experiences. As with other parts of the supervisory relationship, the goal of exploring such a process is to learn how factors within the student therapist interfere with his or her therapeutic activity. This exploration and focus is different from, but analogous to, learning about experiences in the patient–therapist relationship, as indicators of a history of the patient's personal difficulties. The distinction between the therapeutic and supervisory task and focus may seem simple in concept. It is actually quite a complex issue. Supervisees predictably feel quite vulnerable when parallel processes occur or they discuss personal conflicts or inhibitions as therapists. It is important that a strong educational alliance is developed and maintained in individual supervision. That supervisory alliance enables learning during times in which the self of the therapist feels exposed and vulnerable.

V. ROLE OF PERSONAL THERAPY IN PSYCHOTHERAPY EDUCATION

Personal therapy is an even more personal step than individual supervision in learning about psychotherapy. Personal therapy in the form of psychoanalysis is required by psychoanalytic institutes and some psychotherapy programs, especially those with a psychodynamic conceptual orientation. It is difficult, however, to "require" a personal therapy experience under any circumstance, and required therapy distorts the therapeutic relationship to some degree. Much has been made in the literature about psychoanalytic educa-

tion, about how the "training analysis" of the psychoanalytic student ("candidate") significantly influences the process of psychoanalytic education. A positive experience of personal therapy, however, greatly enriches and provides a new level of personal conviction about the therapeutic process. Personal therapy is, therefore, an important, even if elective, part of psychotherapy education.

With respect to group therapies, analogous experiential learning formats for the learning therapist also exist. A.K. Rice, or the "Tavistock" type of group learning experiences, helps individuals learn about the generic group processes that are part of any working group. In general, National Training Laboratory (NTL) groups are helpful in learning how to give and receive feedback, and A. K. Rice groups provide education about issues of power and authority, the delegation of authority, and principles of leadership effectiveness. Other types of group learning experiences are less frequently incorporated into formal psychotherapy training programs but may be encouraged by program directors as ways to broaden the student therapist's accustomed sense of self.

VI. FEEDBACK AND EVALUATION

In each of the preceding learning experiences, an evaluation instrument must be developed to assess the progress of the future psychotherapist. The student therapist's participation in didactic seminars is routinely evaluated by the seminar leader. Many programs use paper-and-pencil tests to assess the conceptual grasp of didactic material. The first broadly used test of cognitive knowledge was only recently developed by the psychiatry residency program at Columbia University. Videotaped diagnostic interviews and videotaped therapy sessions are an extremely important part of the evaluation process, as well as learning experiences. Such tapes are a critically important measure of the beginning therapist's ability to have his or her first independent clinical encounter with patients.

Didactic seminars in more advanced stages of psychotherapy education usually involve presenting individual cases for discussion of how to organize treatment for the patient. It is particularly useful to have an educational conference in which a single case being treated by a psychotherapy learner is presented over time throughout a series of meetings for an entire course of treatment. This "continuous case conference" is usually supervised by a senior member of the educational team. The conference leader helps connect the important themes and processes from one session to the other and integrates an actual therapy with a conceptual model or models. Both the primary presenter at case conferences and the learning group are evaluated with respect to their ability to observe and articulate matters about the patient and the therapist.

Again, because of the powerful sense of vulnerability in learning to become a psychotherapist, it is often helpful to structure initial feedback about their skills and weaknesses before providing a formal evaluation. This principle has also been found to be helpful in many aspects of medical education.

Reports from individual supervisors are generally considered the most important source for evaluation of psychotherapeutic competence. Such evaluations should be systematically solicited by the program director and reviewed with the student therapist on a regular basis. They should assess therapeutic competency and describe both strengths and areas for improvement to be pursued in future components of the training program.

Outcome measurements are difficult matters for psychotherapy education, but they are achieving increasing importance in measuring quality and competence. Outcome measures include both measures of patient satisfaction with the therapist and therapeutic process and the use of rating scales to measure change in signs and symptoms of patients being treated by the psychotherapy student.

VII. SUMMARY

In conclusion, a psychotherapy curriculum involves substantial immersion in a mix of educational experiences that are both personal and professional. There is much hard data to be learned and mastered. Individuals who are quite competent in some aspects of their discipline may function poorly or have to work hard to develop different aspects of themselves to become competent in psychotherapy. The experience of personal change during psychotherapy education often leads individuals to seek personal therapy for themselves as part of developing professional competence. Although mastery of concepts is an important criterion to bring to bear in judging a particular therapist, a good therapist also has to develop an extraordinary set of personal qualities to be used in their efforts to understand and attenuate human suffering.

See Also the Following Articles

Behavior Therapy: Theoretical Bases ■ Bioethics ■ Confidentiality ■ Cultural Issues ■ Economic and Policy Issues ■ History of Psychotherapy ■ Legal Dimensions of Psychiatry ■ Supervision in Psychotherapy

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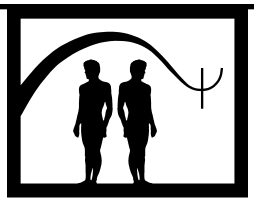

Effectiveness of Psychotherapy

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GLOSSARY

common factors Active ingredients that are common to all forms of psychotherapy and contribute to positive patient outcome.

patient variables Characteristics of patients related to psychotherapy outcome.

psychotherapy outcome The effects of psychotherapy on patient status.

specific intervention variables Therapeutic techniques or interventions unique to a specific form of psychotherapy.

Psychotherapy, defined within the broader context of the field of psychology, is a skilled and intentional treatment process whereby the thoughts, feelings, and behavior of a person are modified with the intention of facilitating increased functioning and life adjustment. Psychologists, psychiatrists, and clinical social workers are authorized to provide psychotherapy to children, adolescents, and adults in individual, group, couples, and family therapy sessions. Although there are hundreds of different psychotherapies that conceptualize and treat problems in different ways, most are variations of three general paradigms: psychodynamic, cognitive-behavioral, and humanistic-phenomenological. For decades researchers have assessed the positive and negative effects of psychotherapy on patients. This entry will review research that has established the effectiveness of psychotherapy within the aforementioned paradigms, review factors important to psychotherapy outcome, and discuss the negative effects associated with psychotherapy.

I. EFFECTIVENESS OF PSYCHOTHERAPY

In 1952, Hans J. Eysenck published a review of the effectiveness of psychotherapy, concluding that 74% of patients, drawn from 24 studies and diagnosed as neurotic, were found to make progress considered equivalent to a similarly diagnosed group of individuals who received no treatment over a two-year time period. Since Eysenck's review, a large body of research has been directed toward determining whether psychotherapy assists patients to solve problems, reduce symptoms, and improve interpersonal and social functioning beyond the improvements that can be expected from existing social supports and inner homeostatic mechanisms. From the early 1930s to the 1960s, this was a much debated topic. The 1970s, 1980s, and 1990s saw an increase in both the number of studies undertaken and the quality of studies used to evaluate the outcome of therapy. This research has left little doubt that pa-

tients who undergo treatment fare substantially better than untreated individuals.

One mathematical technique, meta-analysis, is used to summarize large collections of empirical data. It has been successfully used to estimate the actual size of treatment effects in terms of percentage of patients who improve under various treatments compared to untreated controls. In general, meta-analytic reviews suggest that the average person receiving a placebo treatment is better off than approximately 66% of the untreated sample, while the average person receiving psychotherapy is better off than 80% of the untreated sample. This information indicates that while clients who receive placebo treatments show more improvement than untreated individuals, this improvement falls well short of that occurring in clients who undergo a course of psychotherapy.

Not only has research on the outcome of psychotherapy clearly demonstrated the effectiveness of treatment, but this finding is enhanced by data suggesting that the road to recovery is not long and that treatment gains are maintained. For example, multiple studies have found that approximately 75% of clients can be expected to have recovered substantially after 50 sessions or nearly a year of weekly psychotherapy and that even with as few as 8 to 10 sessions about 50% of clients have shown reliable improvement. Notwithstanding these findings, the amount of therapy needed to produce effects continues to be debated. The pattern of changes during psychotherapy has also been examined, with several studies suggesting that different symptom clusters improve at different times during treatment: symptoms of poor morale respond most quickly, followed by improvement in symptoms of chronic distress, with symptoms related to the patient's character or personality traits improving at the slowest rate.

In addition to finding that the road to recovery is relatively short for many patients, researchers have discovered that improvement tends to be lasting. There is no evidence to suggest that psychotherapy will permanently safeguard a person from psychological disturbance, but many patients who undergo therapy achieve healthy adjustment for an extended period of time. Many studies, including meta-analytic reviews, have shown that the effects of psychotherapy are relatively lasting. However, there is some evidence to suggest that maintenance of treatment effects is worse in cases of substance abuse disorders, eating disorders, recurrent depression, and personality disorders. Research has also shown that the maintenance of treatment effects can be enhanced by efforts directed at this goal in the final sessions of therapy.

II. FACTORS IMPORTANT TO PSYCHOTHERAPY OUTCOME

In addition to the research focused on supporting the effectiveness of psychotherapy, considerable emphasis has been placed on studying factors related to positive patient outcome. Findings from this research fall into three general categories: patient variables, common factors, and specific intervention variables.

A. Patient Variables

Although a number of studies have investigated the impact therapists have on psychotherapy outcome, there is surprisingly little evidence that suggests therapists or their techniques are the central and essential factors affecting patient outcome. On the contrary, it is in fact the patient who is most likely to determine successful outcome. The literature focusing on the study of patient variables is too voluminous to fully summarize here; therefore, only the most important findings are reported.

Each patient entering treatment brings a diverse array of factors when presenting to the clinician. These include, but are not limited to, a variety of psychological disorders, physical complaints, historical backgrounds, stresses, and the quality of their social support networks. Patient variables found to have a relationship with outcome are severity of disturbance, motivation and expectancy, capacity to relate, degree of integration, coherence, perfectionism, and ability to recognize and verbalize focalized problems. Therefore, patients suffering from challenging symptoms as well as relative deficits in numerous patient variable categories are likely to experience negligible improvement during treatment. For example, the borderline, alcoholic patient with suicidal tendencies who is forced into treatment, believing that most marital problems are a result of an insensitive spouse, is likely to benefit less from treatment than the depressed patient who voluntarily begins treatment, is low in perfectionism, and is determined to make personal changes that will lead to marital harmony.

Although patient variables have been conveniently categorized, the impact each has on the outcome of therapy is not equal. In general, the severity of the disturbance is generally the patient variable that is most

related to outcome. Patients with serious mental disorders, such as schizophrenia, schizoaffective disorder, and bipolar disorder, are typically treated primarily with psychotropic medications, suggesting the challenge these disturbances provide for psychotherapy alone. Personality disturbances also appear more resistant to change even in long-term treatments that last years.

B. Common Factors

Because outcome researchers have consistently failed to find sufficient evidence indicating superior effects for particular theoretical systems of psychotherapy, some researchers have concluded that psychotherapy equivalence is a result of factors common to all theories of psychotherapy. Whereas some view these beneficial ingredients as both necessary and sufficient for change, others believe that these ingredients act in coalition with techniques that are unique to particular interventions. It is important to note that regardless of the position held, factors common to all treatments are likely to account for a substantial amount of the improvement that occurs in psychotherapy.

In a review of the empirical research, Michael J. Lambert and Allen E. Bergin grouped many factors common across psychotherapies into three categories: support, learning, and action factors. Support factors that contribute to positive patient outcome include catharsis, warmth, respect, trust, empathy, therapist/client collaboration, reassurance, and decreased sense of isolation. Learning factors include insight, affective experiencing, corrective emotional experience, cognitive learning, advice, feedback, and reconceptualization of problems. Action factors include behavioral regulation, cognitive mastery, encouragement of facing fears, practice, reality testing, and success experiences. The common factors included in these categories seem to operate most actively during the in-session process of therapy. When common factors are present, they result in a client experiencing an increased sense of trust, security, and safety, along with a reduction in tension, threat, and anxiety. These conditions, in turn, promote a client's awareness of problems and his or her ability to take appropriate risks by confronting fears using new and more adaptive coping mechanisms and behaviors. With success in implementing new behaviors, clients become increasingly motivated to resolve problems related to their intrapersonal and interpersonal functioning.

Factors receiving the most attention in the literature are the common factors considered to be the core of the therapeutic relationship (e.g., empathy, respect, and collaboration). A number of related terms such as acceptance, tolerance, therapeutic alliance, therapeutic relationship, working alliance, and support are also used to describe these ingredients. Several studies designed to explore which therapist variables distinguished most consistently between more effective and less effective therapists have found that a client's perception of empathy is important to outcome because less effective therapists have been found to demonstrate lower levels of empathy. Empathy, rather than technique, has repeatedly been shown to be the best predictor of outcome.

Related to these findings are studies investigating the therapeutic relationship, which have suggested that a positive working alliance between the patient and therapist is a necessary condition for patient improvement. Even behavior therapists, who place little theoretical emphasis on relationship variables, have repeatedly found evidence supporting the importance of the therapist–client relationship. In several studies where patients were asked about the most important factors of their therapy, they tended to endorse the personal qualities of their therapists, using adjectives such as "sensitive," "honest," and "gentle." Additional evidence supporting the necessity for a strong working relationship is the positive association repeatedly found between scores on measures of early treatment alliance and psychotherapy outcome. Although a significant amount of evidence points to common factors as mediators of patient change, the notion of beneficial ingredients unique to specific therapies cannot be ruled out, as occasionally such interventions, independent of common factors, can be shown to contribute to successful outcomes.

C. Specific Intervention Variables

The drive to empirically validate the efficacy of specific interventions is due, in part, to the field of psychotherapy's commitment to theoretically based approaches, as well as the influence of political and economic forces. Collectively, these factors have led to the use of comparative outcome studies, which generally avoid the ethical and methodological problems associated with no-treatment and placebo controls, while enabling researchers to study the effectiveness of particular techniques or theories by comparison. For the most part, comparative studies have yielded equal effects for all types of psychotherapy. Some evidence suggests, however, that specific interventions are related to superior outcome in the treatment of some disorders.

Specific behavioral treatments have been found to be effective in treating patients with anxiety disorders. To date, two treatments—systematic exposure and applied relaxation techniques—have been shown to be efficacious in treating a variety of anxiety disorders. Exposure is a broad term that encompasses both interoceptive and situational exposure interventions. Interoceptive procedures attempt to reliably produce panic-type sensations, with the intent of severing or weakening the patient's associations between certain bodily cues and their respective reactions to panic. The technique of situational exposure, also known as in vivo exposure, refers to the patient's repeated intentional encounters with a feared stimulus. Given the focus placed on the catalyst of fear, it is not surprising that clearly identifying the stimulus that induces the patient's reactions is crucial for the success of these procedures.

Evidence suggests that the most effective treatment strategy includes identification of feared stimuli, periods of exposure to the feared stimuli sufficient in length to reduce the patient's level of anxiety, and a focus on thoughts providing self-efficacy or performance accomplishment. A general strategy employing the use of exposure techniques appears to be the most efficacious intervention for agoraphobia. Similar exposure techniques have been shown to be successful for social phobic, panic, and post-traumatic stress disorder patients as well.

The results of a form of relaxation, referred to as applied relaxation, appear to show promise in treating specific anxiety disorders. Applied relaxation entails instructing patients in the skill of progressive muscle relaxation. Patients are generally taught how to progressively relax specific muscle groups. Whereas the evidence supporting the use of applied relaxation techniques alone is mixed in the panic disorder literature, it appears there is support for treating generalized anxiety disorder with relaxation training. Additional evidence suggests that the treatment of specific disorders is most successful when particular interventions are combined with specific theory-based therapies. For instance, panic disorder is treated most effectively when a cognitive-behavioral theory of therapy is used in conjunction with behavioral techniques.

Like anxiety disorders, there is some evidence supporting the use of specific behavioral techniques in the treatment of depression. However, in the case of depression, these procedures are not more effective than cognitive, interpersonal, and psychodynamic-interpersonal therapies. For example, behavioral activation alone, which refers to a patient scheduling activities that promote mastery as well as pleasurable activities, has been found to be as effective as cognitive therapy. Whereas behavioral activation is a procedure that makes concerted efforts to involve patients in constructive and pleasurable activities, cognitive therapy emphasizes the modification of maladaptive thoughts, beliefs, attitudes, and behaviors of individuals. Although some researchers predicted the superiority of cognitive therapy's ability to successfully treat depressive patients, the results of large, well-controlled studies suggest that interpersonal and psychodynamic-interpersonal therapies are efficacious as well. In contrast to the focus that cognitive therapy places on maladaptive thoughts, beliefs, and behaviors, interpersonal theory perceives depression as the consequence of problems in the interpersonal history of the patient.

As eating disorders are generally characterized by harmful cognitions surrounding weight and physical image, cognitive and behavioral interventions have been the most extensively researched treatments. In particular, cognitive-behavioral therapy has been the focus of much research in the treatment of bulimia nervosa, showing promising results. However, it appears that interpersonal therapy provides generally equivalent results when long-term followup findings are considered.

Reviews of the treatment of substance abuse disorders suggest that various therapy modalities have been found effective in treating patients. Therapies that provide generally equivalent results are cognitive, cognitive-behavioral, and psychodynamically oriented therapies. Whereas patients abusing alcohol have been treated, with similar success, using psychodynamic, cognitive-behavioral, and psychoeducational treatment modalities, opiate-dependent patients have been treated with cognitive and supportive-expressive psychodynamic therapies with generally equivalent results.

Some caution should be applied when interpreting the above findings, however, as the results mentioned are typically based on randomized clinical trials. To date, there is little evidence suggesting that these findings generalize to the clinical setting. The question of whether one technique is comparatively unique and more effective than another is a consistent topic in the literature of psychotherapy. There is currently little evidence supporting the superiority of particular interventions, although future research may note unique contributions. For instance, there is a growing body of

evidence suggesting that the use of therapy manuals allows for the detection of discernible differences in the behavior of therapists, while at the same time enhancing the effects of specific therapy procedures. Perhaps these contributions will allow for more accurate comparisons in outcome studies. The search for specific techniques and common factors that distinguish successful treatment has proved to be difficult because of the myriad factors that likely exist in the interactions between therapists and clients.

III. NEGATIVE EFFECTS OF PSYCHOTHERAPY

Findings from study of the progress and outcome of patients undergoing psychotherapy have resulted in both expected and unexpected conclusions. Most patients receiving treatment improve, a minority of patients remain unchanged, and contrary to the intent of psychotherapy, a small percentage of patients actually worsen as a result of, or at least during, treatment. Independent reviews of the literature suggest that some patients fail to achieve beneficial gains from treatment. Although accurate estimates of patient deterioration are difficult to make because the results of such incidents are not often the focus of psychotherapy outcome studies, estimates of patient deterioration vary between 0% and 15%. Similar to patient improvement, it appears that the phenomenon of deterioration is equally prevalent across theoretical orientations. In addition, treatment failures are reported in all client populations, treatment interventions, and group and family therapies.

Despite what appears to be an equitable distribution of treatment failures, specific factors have been associated with deterioration. Consistent with the influence that patient variables often have in treatment success, patient characteristics appear closely linked to treatment failure. Severity of mental illness alone is predictive of unsuccessful outcome, and severe levels of mental illness in combination with specific interventions designed to breach, challenge, and undermine entrenched coping strategies and defense mechanisms are more likely to result in treatment failure. Consequently, psychotic, borderline, schizophrenic, and bipolar patients are those patients who most frequently experience deterioration during the course of treatment. Similar findings have been reported in the psychoanalytic literature, as patients lacking quality interpersonal relationships, low-anxiety tolerance at the inception of treatment, and low motivation were more likely to worsen when treated with psychoanalysis and purely supportive therapies, whereas patients treated with supportive-expressive psychotherapy obtained better outcomes. Deterioration is not unique to individual therapy, however. Reviews of group psychotherapy outcome have reported a positive correlation between treatment failure and patient variables such as low participation, poor self-esteem, poor self-concept, and more significant needs for fulfillment. Additional personal characteristics associated with patient deterioration include hostility, interpersonal dysfunction, and negative expectations of treatment.

These findings suggest that it is important to consider the type of intervention most appropriate for a particular client. However, harm is not attributable to the patient and intervention alone. The results of studies investigating therapists' contributions to the phenomenon of deterioration have suggested that specific therapist behaviors can lead to treatment failure. For instance, research investigating the relationship between therapists' emotional adjustment, empathy, directiveness, support, and credibility, and patient outcome found that therapists' empathic abilities were the most predictive of patient outcome. Additional findings have suggested that effective therapists are also likely to provide more direction and support than ineffective therapists. Some researchers have also found that less effective therapists tend to emphasize values such as having a life of comfort and excitement, whereas effective therapists consider intellectual values, such as reflection, as more important.

Some research has also suggested that therapist "negative reactions," including disappointment, hostility, and irritation, are associated with patient deterioration. In addition, there is some indication that client deterioration is more prevalent when clinicians underestimate their client's illness or overestimate their client's progress in treatment. Research exploring the importance of leadership styles in group therapists suggests that confrontational and aggressive group therapists tended to have more treatment failures in their groups. These therapists were observed to be more likely to insist on immediate client disclosure, emotional expression, and change in attitude.

There is a growing body of literature which suggests that if patients who are experiencing deterioration during psychotherapy are identified early in the treatment process, then steps can be taken to assist them in obtaining a more favorable outcome. Primarily, these studies have involved providing regular feedback re-

garding patient progress to therapists so that they can make needed adjustments in their treatment of clients who are having a poor response to therapy. However, in an attempt to further improve the outcomes of patients who are experiencing deterioration, several research groups have begun to extend the practice of providing regular feedback regarding patient progress to others involved in the treatment process, such as clients and clinical supervisors. The impact of providing individuals other than therapists with feedback regarding patient progress remains unclear.

IV. SUMMARY

Years of clinical research have produced compelling evidence for the value of psychotherapy. Contrary to Hans J. Eysenck's controversial publication regarding the efficacy of psychotherapy, outcome studies have confirmed that patients benefit from treatment in a variety of domains. According to the dose-effect literature, benefits derived from therapy transpire in relatively brief periods of time. For many clinical disorders, generally one-half of all patients return to normal functioning in 5 to 20 sessions. An additional 25% of patients experience a similar level of substantial improvement when dosage levels are increased to 30 to 50 sessions. The benefits from treatment appear to be durable, as the results of followup studies suggest that the effects of treatment last at least one to two years subsequent to treatment. Although researchers have produced empirical evidence supporting the effectiveness of psychotherapy, they are just learning to understand why patients tend to improve.

Not all patients experience equal effects from treatment, and this finding has inspired the investigation of factors facilitating both positive and negative change. The results of such studies have indicated that a patient's level of disturbance is most predictive of outcome. However, desire to change, interpersonal skills, and awareness of relevant problems have all been found to be related to outcome. In addition to patient variables predictive of successful outcome, there are characteristics of a therapeutic relationship that facilitate a patient's sense of trust, safety, and security. According to patients' reports, therapist empathy and a strong therapeutic alliance are most predictive of treatment outcomes.

Although the use of specific interventions has shown promising results in the case of particular disorders, in general the search for superior treatment strategies has been disappointing, and according to some researchers unnecessary, given the complexity of potential interactions between therapists, clients, and modes of therapy. Regretfully, not all patients improve from treatment; in fact, some actually worsen. Although knowledge of this phenomenon is somewhat limited, there is some evidence that suggests that treatment failure is best predicted by severity of mental disorder. Furthermore, factors inhibiting the development of a strong therapeutic alliance also predict negative outcome. There is evidence to suggest that providing regular feedback regarding patient progress to therapists helps improves the outcome of patients who are experiencing deterioration during psychotherapy.

See Also the Following Articles

Efficacy ■ Objective Assessment ■ Outcome Measures ■ Research in Psychotherapy ■ Termination

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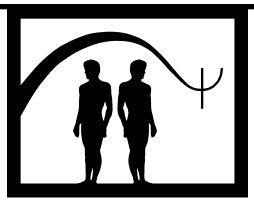

Efficacy

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GLOSSARY

effect size A common metric in meta-analyses that represents the magnitude of a difference between a treatment and a control group.

generalizability The ability of the results of a study to extend to other situations and patient samples.

meta-analysis A procedure to quantitatively summarize the cumulative findings of a body of literature.

therapist adherence How closely the participating therapist follows the treatment manual and techniques that have been specified.

therapist competence The ability of the therapist to conduct therapy according to the specified theory in a way that maximizes the possibility of client change.

treatment manuals Typically describes in detail the theoretical underpinning of a specific therapeutic approach, the strategies that should be used, and suggestions for dealing with specific issues in treatment.

I. EFFICACY IN PSYCHOTHERAPY RESEARCH

The efficacy of treatment is determined by a clinical trial or trials in which many variables are carefully controlled to demonstrate that the relationship between the treatment and outcome are relatively unambiguous. Efficacy studies emphasize the internal validity of the experimental design through a variety of means including random assignment, blinding procedures for raters, careful selection of patients, manuals to standardize treatment delivery, training and monitoring therapist adherence to the treatment, and managing the "dose" of treatment by conducting analyses that include only patients that have received a specified amount of treatment. These and other strategies are used to enhance the ability of the investigator to make causal inferences based on the findings (e.g., is cognitive-behavioral treatment more effective in treating panic disorder than psychodynamic treatment?).

In contrast, the effectiveness of a treatment is studied in natural clinical settings when the intervention is implemented without the same level of internal validity that is present in clinical trials. Effectiveness studies emphasize the external validity of the experimental design and attempt to demonstrate that the treatment can be beneficial in a typical clinical setting in which fewer experimental variables are controlled. Typically, clients are not preselected to represent a homogeneous sample, treatment dose is not necessarily controlled, and therapist adherence to treatment guidelines is neither highly specified nor monitored. Therapists tend to be those working in clinical settings and may or may not receive the same level of prestudy training as therapists in efficacy studies.

It is only natural that some confusion between efficacy and effectiveness exist. Historically these two terms were often used interchangeably. Meta-analytic methods for estimating treatment effects have typically included both types of studies when calculating the "effect size" that represents the magnitude or size of difference between a treatment and a control group. The use of the term "effect" within the context of inferential statistics and experimental design naturally leads to descriptions of the studies as evidence for the effectiveness of treatment. As a result, even recent literature often does not incorporate the modern distinction between efficacy and effectiveness.

The study of efficacy through clinical trials has many benefits for psychotherapy research. The methodology of clinical trials allows for improved internal validity through minimizing attrition by having patients commit to prespecified treatment length prior to receiving treatment. Thus, efficacy trials are praised for their ability to determine the specific factors that contribute to therapy outcome by controlling for confounding variables. Another way that clinical trials increase internal validity is by controlling the types of patients included in the study. Prospective participants of a clinical trial are usually screened to ensure that participants meet predefined criteria. Screening for inclusion in studies often includes meeting specific criteria for diagnosis and meeting certain cutoff scores on various measures. Participants are often excluded from a study if they meet diagnostic criteria for additional disorders. This is done in an attempt to limit the number of clients with comorbid diagnoses and thus minimize between-participant variance and avoid confounding variables.

Efficacy studies also employ the use of treatment manuals to standardize treatment delivery between therapists. Treatment manuals typically describe in detail the theoretical underpinning of the therapeutic approach, the strategies that should be used, and suggestions for dealing with specific problems that arise during treatment. The use of therapy manuals and more experienced therapists presumably reduces the effects of the therapist's contribution to outcome, allowing for more clear comparisons of treatment procedures. The use of manuals is presumed to magnify the differences between therapies by reducing the "error" that could be introduced by specific therapists.

The standardization of treatment delivery between therapists is further ensured by training therapists prior to the study, monitoring therapist adherence to the treatment during the study, and supervising therapists who deviate from the treatment protocol. Thus, therapist competence is ensured, enabling researchers to draw appropriate conclusions regarding treatment differences. Another key element in efficacy studies is managing the "dose" of treatment by ensuring that each patient has undergone the complete treatment and thus a sufficient dose to ensure a positive response. Thus, efficacy studies are able to identify the impact of therapy from a fixed number of sessions across treatment groups.

Limitations of efficacy research are usually associated with its strengths. The main limitations are associated with the degree to which results can be generalized to routine practice. The results of these studies tend to show the maximum benefits that can be derived from treatments. In routine clinical practice, clinicians must help patients even when they have multiple disorders, are extremely disturbed, or are even subclinical. They cannot undergo extensive training, monitoring during practice, or supervision. Patients often receive multiple treatments (e.g., medication, group therapy) simultaneously with the treatment of intent.

II. NIMH COLLABORATIVE DEPRESSION EFFICACY STUDY

An exemplary study of treatment efficacy is the Collaborative Depression Study conducted by the National Institute of Mental Health (NIMH) in 1989. This study was the combined effort of investigators who were equally interested in two psychotherapy modalities as well as the pharmacological treatment of patients with depression. This approach clearly marked a change in research strategies from examining therapy as usually practiced (effectiveness) to studying "ideal" therapy as guided by manuals and competency ratings (efficacy).

In 1989, Irene Elkin and other principle investigators reported on the comparative outcomes of this study, which compared a standard reference treatment (antidepressant imipramine plus clinical management) with two psychotherapies (cognitive-behavioral therapy and interpersonal psychotherapy). These three treatments were contrasted with a drug placebo plus clinical management control group. Although each of these two psychotherapies had been shown to be specifically effective with depression, this study was the first head-to-head comparison of these two psychotherapies. Since the initial publication, a large number of papers have been published regarding various aspects of this study.

Participants in this study were referred from psychiatric outpatient services, self-referrals, and other mental health facilities. An initial 560 patients were interviewed by clinical evaluators using the Schedule for

Affective Disorders and Schizophrenia interview to eliminate participants with comorbid diagnoses. Inclusion criteria included the diagnoses of a current episode of major depressive disorder, and a score of 14 or higher on an amended version of the 17-item Hamilton Rating Scale for Depression. Remaining candidates for the trial were excluded if they had additional psychiatric disorders, two or more schizotypal features, history of schizophrenia, organic brain syndrome, mental retardation, concurrent treatment, presence of specific physical illness or other medical contraindications for the use of imipramine, and presence of a clinical state inconsistent with participating in the research protocol (e.g., high suicidality). The 250 patients who passed the clinical and medical screening gave consent to be entered into the study and were randomly assigned to a treatment condition based on a separate computer-generated random order for each of three sites: Pittsburgh, Oklahoma City, and Washington, D.C.

The 28 therapists (18 psychiatrists and 10 psychologists) were carefully selected, trained, and monitored in the specific treatment they offered. A different group of therapists conducted treatment in each of the treatment and control conditions, with the exception of the two pharmacotherapy conditions (imipramine plus clinical management and pill placebo plus clinical management), which were conducted double blind by the same therapist. Patients were assigned to therapists within treatments according to availability, and each therapist saw between 1 and 11 patients.

The treatments were carefully defined and followed manuals that spelled out theoretical issues, general strategies, major techniques, and methods of managing typical problems. Clinical management was a component of both pharmacological conditions to ensure clinical care and to maximize compliance. Because the clinical management offered patients support, encouragement, and occasionally direct advice, this condition may have approximated a "minimal supportive therapy" condition. However, because specific psychotherapeutic interventions were not used, improvement attributed to the "minimal supportive therapy" is indicative of common factors present in all conditions, and not specific therapeutic interventions.

During the training phase of the study, all therapists received additional training in their respective approaches and met competency criteria in carrying out their assigned treatment. Throughout treatment, therapists were monitored to ensure their adherence to their respective approaches and to determine whether the treatments could be differentiated from one another. The treatment approaches were observed by researchers and were correctly classified more than 95% of the time, ensuring that differences found between treatments were indeed due to the difference in therapeutic approaches.

Psychotherapy sessions were each 40 to 50 min long, whereas the initial pharmacotherapy session was 45 to 60 min long and clinical management sessions 20 to 30 min long. Treatments were intended to last 16 to 20 weeks, however the total sample averaged 13 sessions. Those who completed therapy averaged 16.2 sessions, while early terminators averaged 6.2 sessions.

Eleven of the 250 patients dropped out of the study before the first treatment session. Of the remaining 239 patients entering treatment, 77 (32%) terminated before completion (had less than 12 sessions of treatment) either because they chose to or because they were withdrawn by the study staff. On investigation of differences between early terminators and those who completed treatment, it was determined that early terminators across all the treatments were significantly more severely depressed at intake than those who completed treatment.

Outcome was assessed on termination of treatment and follow-up intervals on measurements of depressive symptoms, overall symptoms, and general symptoms from both the perspective of a clinical evaluator and the client. Outcome was analyzed for pretreatment–posttreatment differences and predetermined levels of clinical recovery. Post hoc explanatory analyses were carried out comparing patients with different levels of depression severity.

Numerous comparisons were made, and the results of the study are very complex. Confounding variables influencing outcome included initial severity of the patient's condition, research site differences, and the attrition rate of the patients. However, each of the treatment conditions, including the control condition, evidenced significant improvement from pretreatment to posttreatment. The results for cognitive-behavioral therapy (CBT) and interpersonal therapy (IPT) fell in between the imipramine plus clinical management group (IM-CM), which was the most effective, and the placebo plus clinical treatment group (PLA-CM), which was the least effective, although the psychotherapy outcomes were closer to the more effective IM-CM condition.

The initial severity of depression proved to be a significant variable in treatment outcome. For the patients with less severe depression, there was no evidence of the effectiveness of any treatment over PLA-CM group. However, the patients who were more severely depressed and functionally impaired did extremely well with the IM-CM condition and poorly on the PLA-CM condition, with the psychotherapies falling in between.

The results suggested that the psychotherapies needed to be offered for more than 14 sessions with the patients with more disturbances, as many continued to show symptoms of depression at the end of treatment.

Among the more interesting findings were comparisons of the two psychotherapies with the PLA-CM control group. This latter condition was intended to control for the effects of regular contact with an experienced and supportive therapist, the general support of the research setting, and the effects of receiving a "drug" that was thought to be helpful, thus answering the question of whether the psychotherapies had any effects beyond what could be achieved through this rather extensive control condition.

There was limited evidence of the specific effectiveness of IPT and no evidence for the specific effectiveness of CBT. Surprisingly, there was also little evidence for superiority of either therapy in contrast to the placebo plus clinical management. The therapies were effective, but the patients who received the placebo plus clinical management also improved. These results are consistent with the common finding that the relationship that develops between therapist and patient is a potent force in enhancing treatment outcome. This positive alliance was found in the clinical management conditions (drug/placebo) as well as in the psychotherapy conditions.

In head-to-head comparisons of IPT and CBT, no significant differences were found in any of the major analyses or in comparison with patients with more and less severe disturbances. This similarity held up even on measures that were thought to be differentially sensitive to the two therapies. However, in some post hoc comparisons, modest evidence of specific effects could be found. Although all patient groups improved by the end of treatment, superior recovery rates were found for both IPT and IM-CM, when compared to the PLA-CM control group.

III. SUMMARY

Clinical trials provide evidence of the degree of effectiveness of a specific treatment compared to various control groups under rigidly controlled experimental conditions that allow researchers to make causal inferences about the causes of improvement. Clinical trials involve taking a theoretical rational for the disorder of interest, a hypothesized chain linking change mechanisms to specific interventions, and operationalization of interventions that promote the likelihood of replication. They also include the identification and careful selection of a target population and use of measures that are appropriate to the disorder and relevant to symptomatic recovery and daily functioning. Therapists are carefully selected, trained, monitored, supervised, and their adherence to treatment manuals and competence are ensured. The data that result are subjected to appropriate statistical analysis including the extent to which differences between treatment and control groups are probable. They attempt to delineate the mechanisms through which psychotherapy operates. Because of the rigorous design demands, clinical trials are limited in their ability to generalize to routine practice, thus they must be followed by effectiveness research paradigms.

See Also the Following Articles

Cost Effectiveness ■ Effectiveness of Psychotherapy ■ Outcome Measures ■ Relapse Prevention ■ Research in Psychotherapy ■ Termination ■ Working Alliance

Further Reading

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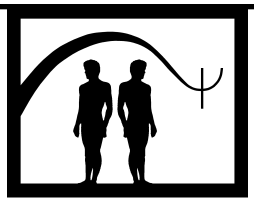

Electrical Aversion

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GLOSSARY

conditioning The term conditioning is used for the establishment of conditioned reflexes. The classical or respondent conditioned reflex first described by Pavlov is produced by regularly following a stimulus (the conditioned stimulus) by an unconditioned stimulus, that is, a stimulus that in a motivated animal or person produces an unconditioned reflex. A conditioned reflex, which is similar to the unconditioned reflex, commences to occur to the conditioned stimulus. The familiar example is the occurrence of salivation to an auditory stimulus that is regularly followed by the presentation of food. An avoidance conditioned response is one that attempts or successfully avoids an unpleasant stimulus, such as an electric shock. The attempt could be withdrawal of a limb when the shock is administered to the limb. The successful avoidance could be pressing a bar or jumping a hurdle in response to a signal that is followed by the shock if the response is not made. This form of conditioning in which a response is followed by a pleasant or unpleasant stimulus is termed operant or instrumental conditioning.

extinction Gradual failure of a previously conditioned response to occur to the conditioned stimulus when the latter has not been followed by the unconditioned stimulus on a number of occasions.

reinforcement The presentation of the unconditioned stimulus following the conditioned stimulus. Partial reinforcement is intermittent in that the unconditioned stimulus is at times omitted. Conditioned responses established by partial reinforcement are more resistant to extinction than those established by consistent reinforcement, that is, they take longer to fail to occur when reinforcement is consistently ceased.

U-scores U-scores of sexual orientation use the Mann-Whitney U-test to provide a statistical assessment of the degree to which individual men show increased penile volume responses to ten 10-second films of nude women versus ten of men. The resulting U-score approaches 100 the more their ten responses to the pictures of women were greater than the ten to the pictures of men, and approaches 0 for the reverse. When the scores are 23 or less or 77 or more the difference is statistically significant. Scores of over 77 were obtained by 90% of men identifying as heterosexual.

I. DESCRIPTION OF ELECTRICAL AVERSION

Electrical aversion is the administration of electrical shocks following exposure to cues that stimulate inappropriate urges or behaviors (respondent conditioning) or following the carrying out of the behaviors (operant conditioning). Its aim is to weaken or eliminate those urges or the motivation to carry out the behaviors, so that they are carried out less frequently or ceased. The electrical shock is usually administered to the treated subject's limbs either by attached electrodes at an intensity determined by the

subject to be painful but not unbearable and not emotionally distressing, or by devices such as a cattle prod or a remote control device at a level that is unbearably painful and emotionally distressing.

II. CASE ILLUSTRATION

At her initial consultation Ms. J. D., aged 27, reported the presence of jealous obsessions since her first emotional relationship with a man when she was 18. The thought that her boyfriend could be sexually attracted or in love with another woman preoccupied her almost continuously and was extremely distressing. It would cause her to repeatedly accuse the boyfriend of being in love with other women but only staying with her because he felt obliged to. His assurance that he was not would only briefly relieve her of the thought that as she said "the terrible things in my mind are true." If between relationships she formed a friendship with a woman she considered attractive, when she met a new boyfriend she would cut off the relationship with the woman, for fear the boyfriend would find her attractive. Also she would put pressure on her boyfriend to limit any kind of social interactions with women she saw as attractive. This behavior had frequently caused boyfriends to whom she was strongly attracted to terminate the relationship. Ms. J. D. added that "otherwise they would never have let me go." She said that from the time she was 18 to 22 the thought was present "24 hours a day; it was all I could think about" and frequently it would cause her to become "hysterical," that is emotionally out of control. She said because of the continuous preoccupation she stayed in secretarial employment below her ability so that she could continue to work. When she was criticized for her behavior she said she would try and control it, although the thoughts would remain distressing. Finally she felt she would stop work and any social activities as otherwise she would attempt suicide. She said when she told her mother this, her mother said she would be sent to a mental asylum, and this caused her to continue her normal life.

Prior to the initial consultation Ms. J. D. had had psychiatric treatment for several years that included administration of the antipsychotic agent thioridazine and the antidepressant agent amitriptyline, and encouragement to accept that her thoughts were not true. However, she felt that in contrast to the behaviorally oriented psychiatrist she saw in the previous year, her initial psychiatrist would advise her but not encourage her to depend on herself. The second psychiatrist attempted to rid her of the obsessive thoughts by a satiation procedure, instructing her to write them down repeatedly. Nevertheless, although she felt very guilty about the behavior with her current partner, she could not control it. She added that a few months previously she found she had a lump in her breast and hoped it was malignant as death would relieve her of her distress concerning her obsessive thoughts. She constantly experienced headaches that she attributed to her distressing thoughts and was unable to enjoy any activities due to the constant preoccupation. When people talked to her she would answer vaguely as her mind was continuously on the thoughts.

It was not possible to clarify whether Ms. J. D. believed her boyfriend was in love with another woman or feared he was, that is phenomenologically whether the thought was a delusion or an obsession. It is commonly considered that patients with obsessive–compulsive disorder do not believe their obsessive thoughts are true, and that patients who do are suffering from a delusional disorder. However, in my experience this is not always the case, and patients who have a particular belief can have an illness that has all the features of obsessive–compulsive neurosis rather than delusional disorder in terms of the age of onset, life history, and response to cognitive behavioral treatment and selective serotonin reuptake inhibitor medication.

I considered that her illness had the features of obsessive–compulsive neurosis and I treated her initially with clomipramine, increasing the dose to 150 mg at night. This medication had been established in controlled trials to be specifically effective for this condition. My decision was also influenced by the fact that her mother had a depressive illness that responded to this medication and her brother had been diagnosed with a schizophrenic illness with obsessive features that responded to a mixture of clomipramine and a phenothiazine. However, Ms. J. D. showed little response to the introduction of clomipramine.

In view of the severity of her condition and the fact it had not responded to medication or satiation therapy, I decided to try electrical aversion in an aversion-relief procedure. Ten phrases expressing her thoughts, such as "Being upset when I see my boyfriend talking to an attractive woman," "Being upset at the thought of my boyfriend flirting with another woman," as well as an eleventh statement "Feeling confident of my boyfriend's love" were each written on separate filing cards. The cards were placed upside down in front of the patient with the card with the eleventh statement after the 10 and on top of about 20 blank cards. Electrodes were attached to Ms. D.J.'s first and third right hand fingers from a device constructed to deliver an electrical shock consisting of 1 millisecond pulses every 10 milliseconds and

of 1 second duration. The voltage of the shock to be administered was decided prior to treatment, as she determined it to be unpleasant but not upsetting. In her case this was 85 volts.

She was then instructed to turn over the first card and read it aloud. Immediately when she completed reading the phrase she received a shock at the level determined. This procedure was repeated with the following cards every 10 seconds until she had read the phrases on all 10 cards. She then read the final card and did not receive a shock. The aim was that the statement on this card would be reinforced by the relief of knowing when reading it that it would not be followed by a shock. The 10 cards were then shuffled and the procedure repeated four more times. Shuffling the cards was done so that she would not realize when she was about to turn over the card with the eleventh statement so that the relief would not be experienced until she saw the phrase. She received this treatment twice a week for 4 weeks. By the fifth session she reported that the thoughts were less frequent and much less distressing, so that she was able to go out with her boyfriend and not be constantly watching him or be concerned if he talked to other women. The treatment was ceased after the tenth session when she felt her improvement was maximal. In the final session I noticed that she laughed when she read the phrase "Being upset at her boyfriend being sexually aroused at the sight of a girl in a see-through nightie." After the session I asked her again if she initially had believed the thought that her boyfriend loved another woman or just feared it. She said "Before this therapy I did believe it, now I believe he loves me. I can almost laugh about the things on the cards. I can look at other women and think my boyfriend loves me. I feel flattered when I look at them."

I continued to see her every few months for the following 2 years, during which time she obtained employment in a much more demanding position as a private secretary to a prominent politician and subsequently married the boyfriend she had been seeing at the time of her initial consultation. She said that issues of jealousy were no longer a problem in their relationship and added that in the past she would seek reassurance from other people. Now she depended on herself and felt much more secure.

III. THEORETICAL BASES AND EMPIRICAL STUDIES

Contingent shock is the administration of highly painful electrical shock to subjects immediately following their carrying out markedly injurious behavior to others or more commonly to themselves, such as eye gouging or finger biting. Its aim is to produce immediate cessation of the behavior and prevent its future occurrence. This form of contingent shock has been accepted without question to be a form of avoidance conditioning. It had been repeatedly demonstrated to be effective in single-case studies. Duker and Seys in 1996 reported its use by a remote control device in 12 profoundly mentally retarded subjects whose behavior was resulting in life-threatening self-injuries. In a follow-up of 2 to 47 months the behavior was almost completely suppressed in 7 subjects, so that physical restraint was no longer necessary. In a further 3 it was moderately effective, but they still needed daily administration. In 1997 Diden, Duker, and Korzilius carried out a meta-analysis of over 50 predominantly single-subject studies. They found contingent shock to produce an effectiveness score that markedly exceeded that of other procedures used to treat self-injurious behaviors.

The theoretical basis of therapies using lower levels of aversive stimuli proved much more controversial when it was investigated intensively from the 1950s to the 1970s, the period this form of aversive therapies was commonly used. Although there has been no generally accepted resolution, currently little interest is shown in how these therapies produce their effects, reflecting the general decline in empirical research of cognitive-behavioral approaches.

A. Conditioning of Anxiety-Relief

In his monograph *Psychotherapy by Reciprocal Inhibition* published in 1958, which stimulated the widespread introduction of behavioral modification procedures to psychiatry and psychology, Wolpe suggested that "anxiety-relief" responses might be directly conditioned to convenient stimuli and subsequently used to counter anxiety. He based the suggestion on the observation that if a stimulus was repeatedly presented to an eating animal just before withdrawing its food, that stimulus acquired the property of inhibiting feeding even when the animal was in the middle of a meal. Wolpe argued that by analogy it might be expected that a stimulus that consistently coincided with the termination of a noxious stimulus might acquire anxiety-inhibiting effects. He pointed out the possibility was supported by experiments showing that approach responses were conditioned to a stimulus repeatedly presented at the moment of termination of an electric shock, in contrast to the avoidance that is conditioned to a stimulus that preceded an electric shock.

Wolpe investigated the validity of his suggestion by attempting to reduce patients' anxiety. Electrodes

attached to their left forearm and palm were connected to an induction coil fed by a 6-volt battery. Tests were made to determine a level of shock that each patient found very uncomfortable without being unbearable. The patients were then instructed that the shock would be repeated and they were to endure it until their desire to have it stop became very strong, at which point they were to say aloud the word "calm." The shock would then be immediately terminated. After 30 to 60 seconds the procedure was repeated 20 to 30 times at a session. Wolpe emphasized that patients were reassured they would never be shocked without warning, and that such warnings should be given every time a shock was administered, as otherwise some patients became very anxious between shocks. Wolpe reported that most patients reported a feeling of relief at the cessation of the shock, which was sometimes greatly out of proportion to the discomfort that went before. Many found that after one to three sessions using the word "calm" could diminish the intensity of anxiety evoked in the course of day-to-day experience.

B. Avoidance Conditioning

Wolpe also reported studies using electrical aversion to produce avoidance reactions to obsessional stimuli that produced intense and excessive approach responses. He stated that the essence of the method was to administer a very unpleasant electrical shock to the subject in the presence of the obsessional object, citing the successful use of the procedure in the 1930s for the treatment of both alcoholic addiction and fetishism. As used by Wolpe the shock was administered not in the presence of the stimulus, but its mental image, by asking subjects to imagine it. The subjects were instructed to signal when the image was clear, when a severe shock was administered to their forearm. This was repeated 5 to 20 times a session. Wolpe reported a case illustration of its successful use in a woman with what he termed a food obsession. She found foods with a high salt content or that were fattening irresistibly attractive. Following treatment she reported that on imagining any such food she immediately had a feeling of fear and revulsion, accompanied by an image of the shock situation. She no longer experienced the previous misery of hours debating "Should I eat; should I not?"

The reintroduction of electrical aversion by Wolpe led to the procedure being widely adopted in the 1960s using moderate levels of shock to reduce behaviors subjects found unacceptable. These included homosexual, gambling, and paraphilic behaviors and alcohol and other substance abuse. It also stimulated the use of high levels of contingent shock to inhibit harmful behaviors in developmentally delayed subjects. Its use in the treatment of anxiety was rarely followed up.

C. Bearable Electrical Aversion in Treatment of Homosexuality

Throughout the 1960s the assumption persisted that the milder form of electrical aversion was a conditioning procedure resulting in an aversion to the stimulus or behavior that preceded administration of the electric shock. This assumption was first questioned in 1969 in relation to its use in the modification of homosexual interest or behaviors. As pointed out in a 1977 review by McConaghy, it was this use that was most subjected to empirical investigation, both in relation to its efficacy and mode of action. This was most likely because the response of homosexual men could be assessed not only by their self-report of changes in their feelings and behaviors but also by apparently objective laboratory assessment of changes in their sexual orientation. It was also this use in homosexual men that was strongly and persistently criticized, most recently by King and Bartlett in the *British Journal of Psychiatry* in 1999.

The first influential study in which an aversive procedure was employed to treat a significant number of men who identified as homosexual was reported by Freund in 1960. An emetic agent was administered to the men daily and while its effects lasted, they were shown slides of dressed and undressed men. In a second phase of treatment they were given 10 mg of testosterone propionate and 7 hours later were shown films of nude or seminude women. Freund reported only the men's subsequent heterosexual adaptation. In 10 men (15%) it was short term and in 12 (18%) it lasted at least several years. Freund termed the procedure conditioned reflex therapy. His report was published in the influential monograph *Behaviour Therapy and the Neuroses*. The editor, Eysenck, accepted that the procedure acted by conditioning but pointed out that that the principles of conditioning and learning theory must be known and adhered to by practitioners if such procedures were to be effective and not harmful. He stressed the importance of exact timing of the administration of the conditioned stimulus in relation to the unconditional stimulus and that this could not be achieved in regard to the onset of the effect of emetic agents. He considered better results would be obtained with electrical shock, the onset of which could be exactly timed. Subsequently an increasing number of

studies were reported using electrical shock rather than emetic agents in the treatment of homosexuality.

1. Anticipatory Avoidance Conditioning

Following Eysenck in emphasizing their conviction that if conditioning techniques are to be employed in psychiatry, they should represent the systematic application of the methods and findings of experimental psychology, in 1964 Feldman and MacCulloch introduced anticipatory avoidance aversion therapy in the treatment of homosexuality. They concluded from a review of the literature that for the response to be most resistant to extinction a conditioned avoidance technique should be used. The training trails should be well spaced, electrical shock used rather than nausea-producing agents, and reinforcement should be partial (see Glossary). Subjects were shown a slide of a male, which they could remove with a switch provided, but were instructed to view it as long as they found it attractive. If they left it on for 8 seconds they would be given an electrical shock to the calf that was terminated when they removed the slide. The level of shock employed was that which inhibited their feeling of attraction. On two-thirds of occasions they could remove the slide before 8 seconds so avoiding the shock, the reinforcement trials. On one-third of occasions their attempts to remove the slide were unsuccessful, so they received the shock. These nonreinforced trials meant that the avoidance response was only partially reinforced. Randomly on about half the occasions when the subjects removed the slide of the male it was replaced by the slide of a female. MacCulloch and Feldman in 1967 reported the response of 41 male and 2 female subjects, concluding that 25 were significantly improved in that they showed ratings of 0 to 2 on the Kinsey 0 to 6 scale, where 0 is exclusively heterosexual, and 6 exclusively homosexual. Thirteen of the 25 were heterosexually active with no homosexual fantasy or behavior.

2. Aversion-Relief Therapy

In an alternative development in 1964, Thorpe and colleagues argued that as photographs symbolized the behaviors to be treated with aversive therapy, words might be equally effective symbols and their use would avoid the necessity of obtaining suitable photographs. They also noted that in sessions of aversive therapy when subjects recognized by a signal that administration of unpleasant stimuli had finished they experienced great relief. They decided to incorporate this relief into the treatment of homosexuality in men that they had developed, which they termed aversion-relief therapy. With aversion-relief, as used in the case illustration reported, subjects were shown a series of words or phrases every 10 seconds. All but the last word or phrase related to the behavior being treated, for example, "homosexual" or its synonyms. The last word related to behavior to be encouraged, such as "heterosexual." Each time the subject saw a word he was to read it aloud. He received a painful shock to his feet, except when the last word was shown. Thorpe and colleagues reported subjects quickly learned that they received no shock with the last word and experienced marked relief. The series of words were shown five times in a session, which was carried out daily. The responses of three subjects were reported at 4-weeks follow-up. Two subjects reported negative feelings to homosexuals or homosexual thoughts during or following treatment and the third that he had no homosexual desires in situations where in the past he had experienced them. All three reported more heterosexual interest.

3. Contingent Electrical Shock

In 1969 Bancroft reported the use in 10 homosexual men of electric shock contingent on their showing a distinguishable penile circumference response to photographs of males. Up to four further shocks were given at 15-second intervals unless penile circumference decrease occurred. At the time it had not been recognized that as shown by McConaghy in 1974 a percentage of men in response to stimuli they find sexually arousing initially show penile circumference (but not volume) decreases. In such men their responses of arousal to pictures of males would be indexed as decreases and not followed by shock, while their reduced arousal to pictures of males would be followed by shock. This may have contributed to outcome of the subjects treated, the poorest in the literature. One year or more following treatment two and possibly a third reported reduced homosexual desire and one reported no homosexual desire.

A related contingent treatment was used in the treatment of male child molesters by Quinsey and colleagues in 1980, although evidence had by then been advanced that penile circumference decreases could paradoxically index increased sexual arousal, and vice versa. The subjects were given biofeedback of their penile circumference responses as if the responses correctly indexed their arousal to pictures of adult and child nudes. The subjects received electrical shock to the arm when they showed circumference increase to the pictures of children. The only outcome reported was change in their penile circumference responses to the pictures following treatment, although again by this time the ability of many men to consciously modify

their penile circumference responses had been reported. In their 1995 review of sexual reorientation therapy for pedophiles, Barbaree and colleagues considered this the only well-controlled study that convincingly showed the effectiveness of electrical aversion with child molesters.

4. Comparison Studies of Aversive Procedures in Homosexuality: No Conditioning Evident

The first comparison study of aversive procedures was reported by McConaghy in 1969 with a year follow-up reported in 1970. It and a subsequent series of studies reviewed by McConaghy in 1977 were designed to determine the effects of aversive therapy in male homosexuality and whether they were consistent with it acting by conditioning. In the studies, in addition to subjects' self-reports, their penile volume responses to 10-second duration moving films of male and female nudes were investigated before and after treatment and at follow-up. McConaghy in 1998 reviewed evidence showing that penile volume compared to penile circumference assessment provided a more valid assessment of individual subjects' stated ratio of heterosexual/homosexual interest and, when advantage was taken of its much shorter latency, was much more resistant to modification by the subject.

In the initial study 40 men who requested aversive therapy to reduce or eliminate homosexual interest or behaviors were randomly allocated to two procedures. Twenty received apomorphine aversive therapy to photographs of nude men and 20 received electrical shock aversion-relief therapy using phrases, with the shocks delivered to two fingers of the subjects' hands. The level of shock was that subjects found painful but not unbearable. At 1-year follow-up half the subjects considered their homosexual urges to be reduced and half, mainly the same men, that their heterosexual desire had been increased. A quarter of the subjects had had no homosexual relations since treatment and a quarter reported that the frequency of such relations was reduced. There were slight but nonsignificant trends for more men to report increased heterosexual interest following aversion-relief and more to report reduced or no homosexual relations following apomorphine aversion. Using U-scores (see Glossary) of the men's penile volume responses to the film assessment, prior to treatment 10 of the 40 showed scores of over 50, indicating predominantly heterosexual orientation, with 1 of the 10 having a score of over 77. Following treatment 15 showed scores of over 50, with 2 having scores of over 77.

McConaghy pointed out that the conditioned response to a stimulus reinforced by a painful electrical shock to the fingers was hand withdrawal, and to a stimulus reinforced with apomorphine is nausea. Following treatment no subjects reported these responses, despite their reporting reduction in homosexual desire. It was suggested that this reduction could not be produced by conditioning in view of the absence of the expected conditioned responses. Workers including MacCulloch and Feldman and Thorpe and colleagues in 1964, and Solyom and Miller and Schmidt and colleagues in 1965 had reported reduction in homosexual feelings following aversive procedures in homosexuality. They did not report the presence of expected conditioned responses, but did not appear to have attached any significance to this.

In the follow-up reported in 1970, McConaghy pointed out that although only seven subjects considered their sexual orientation had changed from predominantly homosexual to predominantly heterosexual, other criteria of evaluating responses were also important. Some men who remained exclusively homosexual and continued homosexual behaviors they found acceptable, reported they were no longer continuously preoccupied with homosexual thoughts and felt more emotionally stable and able to live and work more effectively. A number of these men were able to control compulsions to make homosexual contacts in public lavatories, which had caused them to be arrested one or more times previously. Six of the nine married men at follow-up stated their marital relationship had markedly improved, including two who had ceased having intercourse with their wives some years prior to treatment.

Although there were no statistically significant differences in outcome between aversion-relief and apomorphine aversion, it was considered that the trends toward slight differences required investigation by replication. A further 40 men seeking treatment for homosexuality were randomly allocated, 20 to receive apomorphine therapy as in the first study and 20 to receive the anticipatory avoidance treatment developed by Feldman and MacCulloch. The latter treatment was used as being theoretically the most effective, if it did act by conditioning. At follow-up there were no consistent trends for the outcome of the two procedures to differ, both producing results comparable with those of the first study. Changes in subjects' penile volume responses to the films of men and women following the two procedures were also similar and comparable to those found in the first study. The two studies had therefore demonstrated that three markedly different aversive procedures produced comparable outcomes, yet as conditioning techniques one, apomorphien therapy, could be expected to be poorly effective and one, anticipatory avoidance, maximally effective.

5. Backward Conditioning and Forward Conditioning Equally Effective

A third study further replicating the findings concerning the outcome of electrical aversive therapy in homosexuality and strengthening the argument that the procedure does not act by conditioning was reported by McConaghy and Barr in 1973. Forty-six men seeking to control unacceptable homosexual interest or behaviors were randomly allocated to receive either anticipatory avoidance, classical conditioning, or backward conditioning. Anticipatory avoidance was carried out as in the previous study. With classical conditioning subjects were shown for 10 seconds at 4-minute intervals slides of males they had selected as attractive. For the final second of exposure of the slide and for 1 second following its removal they received a painful electrical shock to two fingers of one hand. The backward conditioning approximated the avoidance procedure in terms of frequency and duration of the presentation of the slides of males and females but with the electrical shocks preceding rather than following the presentation of the slides of males. There were no consistent trends at 1-year follow-up for one therapy to be more effective than another. The proportion of men reporting decreased homosexual interest and increased heterosexual interest was similar to that in the previous two studies. The change in the sexual orientation of the men as determined by penile volume assessment was also similar.

As backward conditioning is accepted to be a relatively ineffective conditioning procedure, the finding that it produced a similar outcome to forms of conditioning accepted to be effective, strongly supported the conclusion that the outcome of electrical shock aversive procedures in homosexuality is not the result of conditioning. In addition, if conditioning played a role in the outcome of aversive procedures it would be expected from conditioning research that the outcome would be greater if more intense shocks were employed. In the 1973 study no relationship was found between outcome and the intensity of voltage selected by the subjects.

6. Positive Conditioning Ineffective: Electrical Aversive Therapy Superior to Placebo

In the early 1970s studies were reported in which a small number of homosexual men were treated by having them view slides of women in association with those of men with the aim of increasing their sexual arousal to women by positive conditioning. McConaghy in 1975 reported a fourth study comparing this treatment with aversive classical conditioning. Thirty-one homosexual men were randomly allocated to one or other of the procedures, half of which were presented in forward and half in backward conditioning paradigms. Subjects' penile volume responses were recorded throughout all procedures. No penile response conditioning occurred to the slides of women in the positive conditioning procedure although unconditioned penile responses continued to occur to the slides of males throughout treatment. Also there was no difference in the changes in sexual interest or behaviors reported by the men who had received the positive conditioning in a forward as compared with a backward paradigm. It was concluded that the positive conditioning procedure had no specific therapeutic effect but acted as a placebo therapy.

At 3 weeks and 1-year follow-up, more subjects who received the electrical aversive treatment as compared with positive conditioning reported reduction in homosexual interest and behaviors. The differences were statistically significant for reduction in homosexual interest at 3 weeks and reduction in homosexual behavior at 1 year. The outcome following aversive therapy given in forward and backward forms did not differ. At 3 weeks following both the aversive therapy and positive conditioning a similar number of subjects reported increased heterosexual interest and behaviors, but at 1 year there was a trend for more subjects to report this following aversive therapy. It was concluded that the aversive therapy produced specific reduction of homosexual interest and behaviors in contrast to the placebo effects of positive conditioning.

7. Aversive Therapy Does Not Produce Specific Change in Penile Volume Assessed Sexual Orientation

The changes in subjects' penile volume response assessment to the 10-second films of men and women from before to after all treatments in the fourth study were similar to the changes in the heterosexual direction that followed the aversive therapies in the three previous studies by McConaghy and colleagues. If these changes were a specific effect of treatment they should have been greater following the aversive as compared to the positive conditioning placebo procedure, since the reduction in homosexual interest produced by the aversive therapy was significantly greater than that following the placebo. As the penile volume changes were comparable, it was concluded they were nonspecific and unrelated to the treatment effect, but resulted from subjects consciously or unconsciously modifying their penile volume responses to appear more heterosexual. Freund had shown in 1971 that 5 (20%) of 15 homosexual men were able to do so without treatment. In the four studies, of the men assessed

prior to treatment 117 showed predominantly homosexual and 33 predominantly heterosexual orientation. Following treatment 53 showed predominantly heterosexual orientation. This change in 17% was within the range of the men Freund showed could produce in their penile volume responses voluntarily.

It was concluded that the specific reduction in homosexual interest and behaviors produced by electrical aversive therapies was not accompanied by any change in the subjects' sexual orientation as determined by physiological assessment of their sexual arousal to films of males and females. This conclusion was based on the only series of studies in the literature that used a highly valid measure of sexual orientation to measure the influence of aversive therapy on sexual preference. It casts strong doubt on the value of the continued used of aversive procedures to change the sexual preference of rapists and pedophiles. These changes have never been investigated using subjects' penile volume responses, but only their penile circumference responses. As pointed out by McConaghy in his 1998 review, these responses are of much lower validity and more open to voluntary influence.

D. Electrical Aversive Therapies Produce neither Aversion nor Indifference but Control

In the discussion of the previous study in 1975 McConaghy pointed out the rarity with which homosexual subjects reported negative feelings to homosexual stimuli following treatments that associated these stimuli with aversive experiences. Presumably it was the expectation of such aversions that prevented therapists from initially paying attention to their absence. McConaghy suggested that the procedures be termed aversive rather than aversion therapies. Apart from being more accurate it seemed the negative publicity given aversive therapies resulted in part from the incorrect belief that they produced aversions and hence reduced treated subjects' ability to carry out behaviors they considered acceptable. This publicity was reinforced by the widely acclaimed film of Anthony Burgess's 1972 novel *A Clockwork Orange,* which demonstrated the forced use of an extreme aversive procedure to produce a disabling aversion to violence in the protagonist.

When it was generally accepted that aversive procedures did not produce aversion, their outcome was widely accepted to be one of indifference. Wolpe in 1986 argued that this indifference was due to classical conditioning, even though no conditioned response was observed. He did not refer to the findings of the equal effectiveness of backward and forward conditioning reported above, which would exclude the treatment response being due to conditioning. Also the finding of McConaghy's 1975 study that there was no specific change in the penile volume responses of homosexual men to films of men and women following aversive electrical shock therapy made it clear that the subjects were not indifferent to homosexual stimuli. As early as 1972 McConaghy had referred to subjects treated with aversive therapies being able to cease potentially harmful homosexual acts they had previously experienced as compulsive such as making contacts in public lavatories, while continuing acceptable homosexual behaviors in private. In a 1990 review McConaghy pointed out that superficial questioning could lead to the conclusion from successfully treated subjects' self-reports that they experienced indifference to those stimuli that caused them to carry out behaviors or experience feelings beyond their control prior to treatment. Careful questioning of such subjects elicits the information that, when confronted with such stimuli, they still experience attraction to them. However, the urge to respond behaviorally, or to become preoccupied with fantasies concerning the stimuli is much reduced or absent. He referred to the 1967 finding of MacCulloch and Feldman that six subjects who responded well to aversive therapy for compulsive homosexuality still displayed an occasional and very slight degree of homosexual interest in directly observing males, without, however, any subsequent fantasy.

1. Electrical Aversive Therapy Equivalent to Covert Sensitization

As early as 1965 Gold and Neufeld pointed out that some therapists have ethical and aesthetic objections to the use of physically unpleasant stimuli in aversive therapy. They recommended an alternative procedure later termed covert sensitization. Instead of a physically aversive stimuli being used, a homosexual subject while relaxed was instructed to visualize a psychologically aversive fantasy, such as while engaged in homosexual activity seeing a policeman standing nearby. In later developments the subject was instructed to visualize approaching an attractive male and then seeing he was covered with scabs and gave off a terrible stench, making the subject feel sick and vomit. He turned away and started to feel better. In 1980 Lichstein and Hung reviewed studies employing covert sensitization, pointing out the paucity of controlled studies evaluating the procedure. They considered that only one study controlled for expectancy effects. The control procedure was for subjects to visualize deviant images repeatedly without nauseating images after having been told that

this would be therapeutic, whereas visualizing them with nauseating images as in covert sensitization would increase their deviant behavior. This seemed to be so opposed to common sense it would seem unlikely the subjects would have an expectancy of success with the control procedure. In fact, the authors reported one did not and continued to use the covert sensitization procedure against instructions. Also the study discounted subjects' self-reports of improvement and relied totally on their penile circumference responses as measures of outcome. From the findings of this methodologically faulty study, Lichstein and Hung concluded that the addition of nauseating aversive images increased the therapeutic effect of desensitization to the deviant images.

In a subsequent randomized controlled study reported in 1981, McConaghy and colleagues found covert sensitization to be as effective as electrical aversive therapy. Twenty men seeking treatment for homosexual urges and/or behaviors they experienced as compulsive were randomly allocated, 10 to each procedure. As it had been demonstrated there was no specific change in the penile volume assessment of sexual orientation in homosexual subjects treated with electrical aversion, it could not provide an objective evaluation of treated subjects' outcomes. Reliance could be placed only on their self-reports. These reports therefore were obtained in interview by an assessor who took no other part in the study and was blind to the nature of the treatment the subjects received. Subjects were followed-up for 1 year. The response to both procedures was similar to that to the aversive procedures in the previous studies.

2. Behavioral Completion Model of Electrical Aversive Therapy

Evidence reviewed by McConaghy in 1977 indicated that the outcome of aversive therapy in homosexuality was similar to that of systematic desensitization. It had been observed clinically that many subjects seeking treatment reported they had tried to control homosexual or paraphilic urges in situations where they had expressed such urges previously. However, when attempting this control they experienced increasing tension that they found so aversive as to force them to act upon the urges. It was theorized that a neurophysiological behavior completion mechanism existed that produced heightened arousal, experienced as tension, if subjects did not complete a habitual behavior, when they were exposed to cues to carry out the behavior, such as situations where they had carried out the behavior previously. The association of excitatory and inhibitory stimuli in aversive procedures was considered to reduce or inhibit this arousal. Evidence that conflicting stimuli produced activity in forebrain structures in cats with resultant reduction in anxiety and fear was provided by a 1977 study of Thomas and De Wald.

On the basis of this theory McConaghy developed as a possible replacement for aversive therapies, an alternative behavior completion procedure, initially termed imaginal desensitization. The subjects was first trained to relax and then while relaxed were instructed to visualize being in situations where they had previously carried out the behavior they wished to control. When they signalled they were visualizing this while remaining relaxed they were then instructed to visualize not completing the behavior but carrying out an alternative such as leaving the situation until they signalled they were doing so and were remaining relaxed. Electrical aversive therapy had been reported in uncontrolled studies to be effective in gambling.

E. Alternative Behavior Completion Superior to Aversion-Relief in Compulsive Gambling

Alternative behavior completion was evaluated in relation to an aversive procedure in compulsive gamblers rather than subjects with compulsive sexual urges, because the outcome in most gamblers could be checked with their partners independently of their self-reports. Their self-reports were obtained in interview by an assessor blind to the nature of the treatment. McConaghy, Armstrong, Blaszczynski, and Allcock in 1983 reported the outcome of 20 gamblers randomly allocated, 10 to alternative behavior completion and 10 to aversion-relief. At 1-year follow-up significantly more subjects (7 of 10) receiving the former treatment showed reduction of gambling urges and behavior than did those (1 of 10) who received aversion relief. A 2- to 9-year follow-up of these and additional gamblers was subsequently reported in 1991. Their outcome was also checked with partners when possible, as well as in interview by an assessor blind to the nature of the treatment. Again a significantly better response was found in 33 gamblers randomly allocated to alternative behavior completion compared to 30 allocated to other behavioral procedures including aversion-relief. Twenty-six of the former showed cessation or control of gambling compared with 16 of the latter.

F. Electrical Aversion in the Treatment of Alcoholism

As compared with its use in homosexuality, empirical studies of electrical aversive therapy for alcoholism were

limited in number and methodological adequacy. A probable contributing factor was the report by Garcia and Koelling in 1966 that in animals aversions to tastes were much more easily established to malaise produced by ionizing radiation than to electrical shock, whereas the reverse was true for aversions to visual and auditory stimuli. In his 1977 review pointing out the lack of randomized controlled studies evaluating electrical aversion in treatment of alcoholism, Lovibond recommended that to develop aversive control of excessive drinking, illness and malaise may be a more appropriate stimulus than electric shock. However, Smith, Frawley, and Polissar in 1997 reported a slightly superior abstinence at 6 and 12 months in patients treated for alcoholism with electrical as compared to chemical aversion.

IV. APPLICATIONS AND EXCLUSIONS

In 1978 Marshall cited reports from 1965 that use of aversive stimuli on occasions resulted in an increase in aggression, so that satiation could be more suitable in treating rapists many of whom have a significant aggressive component. I am unaware of therapists since 1965 reporting increased aggression resulting from use of aversive procedures, despite their increased use in the following decade. I have never noted its occurrence in the well over 200 subjects in whom I have used electrical aversive therapies. King and Bartlett in their 1999 criticism of the use of electrical aversive therapies in the treatment of homosexuality stated that the damage they wrought was not considered and that anecdotal evidence suggested it was considerable. The anecdotal evidence was of course post hoc, requiring the illogical assumption that any negative experiences subsequent to an event are a result of that event. No similar criticsm appears to have been made of the use of aversive procedures employing levels of electrical shock selected by the subjects to treat other conditions.

In the first two studies by McConaghy and colleagues using electrical aversive procedures, the homosexual subjects showed no evidence of disturbed behavior at follow-up 6 months or 1 year later. In the first study four subjects who felt they had not responded adequately requested further therapy. In the third study one subject lost all sexual feelings following treatment, but at follow-up stated they had returned. In the year following treatment two subjects experienced fairly severe depression, and four others had episodes of milder depression. All six had had many similar episodes prior to therapy and it was considered only the first subject's response could be attributed to the treatment. In the fourth study four subjects were admitted to psychiatric units for periods of up to 6 weeks in the year following treatment. All had received psychiatric treatment prior to the aversive therapy. Three who had received positive conditioning (i.e., without aversive stimuli) were admitting following drug overdose, for depression, and for a schizophrenic reaction, respectively. The fourth, admitted following a drug overdose, had received aversive therapy. This finding indicated that if aversive procedures produce negative consequences they were less likely to do so than nonaversive placebo procedures.

As opposed to the post hoc evidence of resulting harm, a 1985 study by McConaghy and colleagues comparing alternative behavior completion with covert sensitization aversive therapy provided prospective evidence that the two procedures had positive rather than negative effects on the psychological state of most subjects treated. Their state and trait anxiety as assessed by the Spielberger scale was significantly lower at the year follow-up than prior to treatment. Further prospective evidence concerning aversive therapies was provided in the 2- to 9-year follow-up of compulsive gamblers treated either with alternative behavior completion desensitization or aversive procedures including electrical shock. Subjects' mean state and trait anxiety, neuroticism, psychoticism, and depression scores prior to treatment were in the psychiatrically ill range. At follow-up the scores of those who showed cessation or control of gambling were in the range of the healthy population. The scores of those whose gambling remained uncontrolled were virtually unchanged.

It would seem established that aversive procedures are effective and appear to have no specific negative consequences compared to placebo. However, therapies not using aversive stimuli are clearly preferable if they have been shown to be equally or more effective than aversive procedures. In fact, due to the negative reaction of many therapists to aversive procedures using electrical shock, they appear to have been largely replaced by alternative procedures, although, unlike electrical aversive therapy, few have been demonstrated in methodologically adequate studies to be more effective than placebo therapy. Kilmann and colleagues in their 1982 review of studies of treatment of paraphilias found that covert sensitization was used in about one-tenth of these studies until 1974 and one-half of those published from 1975 to 1980. In 1983 Marshall and colleagues concluded it was the preferred form of aversive therapy in the United States. In his 1996 review of

the management of sex offenders over the previous 20 years, Marshall referred to his development of satiation and masturbatory reconditioning as alternatives to aversive therapy because the latter did not appear always to be effective and typically, and "quite properly," generated bad press. These alternative procedures as well as covert sensitization were offered to all offenders he treated, although he stated the evidence in support of their value was not remarkable. He added that at times olfactory aversion was used also. In 1973 Maletzky described the addition of an aversive odor, for example of decaying tissue, when aversive images were suggested to the subject following the instruction that they visualize carrying out unwanted behaviors. He termed the procedure assisted covert sensitization.

Alternative behavior completion does not appear to be used in North America despite the evidence from randomized control trials that it reduces the strength of compulsive urges to a significantly greater extent than electrical aversive therapy and covert sensitization. The latter finding was reported in 1985 by McConaghy and colleagues in the randomized controlled study of 20 subjects with compulsive sexual urges. In opposition to the methodologically faulty conclusion reported by Lichstein and Hung, addition of nauseating aversive images did not increase the therapeutic effect of desensitization. The need for replication of the study was suggested on the basis that effective therapies not using nauseating images could be less damaging to the self-esteem of subjects treated. This has not been done and use of such imagery remains the preferred option outside Australia. The 1987 review by the Council on Scientific Affairs of the American Medical Association, which retained the term aversion, emphasized the lack of controlled research in its evaluation. It made no reference to the extensive series of randomized studies of McConaghy and colleagues that led to the development and evaluation of alternative behavior completion as superior to covert sensitization. In regard to the use of aversive procedures in unwanted sexual behaviors, the Council decided that the literature contained predominantly uncontrolled multifactorial studies, and concluded that the most positive results were reported with covert sensitization.

In relation to the treatment of obesity, the Council pointed out the findings of early uncontrolled studies reporting that weight loss with covert sensitization were not replicated by later controlled studies. They considered that the successes in the earlier studies were due to placebo and expectancy effects. They further concluded that controlled studies showed either no or a temporary effect from covert sensitization for smoking, and the evidence supporting the efficacy of electrical aversive procedures in alcoholism was weak. Lawson and Boudin in their 1985 review also concluded that the use of electrical aversion in the treatment of alcoholism was associated with a high degree of attrition and was relatively ineffective. They considered that there was a growing consensus that its use for this condition could no longer be justified. In their 1996 review of 339 alcoholism treatment outcome studies reported between 1980 and 1992, Floyd, Monahan, Finney, and Morley found electrical aversion therapy to be used in only one study. However, in their 1997 study, Smith, Frawley, and Polissar found that patients treated with electrical or chemical aversion had a significantly superior outcome to matched inpatients from a treatment registry. Landabaso and colleagues in 1999 concluded from a 2-year follow-up of 30 patients treated for alocholism that combining electrical aversion with naltrexone was effective when the aversive therapy alone had proved ineffective. The AMA Council considered in view of the inadequacy and contradictory findings of studies, that no conclusions could be drawn concerning the effectiveness of aversive procedures in drug abuse. Occasional case studies of a few subjects, such as that by Garcia Losa in 1999, have reported positive results with electrical aversion.

The Council concluded the best accepted use of aversive techniques is for the reduction of self-injurious behavior is mentally handicapped subjects, citing evidence that they were successful in 25% of those in whom such behavior is severe. They quoted the conclusion of a national task force convened in 1982 that when behavior is dangerous and has not improved with less intrusive procedures, increasingly aversive techniques up to electrical shock for the most severe, are appropriate. Understandably, as pointed out by Van Duser and Phelan in 1993, its use is of significant concern to treated subjects' relatives.

Apart from this use of markedly painful stimuli, it would appear that aversive therapy using moderately painful electrical stimuli remains used only rarely in conditions that have failed to respond to more conventional therapies. It was this form of treatment that historically was extensively researched in homosexual subjects and gamblers to elucidate its mode of action. This research provided the major findings that it did not act by conditioning and that although not producing aversion or indifference, and not changing the sexual preference of the homosexual subjects, it gave both groups of subjects control over urges they previously had experienced as compulsive. The demonstration

that this was possible led to the development of equally or more effective procedures to achieve the same outcome and hence have largely replaced this form of aversive therapy. Unfortunately, the interpretation has persisted as evidenced by the statement of King and Bartlett in 1999 that such aversive therapy was used only to sexually reorient homosexuals rather than to enable them to cease unacceptable while continuing acceptable homosexual behaviors. This has resulted in widespread failure to utilize the procedures developed from its use that would enable homosexual men to maintain safer sexual practices who wish to do so but are unable due to lack of control.

V. SUMMARY

A brief description of electrical aversion is provided followed by an illustration of its use in a woman with severe obsessional jealousy who had failed to respond to medication and other behavioral techniques. Electrical aversion was introduced as "anxiety-relief" to reduce anxiety by cues associated with termination of a painful shock, and as avoidance conditioning to inhibit excessive approach responses to stimuli by following them with painful shocks. Electrical aversion became widely adopted in the 1960s in two forms. One used high levels of contingent shock in developmentally delayed subjects to inhibit their severely harmful behaviors. The other form used levels of shock determined by the subjects to reduce behaviors they found unacceptable, such as compulsive homosexual behaviors, gambling, paraphilic behaviors and use of alochol and other substances. A series of randomized controlled trials of its use to reduce men's unwanted homosexual feelings or behaviors provided evidence that it achieved this aim in comparison to a placebo procedure. It did so not by producing aversion or indifference but by increasing their control. The studies further showed that the procedure did not act by conditioning, nor did it alter the men's physiologically assessed sexual orientation. It was suggested it acted by inhibiting a neurophysiological behavior completion mechanism that compelled subjects to complete habitual behaviors against their will. This theory led to the development of alternative behavior completion as a therapy not involving aversive stimuli, which was shown in further randomized control trials to be more effective than electric aversion in reducing compulsive sexual and gambling urges. Alternative behavior completion was also shown to be more effective in reducing such urges than covert sensitization, an aversive procedure developed to avoid use of physical aversive stimuli, replacing them with imagined aversive consequences. In the treatment of sex offenders in the United States it would appear covert sensitization has largely replaced electrical aversive procedures. The expectation persists there that all aversive procedures modify the sexual preference of the subjects treated despite valid evidence to the contrary. High levels of contingent electrical shock are still used in developmentally delayed subjects. The historical importance of the research evaluating electrical shock aversive therapies in the development of theory concerning compulsive behaviors is pointed out.

See Also the Following Articles

Assisted Covert Sensitization ■ Aversion Relief ■ Avoidance Training ■ Bioethics ■ Extinction ■ Informed Consent ■ Negative Punishment ■ Negative Reinforcement ■ Orgasmic Reconditioning ■ Resistance

Further Reading

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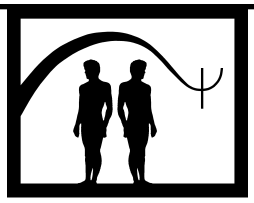

Emotive Imagery

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GLOSSARY

in vivo desensitization Instead of just imagining feared situations, *in vivo* desensitization gradually and systematically presents the actual feared stimuli or events. For example, a client who fears dogs would be encouraged to approach the animal closer and closer, and eventually be willing to touch it and pet it and thus conquer the fear.

reciprocal inhibition Based on C.S. Sherrington's observation that certain nerve impulses cease firing when others are elicited, J. Wolpe proposed a model of psychotherapy wherein anxiety is diminished or extinguished when paired with more powerful anti-anxiety responses.

systematic desensitization A counterconditioning procedure in which unpleasant (anxiety-provoking) stimuli are presented when clients are pleasantly relaxed. Less threatening events are presented first, and gradually, more frightening circumstances are introduced. Treatment continues until the most anxiety-generating event on the hierarchy no longer elicits anxiety.

I. DESCRIPTION OF TREATMENT

Emotive imagery is the use of positive emotion-arousing mental pictures (imagery) to counterbalance fear or anxiety. Thus, an exciting, pleasant, enjoyable image is introduced to offset the negative feelings generated by disturbing events. Repeated pairings of this kind may completely neutralize the anxiety.

Children's phobias had been treated mainly by exposure (gradually feared objects or situations would be introduced to the child) or by feeding (the child would be given ice cream or candy while the feared items were brought closer and closer—as in the famous case by Mary Cover Jones in 1924 wherein a child overcame his fears of rabbits and furry objects). The search for clinically effective anxiety-inhibiting responses added deep muscle relaxation to the aggregation, but it proved time-consuming and difficult or impossible to achieve with many children. Feeding has obvious disadvantages in routine therapy. Consequently, Arnold Lazarus and Arnold Abramovitz explored the possibility of inducing anxiety-inhibiting emotive images in place of relaxation and published a report in 1962. Emotive images refer to those classes of "mental pictures" that are assumed to arouse feelings of self-assertion, affection, pride, mirth, and similar anxiety-inhibiting emotions. Although Lazarus and Abramovitz first used the procedure with children, it was subsequently found to be equally applicable to adults.

With children, the technique of emotive imagery covers the following steps: (a) The range, circumstances, and intensity of the child's fears are established, and a graduated hierarchy is drawn up, from the least feared to the most feared situation. (b) The therapist establishes the nature of the child's hero-images

(usually derived from television, movies, and fiction). (c) The child is asked to imagine a sequence of events, within which a story is interwoven concerning his or her favorite hero or alter ego. (d) As a natural part of the narrative, the least anxiety-provoking items are first introduced. The child is instructed to signal by raising a finger if he or she feels afraid or unhappy or uncomfortable. In response to a raised finger, the phobic stimulus is withdrawn from the narrative and the child's anxiety-inhibiting emotions are aroused once again. The procedure is repeated, usually over several sessions, until the highest item on the hierarchy is tolerated without distress.

A case in point concerns a 9-year-old boy who became afraid of going to school. A sadistic teacher had subjected him to unfair criticism, and although this teacher had left the school, the boy nevertheless developed a full-blown school phobia. The lad was tested and scored very high in intelligence: his mental imagery pertaining to the school environment revealed pictures of receiving unfair punishment at the hands of nasty teachers. His negative images persisted despite the fact that his present teachers were kind and understanding.

The boy's favorite heroes were Batman and Robin. Emotive imagery was woven into the following story:

"Please sit back, get comfortable, take in a deep breath, hold it, and now exhale. Just breathe normally in and out. Now I want you to imagine that Batman and Robin have asked you to help them catch a criminal. Can you imagine that?" The child nodded affirmatively, and judging by his overall demeanor and facial expression, he was fully invested in the drama. The narrative was continued. "Robin hands you a special wrist radio so that he and Batman can contact you whenever necessary. Nobody must know the secret, that you are going to help Batman and Robin solve a crime right in your own school. Then Batman tells you that he has put a secret message in your school locker. He says: 'When you get to school tomorrow morning, go to your locker as soon as possible and read the message. Then destroy it!' Of course you don't want to tell Batman and Robin about your fears. You go to school the next morning and head straight for your locker. Picture yourself going to school. As you ride to school in the bus, you are wondering what the message will say. The bus drives into the schoolyard. The bus stops, you get out and walk slowly to your locker. You don't want to rush there because you don't want to make anyone suspicious."

At this juncture, the boy was asked to describe what was happening—how he was feeling and where he was heading. He described the school building, the hallway along which he was walking, the other children, opening his locker. When asked how he was feeling, he made no mention of fear or anxiety. In place of the fear was the curiosity, the fun, the excitement, and the drama—what would the message say? The emotive imagery was continued.

"You open your locker and there you see a slip of green paper. It has the emblem of a bat on it and you know who the sender is. You slip it into your pocket, and some of your friends come up to talk to you. As soon as you manage to do so without being seen, you read the message from Batman and Robin. It says: 'We will signal you on your wrist radio during your first recess. Over and out!' You go to class. The teacher gives you some work to do. You are sitting at your desk. You wonder what Batman and Robin will want you to do next. You continue with your work. The nasty teacher who left the school walks into the classroom. You look at him, but you can't let that bother you. Bigger things are at stake. What will Batman and Robin ask you to do?"

The nasty teacher was then made the focus of attention with the aim of changing the boy's fear to feelings of indifference. The image of the particular teacher who had supposedly engendered the boy's phobic reactions was now being revamped and revised. The fact that he had no need to be afraid of this teacher was explicitly woven into the tapestry of the narrative. Of course, when Batman and Robin finally contacted him on the wrist radio they stressed that the "nasty teacher" was in fact the person they were after. The boy was asked to keep the nasty teacher under surveillance. Robin said: "That man may get to be very nasty, but just ignore him."

At this point, the boy, verbalizing his own pent-up aggressions, insisted on finishing the story himself. He described how he would help Batman and Robin lure the nasty teacher into a trap so that they could capture him and remove him to the nearest jail. At the end of the session, the boy was asked if he would try out his own Batman and Robin fantasy in school the next day. Observe that he was not asked whether he would go to school the next day. The "demand characteristics" of the situation placed the emphasis on how the boy would carry out his own fantasy projection *in school*. This boy was highly motivated, very responsive, and most receptive to emotive imagery. Thus, it took only a single emotive imagery session for him to return to school and to experience no further problems in that regard.

Some people may be concerned that the emotive imagery procedure plays tricks with a child's mind and encourages him or her to daydream and to dwell on fantasy rather than reality. No negative side effects have

ever been observed in a wide range of children treated by this method.

Although emotive imagery was first conceived as a rapid way of overcoming many children's phobias, its use with adults is also worth emphasizing. For example, a 22-year-old man who feared rejection was extremely reluctant to ask a woman out on a date. Yet he complained how lonely he felt and how much he wished to establish a good male–female relationship. Consequently, he was asked to form an image in which he approaches an attractive woman, asks her out, and is flatly turned down. The therapist said, "Try to picture this scene without feeling upset." After trying this out for a few days the client reported: "The only way I can visualize this without becoming upset is by firmly believing that the only reason she said 'no' to me was because she had a jealous boyfriend whom, she feared." He was told to take the risk of actually approaching women and asking them for dates while keeping the image and thought of the jealous boyfriend firmly in mind.

He followed this suggestion and took the emotional risk of approaching a woman he had long admired. "As I looked at her I went into my mind game, my mental act. I convinced myself that due to her jealous boyfriend she would have to turn down anyone who asked her out. Once I had established this in my own mind, I simply asked her if she would like to have dinner with me and perhaps go to a movie. I was ready for her 'no thanks' and almost fell over when she said, 'Thank you, I'd like to.' I did similar things with four other women and only struck out once—and it really didn't bother me because I 'knew' about the 'jealous boyfriend.'" As this young man discovered, people who acquire proficiency in the use of imagery have a remarkable built-in tool.

II. THEORETICAL BASES

As originally presented, emotive imagery was regarded as a reciprocal inhibition technique. Wolpe's formulation of the Reciprocal Inhibition Principle stated that:

> If a response antagonistic to anxiety can be made to occur in the presence of anxiety-evoking stimuli so that it is accompanied by a complete or partial suppression of the anxiety responses, the bond between these stimuli and the anxiety responses will be weakened.

Whereas Wolpe regarded reciprocal inhibition as a master key to the cure of neurosis, the limitations of this single principle were spelled out during the 1960s when a broad-based social and cognitive learning theory came into being. At the same time, many differing schools of thought incorporated a diverse range of imagery procedures into their repertoires. Thus, the contemporary view is that imagery techniques are not simple one-on-one "pictures in the mind" that exert therapeutic properties. Instead, without delving into complex neurophysiological processes that underlie all behaviors, images are tied to various cognitions, affective reactions, and sensory responses that have behavioral and interpersonal properties and consequences. The modern social cognitive perspective draws on direct and observational experiences and places emphasis on symbolization, self-regulation, forethought, and communication.

Those who wish to study in full the theoretical bases of any form of imagery will need to explore such diverse areas as verbal coding, observational learning, structure versus function, pictorial metaphors, and many other complex mental operations. For practical purposes, it is unnecessary to comprehend these nuances, and it is sufficient to conclude that a mental image should not be likened to a photograph in the mind but should be portrayed as a motion picture with many dramatic undertones.

III. EMPIRICAL STUDIES

Although an extremely rich clinical array of imagery techniques has been described, of which emotive imagery is but one of perhaps hundreds, there are no proper empirical studies to support the efficacy of this domain. There are no replicated studies, no measures of validity or reliability, and no operational definitions. Purists may contend that treatment techniques should be held in abeyance until such time as there are data to support them. From a practical perspective, it is necessary and advisable to proceed on the basis of clinical reports. It has been pointed out that many medical procedures were put to good use before scientific studies elucidated their precise mechanisms of action. Clinicians can point to cause-and-effect sequences which suggest that emotive imagery is a robust method that transcends mere suggestion, placebo, and the like.

IV. SUMMARY

Clinically, it has been shown that by conjuring up positive emotion-generating mental images, children's

fears and phobias can often be overcome quite rapidly. Adults may also benefit from the use of this procedure. The theoretical underpinnings are rather diffuse and tenuous, and there are no hard data to substantiate its effects. Nevertheless, from a purely clinical standpoint, the use of emotive imagery is worthy of note.

See Also the Following Articles

Cinema and Psychotherapy ■ Exposure *in Vivo* Therapy ■ Rational Emotive Behavior Therapy ■ Self-Control Desensitization ■ Systematic Desensitization ■ Therapeutic Storytelling with Children and Adolescents

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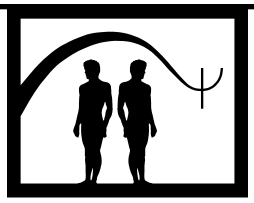

Engagement

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GLOSSARY

common factors Procedures that occur in all types of therapies regardless of the theoretical orientation of the therapist.

engagement Involvement in therapy assessed by client return for therapy after the initial, or intake, interview.

EQ An acronym signifying engagement quotient that is calculated by dividing the number of clients a therapist sees for more than one session by the total number of clients seen by that therapist.

HCVRCS An acronym for the Hill Counselor Verbal Response Category System that enables grouping of therapist verbalizations into 12 divisions.

session evaluation questionnaire An instrument that allows clients and therapists to judge a session according to its depth, smoothness, arousal, and positivity.

Engagement in therapy is a process whereby client and therapist become involved in the therapeutic endeavor. This article will present engagement as a basic therapeutic task that must occur for any type of treatment to be effective.

I. OVERVIEW OF ENGAGEMENT

Many clients seek help, and after an initial or intake session, they do not return for further therapy. These clients are frequently more troubled than clients who continue in treatment. Client nonreturn after intake is not a minor problem. At some agencies, nonreturn rates run as high as 50% or greater. Sometimes clients report that they received sufficient help in just one session, but this is not the case for most clients. At other times, clients are prevented from returning for treatment by physical or financial barriers. Most nonreturning clients continue to have concerns that go unresolved and prove costly to them and to those with whom they interact. Clearly, these clients, and their therapists, did not become involved, or engaged, in the treatment process. If they had, the clients would most likely have returned for further treatment after intake.

There are many effective treatments for use with a wide variety of problems. But even the most efficacious treatment will not work if the client does not attend scheduled sessions. Regardless of the type of therapy being practiced, for therapy to proceed, and ultimately succeed, engagement must occur in the first session. Thus, engagement is a common factor across therapies.

II. CONCEPTUAL UNDERPINNINGS OF ENGAGEMENT

The concept of initial engagement in therapy originated from some observation that I made in 1985 at a

university counseling center I directed. In an attempt to determine why some therapists in the setting were very busy while others were not, I charted the number of clients seen by each therapist for varying numbers of sessions. Some therapists saw a large number of clients for only one session. Other therapists saw few clients for just one session, but saw many clients for more than 10 sessions. In addition to seeing fewer clients for one session, these therapists also saw fewer clients for intermediate (2 to 9) sessions. Because treatment at the center was short term (10 to 15 sessions in duration), these data showed that some therapists were engaging their clients at intake in an ongoing therapeutic process.

I calculated an engagement quotient (EQ) for each therapist. EQ is the number of clients seen for more than one session divided by the total number of clients seen. It can be considered a fielding percentage for therapists. Therapists get chances (total number of clients seen) to field (engage) clients, and their EQ is the percentage of clients who return to see them after the first session. I found that higher EQ therapists had more positive supervisory ratings. I also found that EQ correlated significantly and positively with number of clients seen for more than 10 sessions, but did not correlate with number of clients seen for intermediate numbers of sessions. This latter finding provided statistical confirmation of my suspicions that therapists with higher EQs were engaging their clients at intake in an ongoing therapeutic process.

My initial conceptualizations about engagement were that certain client and therapist characteristics, such as severity of clients' problems, motivation for therapy, and therapists' experience, would relate to engagement. Because therapy is a verbal process, I also believed that therapists' ability to shed light on problems and formulate a treatment plan in a manner that is understandable to clients would facilitate client engagement in the therapeutic process. To do this, I believed that therapists who were skilled diagnosticians and possessed verbal abilities that enabled them to communicate relatively complex problem and treatment conceptualizations clearly to clients would be better engagers. Empirical studies have investigated these conceptualizations.

III. EMPIRICAL STUDIES

A number of engagement studies have been conducted to determine the factors associated with engagement and how engagement occurs. This section presents a brief review of these studies.

A. Waiting Lists

Many clinics and agencies have postintake waiting lists, because they are unable to continue seeing clients immediately for ongoing treatment. Although in 1980 C. Folkins and colleagues found that length of the waiting list was a factor in client postintake return for treatment, studies by James Archer in 1984 and by T. R. Anderson and colleagues in 1987 found that longer waiting list length was not a deterrent to engagement. Although the results of waiting list research are equivocal, it does not seem advisable for agencies to place impediments, such as long waiting lists, in the way of clients' timely continuation in treatment.

B. Client Factors

Investigators have sought to determine if some types of clients are more likely to become initially engaged in therapy than others. In 1992, Raymond Richmond found that clients who were younger, less educated, and members of minority groups were more difficult to engage. He also found that very disturbed clients who had been diagnosed as psychotic or who were prone to unusual thoughts, mannerisms, and hallucinations were more difficult to engage. Clients with suicidal intent were also less likely to return after their initial session. These difficult to engage clients were also less likely to have been self-referred. In 1998, Mark Hilsenroth and his colleagues found that clients diagnosed with antisocial or borderline personality disorders were also less likely than were other clients to return for therapy following the first session. In another study done in 1995 Hilsenroth and colleagues observed that clients who had uncooperative, hostile relationships outside of therapy were less likely to become engaged. These types of clients seem to be those who most need treatment, yet they are the most difficult to engage. The investigators speculated that the difficulties that these clients have interacting with others interfere with the development of good working relationships with their therapists.

Research by me in 1986 and in 1992 and by Larkin Phillips in 1985 has shown that clients who are perceived by their therapists to be more motivated, psychologically minded, and generally better candidates for therapy are more likely to be engaged than clients viewed as poorer candidates for therapy. I also found that clients who had previously been in therapy were more likely to become engaged that clients who had not. In line with these findings, Alfred Heilbrun in 1972 and Daniele Longo and colleagues in 1992 found that clients who rated themselves as more ready

for counseling were more likely to become engaged. In 1995, Kevin Smith and colleagues found that clients who had already started to address their problems on their own were more likely to become engaged in therapy than were clients who had not. Similar findings have led some authors, such as Alfred Heilbrun in 1972 and Charles Lawe and colleagues in 1983, to try to increase client motivation and readiness for therapy with some type of pretraining using written, audio, or video descriptions of what to expect in therapy. Although client pretraining has generally been successful in increasing engagement, studies have not specified precisely what this pretraining entailed; therefore others would not be able to replicate their procedures.

To summarize, it appears that clients who are harder to engage initially in therapy are those who were referred to therapy by others, are not ready to participate in the therapy process, have personal characteristics that interfere with successful interpersonal relationships, and are frequently more disturbed than clients who are easier to engage. Therapists cannot change these clients' behaviors unless they attend therapy sessions. Thus, the burden of engagement of these clients falls to therapists.

C. Therapist Factors

Because some therapists are able to engage a higher percentage of clients than others (i.e., have higher EQs than other therapists), several researchers have sought to determine what characteristics these therapists possess that are associated with engagement. Several authors have examined therapist gender as it relates to engagement with equivocal results. For instance, in 1979, Nancy Betz and Sandra Shullman found that women therapists engaged better than did men. In 1983, Douglas Epperson and colleagues found that men therapists were better engagers, and in 1984, I found that therapist gender did not relate to engagement. Whereas I found that more experienced therapists were more likely to have higher EQs, several studies including the ones by Betz and Shullman, Epperson and colleagues, and Longo and colleagues have found that inexperienced therapists engage their clients at the same rates as experienced ones.

Several studies have investigated whether or not higher engaging therapists are those perceived by clients as having higher levels of the interpersonal influence characteristics such as attractiveness, trustworthiness, and expertness. This has not proved to be the case. Studies by Glen Martin and colleagues in 1988, Kathy Zamostny and colleagues in 1981, and me in 1989 found no relationships between these therapist characteristics and client engagement. In 1986, I also found that therapist characteristics such as empathy, warmth, and genuineness, which in 1957 were posited by Carl Rogers to influence client change, do not relate directly to client engagement. However, I also found that therapists with higher EQs were rated by all clients, not just those they engaged, as more understanding than therapists with lower EQs.

In line with conceptualizations that therapists' verbal and diagnostic skills might influence engagement, in 1986 Warren Tryon and I investigated these skills using psychotherapy practicum trainee therapists' scores from the Graduate Record Examination (GRE) and Millers Analogies Test (MAT) as well as their grades in a clinical diagnostic course sequence. Verbal scores on the GRE, verbal–quantitative GRE discrepancy scores, MAT scores, grade in clinical diagnosis, and grade in advanced clinical diagnosis all correlated significantly and positively with therapist EQ. Therapist age also correlated highly and positively with EQ. We concluded that higher-EQ therapists' greater diagnostic skills combined with their greater verbal facility enabled them to identify client problems and clarify client problems. (We also believed that older therapists might use their own life experiences to understand clients' problems.) Superior verbal ability would also enable therapists to conceptualize and communicate treatment plans. As indicated above, a relationship between empathy and engagement has not been found. It may be that therapists' use of verbal skills to identify and define problems is an indication of therapist empathy. There have been, however, no studies of this possible relationship.

To summarize, few therapist characteristics have been consistently associated with engagement of clients in therapy. Engagement may depend less on who therapists are than on what they do. In this regard, the finding that therapists who are more verbally proficient and who have better diagnostic skills are better engagers suggests that they are using their verbal facility to involve clients in therapy.

D. Characteristics of the Engagement Interview

The best way to determine what therapists are doing in an engagement interview is to investigate the initial interview itself. Most studies have queried client and therapist about the interview immediately after it is finished. Thomas Greenfield in 1983 and Anna Kokotovic and Terence Tracey in 1987 found that clients who were more satisfied with the initial interview were more likely

to return for further therapy. In 1990, I asked clients and therapists to rate their experience of the intake interview using William Styles' Session Evaluation Questionnaire (SEQ), which was developed in 1980. Both clients and therapists rated engagement interviews as significantly deeper than nonengagement interviews. Thus, both participants in engaged therapy dyads felt the intake was deeper, more full, more powerful, more valuable, and more special (the SEQ depth items) than did nonengaged participants.

These deeper, more satisfying engagement interviews also consume more time than do nonengagement interviews. In four different studies (two in 1989, one in 1990, and one in 1992). I found that engagement interviews averaged about 55 minutes, but initial interviews after which the client did not return for further treatment averaged only about 43 minutes.

Thus, client and therapist are involved in time-consuming activities during an engagement interview. What are they doing? From my own clinical experience, I know that clients frequently come to intake with vaguely defined problems. During the intake interview, therapists help them to clarify these problems and focus on how to work on them. In 1986, I conceptualized that this clarification process might even seem to clients as if therapists were identifying concerns for them. Clients who gave stronger endorsement to an item stating this were significantly more likely to return for a second appointment after intake than were clients who agreed less with this item.

In 1989, I hypothesized that this problem identification process involved teaching clients about their concerns. I developed a three-item scale for both clients and therapists that asked to what extent the therapist identified client concerns, provided the client with new ways of understanding himself or herself, and taught the client about himself or herself. Items were rated on five-point scales with higher ratings indicating more teaching about concerns. Higher ratings of these items by therapists related significantly and positively to engagement. Clients rated therapists who had higher EQs as teaching them significantly more than lower EQ therapists. Thus, providing clients with new perspectives on their problems is positively related to engagement in the counseling process and may be what is consuming time in an engagement interview. The results of these studies dovetail nicely with the research that showed higher engaging therapists to be more verbally and diagnostically proficient. Teaching requires the ability to communicate well verbally. Diagnostic skills would enable the therapist to know what to teach.

In my 2002 article, I discuss how I recorded a psychodynamically oriented therapist's intake interviews with 11 of her clients. I used Clara Hill's Counselor Verbal Response Category System (HCVRCS), developed in 1993, to organize the therapist's verbalizations into 12 categories. Seven of the 11 clients returned for a second interview (i.e., became engaged). To explore the pattern of therapist verbalizations during the interviews, I examined the use of the most frequently employed verbal responses (i.e., numbers of minimal encouragers, closed questions, and information) for the first third, second third, and final third of engagement and nonengagement interviews.

In engagement interviews, the therapist's number of closed questions and minimal encouragers started high and steadily decreased during the course of the interviews, and the therapist's number of information verbalizations started low and steadily increased during the interviews. These verbal patterns suggested that in engagement interviews the therapist used questions and minimal encouragers to clarify client problems, and once clarified for the therapist, the therapist provided clients with diagnostic information about their problems and how therapist and client could work together to ameliorate them. Review of the transcripts showed this to be the case.

In nonengagement interviews, therapist use of closed questions and minimal encouragers started low, increased from the first to the second third of the interviews, and then fell in the final third. Information verbalizations fell from the first to second third of the interviews and increased again in the final third of the interviews. This suggested that in nonengagement interviews, there was less initial problem clarification, and perhaps as a result of this, less information was given to the clients later in the session. The clients then did not return to the therapist for further therapy.

The pattern of therapist verbalizations associated with client engagement in the study cited above may be one of several possible patterns. In 1979, William Stiles found that use of verbal categories depended on therapists' theoretical orientations. Thus a psychodynamic therapist may use different types of verbalizations to clarify problems and suggest a treatment plan than a cognitive-behavioral therapist, but both may successfully engage clients.

To summarize, an engagement interview is longer, deeper, and more satisfying than an initial interview after which the client does not return. Therapist verbalizations during an engagement interview are consistent with a pattern that suggests that the therapist is teaching the

client about the client's problems and how they will be addressed in therapy.

IV. SUMMARY

Engagement is a common factor in all types of therapy. To have their problems addressed effectively, most clients must stay in therapy for several sessions. To do this, clients must be involved, or engaged, in the therapy process. If they are not engaged, they will leave therapy before it has really begun.

Most clients have sought help from other sources prior to entering therapy. These other people may have been supportive, genuine, and understanding, but they did not provide sufficient help to ameliorate clients' problems. Clients expect more help from a professional psychotherapist than what they have received from family and friends. If therapists do not demonstrate to clients that they will be able to provide this help, clients have no reason to spend their time and money getting therapy. The research presented earlier indicates that engagement occurs when therapists listen to and reformulate clients' problems to make them clearer to clients and thereby set the stage for addressing them in therapy.

Some types of clients are easier to engage. Those who have had therapy before, have fewer interpersonal difficulties, are self-referred, and have already began addressing their problems are more likely to become involved in the therapy process. The harder task is for therapists to engage more difficult clients who are usually more disturbed.

Some therapists are better engagers than others. These therapists tend to have better verbal and diagnostic skills than less engaging therapists. It appears that they use these skills to clarify client problems and to teach clients about their problems and how to address them. One way to do this is for therapists to question clients a lot at the beginning of the initial session and to gradually provide clients with more information about problems as the session progresses.

Engagement needs much further study. Future research should investigate the effects of client and therapist race and ethnicity on engagement. Client verbalizations relative to engagement need to be studied as do the effects of therapist theoretical orientation on therapist verbalizations associated with engagement. As with most areas of research, the engagement studies raise as many questions as they answer.

See Also the Following Articles

Cost Effectiveness ■ Effectiveness of Psychotherapy ■ Relapse Prevention ■ Resistance ■ Single Session Therapy ■ Termination ■ Working Alliance

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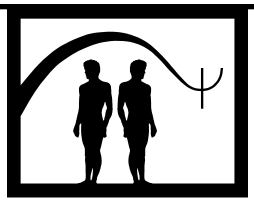

Existential Psychotherapy

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GLOSSARY

affectedness One of the three basic aspects of dasein's way of relating to the world. It involves "being found in a situation where things already matter." This is the affective coloration or tone in which we find ourselves, when we encounter a situation. It can be collective (as in the sensibility of an age or the culture of an institution) or individual (when it is referred to as a mood).

dasein ("being-there") Heidegger's term for human being: the way of being characteristic of all peoples or a single human being. Dasein, being-there, or being-in-the-world implies an involvement in the world. The world and the human being are co-constituted. The world itself consists of relationships among entities which, in turn, are only defined by their interrelationships.

existence Heidegger's name for dasein's way of being, namely, as the kind of being that embodies an understanding and that manifests in its actions (ways of perceiving, thinking, doing) an implicit interpretation of what it is to be the kind of being it is. This understanding is not fundamentally conceptual or even conscious but is shown in the acts and practices that an individual undertakes. Thus, embodying an understanding of oneself is to act and be ready to act (comport oneself) in certain characteristic ways. It is a self-understanding and a reaching forward into the world and into the future.

facticity Heidegger's term for the elements found by dasein already present in its world. These are the elements out of which dasein constructs an understanding or interpretation of itself. Although these entities are created by each culture, they are perceived as existing independently of culture.

falling A basic aspect of dasein's way of being in the world. Although dasein is always being-in-the-world, that is, absorbed in and defined by its involvement with the world, falling implies excessive fascination with and self-definition in terms of the world, to the exclusion of an appropriate awareness of one's true nature (the characteristics of being-in-the-world). Thus, in falling, the being of man as embodying a self-interpretation is forgotten.

mitsein ("being-with") A term intended to convey that dasein is always in a shared, public world. The elements of that world with which it is familiar, which it understands and which matter to it, are shared with (and, Heidegger would say, created by) other people. Since these elements are constitutive of dasein, dasein is necessarily always relating to other people through a shared world.

understanding A basic aspect of dasein's way of relating to the world, equivalent to "knowing how" or being capable of doing something in a particular situation. It is understanding of what is possible in a given circumstance (for example, by knowing how a piece of equipment is used), at the level of a skill rather than a conscious set of beliefs.

"Existential psychotherapy" initially referred to the work of a group of therapists who wrote and practiced in the 1940s, 1950s, and 1960s. Trained as psychoanalysts, they believed that many of Freud's central concepts failed to capture the reality of everyday life and treatment. They objected to what they saw as the mechanistic quality of Freud's theories and the speculative, nonempirical nature of its key elements. These characteristics of Freudianism were felt to be untrue to actual clinical phenomena and appeared to be barriers to effective treatment. These therapists never denied their debt to Freud, but they also found, in the work of the existentialist philosopher, Martin Heidegger, alternative formulations of the nature of man which seemed to provide what was missing in analysis, namely, an approach and set of concepts for thinking about clinical work which allowed therapists to understand therapeutic processes more immediately and accurately, and to relate to patients as they really were.

Existential psychotherapy is rarely taught systematically, and there are relatively few published English accounts of how it is practiced. At its most "extreme," existential therapy may seem risky or dangerous, since it appears to require and encourage strong, spontaneous emotional relationships between patient and therapist, and to tolerate, if not foster, regression. In an already complicated and bewildering field of psychotherapies, existentialists introduce a new vocabulary and a new set of concerns ("death anxiety," "responsibility," "authenticity," "existence") that few practitioners will welcome. Yet many clinical features of existential work have become important parts of psychodynamic, supportive, and, even, cognitive-behavioral therapies. The innovations of the existential therapists overlap considerably with psychoanalytic advances of recent decades. Knowledge of existential ideas and their influence, as well as familiarity with the analysis of man on which they depend, have largely faded from the scene of modern psychiatry and psychotherapy. Yet those ideas bear reexamining. They offer therapeutic approaches that are true to life as it is actually experienced, even though its methods, indications, limitations, and effectiveness have yet to be fully defined.

I. THEORETICAL BASES

A. Heidegger's Analysis of Human Being

The guiding ideas of existential psychotherapy are found in Heidegger's *Being and Time,* published in 1927 and translated into English in 1962. The appropriation and application of this work by clinicians, most prominently Eugene Minkowski, Ludwig Binswanger, Erwin Straus, V.E. von Gebsattel, Roland Kuhn, and Medard Boss, comprise the founding, classical works of existential therapy. Subsequent workers in the existential tradition have included Viktor Frankl, Martin Buber, Paul Tillich, Edith Weigert, R.D. Laing, Rollo May, Carl Rogers, Irvin Yalom, and Leslie Farber. To understand these clinical works requires some familiarity with Heidegger. A summary of some Heideggerian concepts that have been most important to therapists is therefore necessary.

1. Being-in-the-World ("Dasein")

In *Being and Time,* Heidegger's objective was to describe the essential features of human life. In the philosophic tradition, man as subject or knower was distinguished from an independent, separate, but knowable, reality. Heidegger, by contrast, begins with the observation that there is no subject or knower in our experience and no independent world apart from what is experienced by us. What there is, rather, is a single, unified knower-known. Put differently, in experiencing, feeling, or thinking, we are absorbed by or into what it is we are experiencing, feeling, or thinking about. For example, when we relate to another person in conversation, we are absorbed in our dialogue. We usually do not pay any attention to the specifics of word choice, syntax, gesture, posture, prosody, appearance, and so on which comprise the interaction. We are involved in the dialogue itself and among the entities which the dialogue is about. This being already among the things of the world is captured by Heidegger's term for human nature, being-in-the-world, or *dasein.*

Usually, our involvement with the world is preconscious and automatic. The mechanics of what we do, whether relating to another person or to things, are out of awareness. When, to take another example, we use "equipment" in the world, we do not think about or rehearse what we do (except perhaps when learning). We *understand* how to use things, and they already matter to us (they have a valence or affective tone; Heidegger called this feature affectedness), even as we are using them, automatically. Heidegger suggests that such knowing-how should not be thought of primarily as internal mental states or events: they are shown or displayed in our acts. We can, at least sometimes, analyze our actions as if we were following explicit rules or beliefs, but, Heidegger emphasizes, this is not what we usually do. In many cases, no conscious reconstruction is even possible. Conscious, thematic, formulated

thoughts, when they do exist, are only possible because of these preexisting, nonverbal skills.

2. Existence

People are constituted by and discovered in the actions they pursue in order to achieve short- and long-term goals. They are thus inherently temporal: coming from the past and proceeding into the future. Human nature shows itself through future-directed acts. Actions, including how we use things, how we comport ourselves, and how we relate to other people, embody interpretations of self and world. Actions show what matters to us and what we want, as well as what we believe to be possible (given our appraisals of ourselves and the situations in which we find ourselves). It is not only that we betray ourselves by minor movements or habits, as Freud said, but that, most fundamentally, our natures appear through our comportment (actions). This forward-moving, embodied expression of our self-interpretation Heidegger called existence. In Heideggerian terms, dasein exists.

3. Being-with ("Mitsein")

When we look more closely at what is inherent in human nature (constitutive of dasein), we find that not only are we defined by our actions among the things of the world (our comportment among physical objects), but that we are already, whenever we do or think something, with other people. The entities of the world, what Heidegger called facticity (this book, that chair, the sky, rain), are already shared with others. What I can relate to, others can, too. A chair, for example, was made by someone else and can be sat in by anyone; these features are given along with the physical appearance of the chair itself. What is more, when an individual thinks of the chair *as* a chair, a piece of wood, or furniture, she is using a family of concepts that have been passed down and learned from other people. Thus, since the world and the individual are co-determined, and since the world is a public, shared world, the individual is constituted or inhabited by other people, even in the contents of his mind.

4. Authenticity and Falling

For Freud, it may be said, the essence of neurotic functioning is failure to acknowledge and appropriately express one's feelings, wishes, or impulses, for example, those relating to sexuality or aggression. By contrast, the acknowledgment of one's constitutional or socially created drives or wishes is the key to psychological health. Failure to do this condemns an individual to live in a pale "safety mode" of self-deception.

Heidegger has a similar, and at the same time different, understanding of how life should be lived. For him, the distinction is not between normal and neurotic, but authentic and inauthentic. And just as Freud's normality requires an appropriation of one's previously given, inner reality, so Heidegger's authenticity requires an understanding of what is essential about oneself. But there are two significant differences. First, for Heidegger, because understanding, as a fundamental characteristic of being-in-the-world, is shown in our acts and practices (not in having true inner beliefs), authenticity is shown in styles of behavior or comportment in the world. The second difference is that authenticity is not acknowledgment of sexual or aggressive wishes or drives but an appreciation of dasein or being-in-the-world itself, since that is what human nature fundamentally is. In other words, authenticity requires understanding of being-in-the-world: its absorption in things that are factical (entities constituted by our culture, which are nevertheless perceived as necessary and universal). Authenticity is shown by acting with commitment, absorption, and affectedness, despite full awareness of the contingency of the world and our interpretations. Everything, as Wittgenstein says, might have been different. This authenticity resembles love. When an individual loves, it is only a particular individual person who can be the object of her love. Without the loved person the lover feels lost and empty. And yet, she also realizes that no one person could be that special: everyone who loves has her own loved one, and to every lover that loved one is unique. To continue to love, aware of this paradox, is an example of authenticity.

If authenticity is Heidegger's counterpart to psychological health in psychoanalysis, his counterpart to neurosis is falling. It is part of being-in-the-world that individuals are absorbed in their involvement with people and things. But it is always possible for such "thrownness" to lead to inauthentic "falling." In falling, an individual is so absorbed in particular things or relationships that she loses the appropriate appreciation of human nature as being-in-the-world (as Heidegger defines it, in such terms as skillful absorption and facticity). In falling, an individual becomes overly committed to her current situation without acknowledging its contingency, the possibility of alternatives, the impossibility of proof, and the need for commitment and resolute action, despite these features. If authenticity means acting with commitment while also accepting anxiety in the face of human being, falling is trying to avoid anxiety by disregarding what we should appreciate fully, namely, the various aspects of being-in-the-world.

II. DESCRIPTION OF THE TREATMENT

A. From Philosophy to Psychotherapy

In Heidegger, existential psychiatrists found organizing ideas for their clinical work. Their clinical extensions may be grouped under three headings: (1) being-in-the-world and the goals of psychiatric treatment; (2) a model of therapeutic action; and (3) methodological implications of human nature as being-in-the-world. It is apparent that these headings are broad and rather grand. But the philosophical tradition (or Cartesianism) with which the existential approach contrasts has a similar very broad range of clinical implications involving the nature of man and the clinical enterprise (for example, man as a biological object and clinical work as composed of observation, diagnosis, and treatment).

1. The Goals of Therapy

The main goal of psychotherapy is to foster human flourishing, and this means, for existential psychotherapy, living authentically. As we have noted, living authentically means absorbed activity in the world, with awareness of its being or nature. The two parts of this definition (absorbed activity and awareness) may be examined separately.

Absorbed, intentional activity involves striving to realize one's goals and to actualize what one values. Thus, a first step in therapy is careful understanding of the "for-the-sake-of-which" an individual acts. This slight change from the traditional emphasis on behavior as arising from instincts, drives, or early patterned experience to behavior as the striving to realize goals and ideals has direct clinical implications. For, from the outset, the clinician asks himself, "What is this patient trying to do? What does she value?" And as the clinician asks himself these questions, the patient becomes more understandable, sympathetic, and human.

Absorbed activity bears a complex relationship to insight. Existentialists emphasize that insight is not the primary goal of therapy. In fact, existential therapists identify excessive self-reflection as an impediment to or avoidance of absorbed involvement, just as the conceptual, conscious mode of contemplating objects derives from and is "inferior" to more basic, skillful absorption.

Absorbed, skillful activity that furthers an individual's goals and realizes her values must, however, involve accurate appraisal of the self and world, if it is to be successful. Such an accurate appraisal requires seeing clearly and moving comfortably within the objects that compose the world. Such accuracy derives, in turn, from focused attention to and involvement with the world—in other words, from being-in-the-world itself. The opposite of such attentiveness and involvement is detached observation, conceptualization, and overgeneralization. Thus, the additional goal of existential therapy is the ability to recognize, appreciate, and use the particular in the service of bringing about one's aims and values.

Accurate appreciation of the nature of being-in-the-world, as such, is the second great goal of existential therapy, the second component of living authentically. Authentic being-in-the-world embodies an appreciation of its own nature, which has several immediate consequences for therapy. First, the goal of therapy is not to eliminate "negative" feelings, such as anxiety or guilt. Anxiety, for example, is an ineliminable part of human nature because, according to Heidegger, any understanding or interpretation we have of human nature is ungrounded and most fundamentally, unjustifiable by reference to an external, eternal, and universal truth. Reasons for whatever we think and do come to an end, and can come to an end fairly quickly, at which point anxiety intervenes.

From another perspective, all our beliefs and what we understand to be our possibilities are taken from a larger set that is given to us by our culture, which constitutes us (factically). Not only are such beliefs and possibilities never subject to ultimate grounding, but they are never, ultimately, mine. Contra Descartes, certainty does not arise from the inside. What is inside has come from outside, and there is no certainty or necessity out there. To limit anxiety, rather than abolish it, we must involve ourselves in absorbed activity, in the living stream, while recognizing that such anxiety is always a lurking possibility.

Guilt is also an ineliminable part of our nature, for similar reasons. Guilt, like anxiety, arises from the fact that we are constituted by the entities that human culture presents to us factically. Because our being comprises these elements, we are indebted to our culture and our forebears, for our entire selves. Of course, despite this dependency, we are still required to act on the basis of the understanding we have.

Our being, then, is not under our own control, in two senses: (1) we do not choose the possibilities or

categories that are presented to us—these are provided by the culture (or world) out of which we are constituted; and (2) as being-in-the-world, we are thrown into absorbed activity but cannot choose which activities (moods, commitments, values) among our possibilities actually absorb us. This unchosen thrownness into absorbed activity is our most basic way of being; yet we nevertheless need to appropriate and acknowledge it as our own.

Existential guilt or indebtedness is connected to guilt as it is experienced everyday. Our ordinary sense of guilt includes the belief or feeling that we have transgressed ethical norms and have neglected our responsibilities to other people, animals, the environment, or God. In guilt, we feel we have been cut loose from the moorings of ethical standards and have behaved irresponsibly. The feeling of guilt reflects the wish to reestablish connection with such ethical norms and standards. But if we understand existential guilt, we realize that we cannot determine ourselves. We are fundamentally determined by our larger culture or world. As Heidegger says, "The self, which as such has to lay the basis for itself, can never get that basis into its power." Put differently, neurotic guilt is the questing after what is impossible: control in situations where one has no control, achieving perfection one cannot achieve. Wanting the impossible (self-determination) is the basis of guilt.

Living authentically (absorbed, skillful participation and an accurate appreciation of one's nature as being-in-the-world) bears a close relationship to the correct use of our language. Authentic living implies authentic speaking. Language used correctly is a mode of skillful absorption in the world. But language can also hide or blind us to our real intents and purposes, or the real natures of others. The contrasts here are with speech that is inaccurate, unfelicitous, or distorted by denial, overgeneralization, misplaced emphasis, lack of appropriate nuance, disowning of responsibility, vagueness, and so on. Clinical situations are replete with instances of this—times when a patient speaks in an empty or incomprehensible fashion that leaves the therapist "at a loss for words" and thoughts. In such situations, the patient may not yet be speaking meaningfully at all, not using words as parts of actions that make sense; then the therapist's goal may be to point out the emptiness of what appears to be meaningful (for example, when guilt presupposes an impossible perfectionism), or give the patient meaningful words to capture his situation. Alternatively, of course, the patient may be speaking meaningfully, but the therapist may fail to recognize it. In this case, the therapist's goal is to "get with" (understand) the patient so her truly meaningful act, in speaking, can be completed by the therapist's comprehension. Existential psychotherapists are particularly inclined to pay careful attention to the specifics of the patient's language, asking, "What could he mean?" "What is she trying to say or do?" "What do her words imply?" The objective of such close attention is a genuine, active engagement of patient and therapist.

2. A Model of Therapy

The existential approach includes elements that are distinct from those of psychoanalytic or cognitive-behavioral treatments, which emphasize careful, detached observation, diagnosis or formulation by comparison of data to a predetermined set of criteria, and the prescription or administration of treatment. According to Heidegger, such observation and diagnosis do not reveal phenomena; they obscure them. True understanding occurs only through and during active, lived participation. Understanding another person, then, takes place through and during empathic, emotional exchange. The key test of the accuracy or "correctness" of such interplay is its effectiveness in strengthening the connection and emotional resonance between patient and therapist. For the patient, there will be a deepening and amplification of feeling. For the therapist, a similar or complementary reverberation occurs. For both people, success will be experienced as sharing and warmth (in either its positive or negative senses).

The objective of therapy with respect to self-understanding is not to discover or accurately diagnose what is hidden and only known by inference (such as a repressed wish or a hypothesized brain process). Rather, the objective is to enable the patient to see himself more clearly and, therefore, to respond more fully to what is already present in his behavior, but not adequately appreciated. It should be noted that this represents a radical departure from centuries of tradition, often associated with Descartes. In contrast to this tradition, existential therapy emphasizes that what is fundamentally mental is not "subjective" or "in" the head (such as inner images, thoughts, or propositions) but, rather, styles of comportment and patterns of behavior. Fuller appreciation of what is already, immediately present usually includes becoming more aware both of the formative influence of one's past (facticity) and one's defining goals, values, and interests ("for-the-sake-of-whichs"). This idea is captured by Wittgenstein in his statement that "If one sees the behavior of a living thing, one sees its soul." It is also expressed by

Henry James, as noted by Martha Nussbaum: "The effort to really see and really to represent is no idle business in face of the constant force that makes for muddlement." Our goal is to make ourselves people "on whom nothing is lost."

Thus, both the methods and the goals of existential therapy are vivid, emotional immersion in the world, particularly the shared world of patient and therapist. How to do this, and how to structure such interactive encounters so they preserve vigorous interchange and still work to the patient's benefit, need to be discussed.

3. Methods of Therapy

So far, our discussion has been highly abstract. But that is precisely the opposite of where existential psychotherapy would like either the patient or therapist to end up. It is in its specific therapeutic methods that existential psychotherapy most clearly shows its adherence to phenomenology, to the aim of disclosing being as it actually is, undistorted by theoretical formulations. The following six characteristics of existential therapy are frequently emphasized: (1) the phenomenological reduction; (2) affective involvement between patient and therapist; (3) exploration of the surface of meaning; (4) the meaningfulness of all behavior; (5) attention to the uses of language; and (6) temporality or life history. All six are derived from the understanding of human nature as being-in-the-world, although some are consistent with other models as well, including psychoanalysis most prominently.

a. Phenomenological Reduction The phenomenological reduction was developed as a philosophical technique by Heidegger's teacher, Edmund Husserl. It directs philosophers or psychotherapists to focus initially on phenomena—for example, the experiences described by patients—simply as they present themselves to the listener or viewer. The observer is supposed to "bracket," or put out of consideration, her theoretical knowledge of *what* something is (a hallucination, for example, or a manifestation of schizophrenia). Instead, she is to examine the phenomenon as it presents itself, as it were, without category.

Despite the apparent simplicity of this proposal, at least two fundamental objections should be raised to it. First, according to Heidegger himself, the observer is always already in a world that is constituted by her culture and that includes, not isolated data or categoryless entities, but things that are known as particular items (a hammer, a hallucination). In other words, there is no possibility of approaching phenomena as they are in themselves, free of presuppositions. To do that would contradict the fundamental nature of being-in-the-world; the phenomenological reduction is an empty proposal. The second objection, also based on Heidegger's analysis of being-in-the-world, is that the attitude of detached, suppositionless observation—what Heidegger called "fascination"—is not the fundamental or basic way of understanding things. Quite the contrary, since the most fundamental and spontaneous way of understanding something is being familiar with it through using it in purposeful activity, detached reflection is artificial and no guarantee of a more authentic relationship to entities.

Yet, beginning with Karl Jaspers, existential psychiatrists made the careful study of phenomenology the foundation of their clinical approach and provided extensive detailed accounts of patients' subjective experience. Perhaps the resolution of this apparent paradox is that what is to be bracketed is theoretical knowledge, while what is retained and relied on is everyday or ordinary knowledge. Although it is impossible to approach another person with one's mind emptied of its categories, it may be possible to limit oneself to using only those categories that are widely available in the culture, including to the patient herself.

Phenomenological reduction was not originally used as a therapy; rather, it was a method of investigation that would lead to more accurate generalization and classification. This was how Jaspers, Binswanger, and Minkowski used it in their carefully rendered and detailed case reports. But phenomenological reduction may also have therapeutic effects; there are several ways these might be produced. First, naming an experience often changes it, a point Heidegger emphasized. He said, for example, that "language makes manifest." Language picks things out and sharpens our focus. One may, for example, think of examples of child abuse or other torture: knowing and naming each part in detail may produce a stronger impact than do more general descriptions. In addition, language brings an experience out of the inner world and into the public world of our common language. Two people may share the same experience through words. Careful reporting and wording of phenomenology is an important tool for placing the therapist where he can share the patient's experience, minute by minute.

Moreover, phenomenological reduction, though it cannot be totally suppositionless, does remain true to a central Heideggerian theme, namely, the primacy of direct experience and absorption in things themselves,

over abstract, conceptual thought. Heidegger believed, in fact, that it was distance from concrete involvement with life which was the basis of all psychopathology. Thus, a closer approach to or absorption in the details of living can be inherently therapeutic.

b. Affective Involvement Being-in-the-world is active coping with a world of entities that matter to us. Practical, purposeful activity in which entities have emotional valences precedes and is presupposed by all formal, conceptual understanding. If the existential therapist's goal is to form an accurate understanding of what it is like to be his patient, he must develop the same concrete and emotional responses as the patient. Empathy is not a relationship of observing therapist to observed patient. It is sharing the same psychological experience: the therapist must not only understand the patient in terms of diagnostic or other categories, but he must feel what the patient does. This requires affective engagement with the patient.

Although Heidegger included affect among his necessary and constitutive features of being-in-the-world, existential therapists also discovered its importance directly through their work with individual patients. As Eugene Minkowski lived with a delusional depressed man and tried to enter and understand his delusional world, he began to develop intense feelings toward the patient. These were not, however, only the same feelings as the patient's. The patient experienced fear, since he feared his own execution each day. In response to the patient's intractable fear, Minkowski, who was trying to help him, got angry. Other existential therapists have emphasized the importance of genuine respect, fondness, and appreciation which arise in therapists as they work at gaining access to their patients' worlds. Binswanger referred to the curative aspect of love, a position that Edith Weigert also developed. Unlike the dispassionate listener of classical psychoanalytic theory, the existential therapist expects to become emotionally involved with his patient, and he welcomes it.

There are, at least, two ways in which a genuine, emotional relationship may be helpful. First, as in Minkowski's example, people can only influence one another when they matter to one another. In expressing his frustration, Minkowski implicitly challenges the patient's rigidity and challenges him to change. Intense confrontation within an important relationship must lead to change in one or both individuals, or rupture of the relationship.

A second way in which a genuine emotionship may be therapeutic is through love. Through love, the therapist warmly appreciates and values the patient (especially features that she herself undervalues, ignores, or fails to recognize). Thus, the therapist enjoys and applauds the patient's skills, principles, and objectives; the therapist also can see in a positive light aspects of the patient which she insufficiently appreciates (for example, inhibited aggression or "negative," shameful feelings such as anxiety or guilt). The therapist is able to do this because of her genuine liking for the patient, as well as her understanding of the nature of being-in-the-world (which includes thrownness [and, therefore, anxiety], as well as indebtedness [and, therefore, guilt]).

c. Exploring Surface Meanings The existential therapist starts by sharing the patient's experience and then proceeds to explore the surface implications of the meanings of such experiences. In this process, the clinician takes the patient's words, examines them carefully, and tries to form generalizations about them to make manifest their latent (but not hidden!) structure. In this way, she reveals basic characteristics of the patient's thinking.

Minkowski provided the classical example of this procedure. In his close work with a patient with delusional depression, he observed that the patient continued to expect his "final execution" every night, although, of course, this never occurred. Minkowski concluded from this that the patient suffered from "a serious disorder in the general attitude toward the future" and that "The complex idea of time and of life disintegrates, and the patient regresses to a lower level that is potentially in all of us." Minkowski explored *among* the phenomena of the patient's psychosis, searching for the unifying, more general disturbance at the core of the disorder. He did not look for or postulate unconscious processes.

Medard Boss (1963) applied the same procedure in a variety of clinical situations. He took directly observed clinical phenomena at face value and accepted them. The next question for him was not what they revealed about unconscious mental mechanisms or the repressed past. Rather, clinical phenomena were examined as understandable and frequently even admirable behaviors that embodied and displayed aspects of the patient's way of being in the world (which thereby revealed his self-understanding).

Consider Boss's discussion of transference. According to Boss, the existential therapist does not consider "transference" to be a projection or transfer of feelings from one person to another. Nor does treatment involve

working through such a distortion, so that its roots in the past can be clearly separated from the present relationship. Rather, the therapist "admits 'transference love or hate' as the genuine interpersonal relationship to the analyst" experienced by the patient. The existential therapist does recognize that the relationship will be "infantile" and that the patient will misperceive the therapist in ways that arose during the patient's childhood. Yet the therapist still accepts the relationship as genuine and as an important mode of being for the patient. This understanding acceptance, rather than working through of transference distortions, is the mechanism of emotional growth in therapy.

Boss described a similar approach to understanding dreams. He first accepted their surface truth and then looked for more general modes of behavior or self-understanding that they displayed. He recounted a patient's dream in which lions and tigers escape from their cages in the zoo. The dreamer is frightened and begins to run away. From this dream, Boss extracted a general theme: the patient's inability to tolerate without fear life's "vitality," including danger and aggression. Boss emphasized that the patient's fearful attitude is shown directly in the dream. To the existential theapist, dreams reveal more vividly aspects of patients' lives of which they themselves are not usually "adequately and fully aware." But no unconscious content or mechanisms are invoked. Dreams are an "*un*covering, an *un*veiling, and never a covering up or a veiling of psychic content."

d. The Meaningfulness of Behavior Existential analysis of the surface meanings implied by delusions, transference, and dreams is an instance of the more general existentialist principle, shared with psychoanalysis, that all behaviors are meaningful. Meaningful behavior, according to Heidegger, does not require and, in fact, usually lacks, deliberation or even conscious awareness of judgments, motives, or plans. Thus, even acts that appear automatic, reflexive, stereotyped, or driven may be meaningful and reflect a person's self-understanding. In most ordinary situations, the meaning of behavior can be easily understood: we read the meaning from the behavior in its context. In psychopathology, the task is to decipher and find the general disturbance of existence presented by behavior which is not ordinary.

Boss, for example, observed that the behavior of obsessional patients is constricted: only "'pure,' objective and conceptual thinking" is acknowledged and allowed into the patient's awareness. Intimate contact and emotional involvement are avoided. True involvement (a truly absorbed and spontaneous being-in-the-world) would expose the obsessional person to "realms of being" which he experiences as filthy, nauseating, dirty, disgusting, or animalistic. Again, the therapist understands such inhibition as arising from childhood experience, but this conceptual understanding is not brought into the therapy and does not form the background for the therapist's interventions. Rather, the therapist focuses on the patient's inhibited way of being, the style of comportment that it involves.

Because they assume the meaningfulness of many behaviors that others would not, existential therapists accept and tolerate a range of behavior that is unacceptable to ordinary social convention. Thus, in the case reports of many existentialists, including Minkowski and Boss, we find descriptions of extended periods of time in which the patient was "regressed," and "childlike." These therapists accepted such behavior and even participated in it; they believed the behavior reflected a meaningful, though inhibited, mode of being-in-the-world. Such acceptance seemed to have therapeutic effect. One patient told Boss that what was important to her was, "your understanding of my paranoid delusions and hallucinations, your taking them seriously. Your knowledge of their genuine value and meaning enabled me to realize the wholeness of my own self and the oneness of myself and the world."

e. Uses of Language When a therapist is able to help her patient toward more authentic living, she does so primarily by her use of language. Language can facilitate the active, self-aware, and skillful absorption of being-in-the-world. It may, however, also interfere and distance an individual from the skillful, energetic coping she seeks. In the latter case, language can replace an active life among things and people with a "solipsistic" withdrawal into a world of merely conceptual thinking—a world of thoughts that have no use in one's life. Similarly, language may strongly encourage or hinder an individual's empathic attunement and emotional involvement with other people.

The existential therapists' emphasis on being-in-the-world, including empathic attunement, thus led them to explore how language may be *used* in treatment, which is perhaps unique among psychotherapists. Language is not only a tool for conveying information. It is also a mechanism for expressing one's feelings or eliciting feeling in another, communicating a value judgment, sharing anxieties or pleasures, demonstrating concern, proving one's accurate empathic understanding, venting frustration, and accomplishing many other

personal and interpersonal objectives. Sensitivity to and comfortable use of many different ways of speaking are parts of existential therapy, as documented in the writings of Minkowski, Boss, Yalom, Fromm-Reichmann, and others.

Brief, exclamatory remarks ("How awful!" "My God!") may express an immediate emotional reaction that approaches or complements the patient's. Impartial and impersonal statements may "translate" patients' private feelings into feelings that are public, universal, and shareable ("It's infuriating." "No one could stand it.") The use of specific, emotionally charged words ("God," "peace," "safety," the names of important people in a patient's life) may immediately intensify and deepen a patient's feeling, as well as her connection to the therapist.

The existentialists did not organize their uses of language or combine them with other treatment elements (such as exploration of surface meanings) into a coherent therapeutic system. Although it seems existential therapists would agree that, as Wittgenstein said, "Uttering a word is like striking a note on the keyboard of the imagination," only case reports document the therapeutic effects of particular uses of language in existentiated work.

f. Life history Human being is temporal: people, in their active, directed being-in-the-world, are always coming from their past experiences and going toward their future goals. Because an individual must adopt her interpretation of herself and her world from the possibilities that are presented factically by her culture (or world), she must always embody an historical dimension that refers, through her behavior, to the past. And because actions are always already understandable as doing something for-the-sake-of-which, she also always manifests her orientation toward the future. In fact, past and future are coordinated: the values and goals that an individual has have been created from elements in the past. To understand someone fully, we therefore usually must know about their past, an insight shared with psychoanalysis but understood somewhat differently by existentialists.

There are many examples of the interplay of appreciating a life history and existential therapeutic practice; some overlap psychoanalytic therapy. First, detailed, comprehensive knowledge of an individual's past experiences will facilitate the work of empathy—what Martin Buber called "imagining the real." Second, accurate empathic expressions are more likely to arise from such vivid, vicarious experiences of the patient's life. Third, some verbal and nonverbal behaviors may only be understood against the background of the past. Actions may be reenactments, and sometimes only knowledge of the patient's past will permit the therapist to develop reasonable, intelligible explanations for behaviors that would otherwise seem to be mere symptoms without rational justification. These three examples are familiar to psychoanalytic practitioners.

Perhaps more specific to existential therapy is its emphasis on man's inherently temporal nature as such. If the goal of therapy is living authentically, and if living authentically comprises an understanding of oneself as being-in-the-world, then it seems that such authentic living must include a clearer and more active appreciation of one's temporality (one's being constituted by the past and always projected into the future). Yet despite the importance of temporality as a component of being-in-the-world, existential therapists for the most part have not developed this idea. Keener awareness of the pervasiveness of the past might modify, and perhaps heighten, feelings of anxiety and guilt, which arise inherently from the past and form a structure of being-in-the-world. A therapist's image of her patient as directed toward future goals and seeking to realize important values may significantly inform her approach to treatment.

III. APPLICATIONS AND EXCLUSIONS

The clinical indications and contraindications for existential approaches have not been systematically established. Historically, existential therapy was developed in work with psychotic patients. Binswanger, Minkowski, and Boss, in their seminal descriptions of existential work, presented patients who suffered from persistent and very troubling delusions and hallucinations. Recent writers in the existentialist tradition have tended to agree that such empathic, "presuppositionless" approaches are particularly suited to engaging and helping patients who are psychotic. If so, it may be because emotional involvement and expression by the therapist can help her to connect with patients who are emotionally withdrawn or who fear and avoid such contact.

Yet there is also evidence that existentialist approaches may have much broader application. Yalom (1980), for example, has described in detail his work with a wide variety of patients who were not psychotic, but who suffered from severe feelings of isolation, loss

of meaning, impairments of the will, or confrontation with death.

The contraindications to these methods have also been based largely on clinical impression, not rigorous study. Patients who may be unable to tolerate strong feelings toward the therapist—for example, individuals who tend to escalate their hopes and expectations for help and care from the therapist, or who become excessively angry when such expectations are disappointed—may find existential approaches countertherapeutic. Such patients may show better outcomes when therapists are less emotionally expressive and involved. However, modifications in technique (for example, "counterprojection" of exaggerated demands or aggressive reactions) may improve the response of such individuals to existential approaches.

IV. EMPIRICAL STUDIES

Empirical outcome studies of existential psychotherapy are lacking. Treatment effectiveness has instead been documented in individual case reports, which are thus not systematically controlled for bias in the selection of reported cases, variations in the treatment provided as "existential" by different practitioners, nonspecific or "placebo" effects, lack of rigorously defined or carefully measured outcomes, and so on. Moreover, the line between specifically existentialist approaches and what might be considered "nonspecific" treatment factors is not easy to draw.

In assessing the evidence in support of existential psychotherapy, it may be helpful to begin with the appreciation that existential treatment elements—including empathy and respect for the patient's point of view, emotional, expressive relationships between patients and therapists (which will, at times, involve conflict) and attention to degrees of attachment and of separation—are parts of any therapeutic or healing relationship. Of course, other therapies emphasize additional elements as well (for example, transference interpretation in psychoanalysis or skill-building in cognitive-behavioral therapy). But the extensive outcome literatures of these other therapies have documented the importance of such common components within multiple forms of therapy in promoting positive outcomes and, therefore, support indirectly but strongly the importance of existential elements.

Existential therapy seeks to enter and explore the patient's world from within it, beginning with the phenomenological reduction. The therapist seeks to develop her understanding of the patient in terms that the patient would agree to and accept—terms that are available not only to the "specialist" with expert training but that are inherent in the very words the patient speaks. This is, in effect, the attempt to share the patient's perspective, to see it her way, and to share her reactions.

The value of this approach is strongly supported by the extensive literature on the importance of a strong and positive therapeutic alliance. One defining element of the therapeutic alliance, which is associated with improvement in psychotherapy, is agreement on goals and tasks—in other words, a shared perspective on what is "wrong," what should change, and how. This element has been shown to be crucial across therapeutic modalities and settings: measured at the start of therapy, it is associated with positive outcome. Such agreement between patient and therapist—a true working together and not merely patient "compliance"—must require the therapist to enter the patient's world, to indicate that she understands what is troubling her and why she seeks help. This working together on shared tasks for common purposes is the essence of both the therapeutic alliance and the phenomenological reduction, as it is applied therapeutically.

In addition, existential psychotherapy emphasizes the therapeutic force of the emotional involvement of patient and therapist. The therapist's genuine interest in the patient, as well as her respect and valuing of her patient, are key treatment elements. Moreover, the therapist will have and express feelings of liking or affection for the patient, as well as feelings of anger and frustration. These expressions are made in the service of developing an emotional attachment between patient and therapist. The value of this element as well is supported by the literature on the therapeutic alliance. That literature strongly indicates the importance of the patient's positive regard for the therapist—her perception that the therapist cares and wishes to help—in promoting successful treatment outcome.

These two elements of the existential therapist's relationship with her patient—sharing common perspectives and the open expression of feeling—have been shown to be important in nontherapeutic relationships as well. For example, the marital and family literature strongly documents the importance of such "healing relationships" marked by respect for individual experience, high levels of connection, tolerance for and ability to resolve conflict, equality, and sharing of responsibility. Such relationships can "treat" the effects of earlier, less facilitating interpersonal interactions on self-esteem and adaptive functioning and can help to prevent the

development of psychopathology. The documented value of such nontherapeutic relationships lends additional empirical support to the existentialist focus on fostering such relationships in the treatment setting.

Recent developments in the neurosciences also support important tenets of existential approaches. For example, much recent work in lower animals and in humans suggests the importance of subcortical and cortical-subcortical brain pathways that subserve the processing of emotional information, automatically and out of conscious awareness. These findings are strongly consistent with the emphasis of existentialist workers that being-in-the-world includes an affective relationship with situations—and other people—which is automatic and which precedes any conscious or cognitive appraisals. The implications of this understanding for psychotherapy have not been systematically worked out. Yet the importance of strong affective exchanges between patient and therapist—both of connection and of conflict—as crucial components of treatment are consistent with the notion that affective interaction, not merely conceptual understanding, is an essential component of treatment. The patient must come to feel situations differently if she is to appraise them and act within them in new, more authentic, and vivid ways.

V. CASE ILLUSTRATIONS

These cases illustrate the central existential task: to apprehend the other's being in the world and by a shared engagement to render such a being in the world both understandable and livable. The basic assumption of this task is the possibility of one person's imagining the real of another, that is, a relatively full acknowledgment of another's experience of individual existence. The aim of existential exactness is this fidelity to the other's existence, which faces within the existential method the problem of reaching what is unconscious to that experience. The therapeutic assumption of such attempts is that a rendering into mutually understandable language reduces the other's isolation and opens the way to productive discourse. Throughout we will have to address whether an existential approach to the conscious, shared, individual elements of experience takes into account not only unconscious factors, but both biology and the larger social context within which experience occurs. Any presentation of one psychotherapeutic approach cannot go forward productively without attention to what may he sidelined or altogether neglected.

The first and most readily usable illustration is engagement with paranoid states. A man of 35 was hospitalized for threatening behavior and persecutory convictions. He refused to take medications or permit access to his family or employer. The initial interviews were centered on making his experience of persecution mutually understandable. The interviewer at first expressed indignation at the behavior the patient reported he had received; further, the interviewer gave examples of similar persecutory behavior he himself had observed. No attempt was made to interpret or "reality test" the patient's statements. Instead, the interviewer wanted to plumb the depth of the patient's experience, and to that end, the interviewer expressed increasing indignation and gave further examples of the injustices of the world. The patient visibly relaxed and in response to the interviewer's growing indignation and examples cautioned the interviewer against becoming paranoid. The two had arrived at some mutuality of concern.

The interviewer, however, did not retreat from his "paranoid" position, remarking that he was older than the patient and had perhaps seen more of the world's injustice. The patient, in turn, did not retreat from his almost anti-paranoid position, speaking of his continuing surprise at injustice and his strong expectations that the world should he a better place. ("Naivete" has often been reported among paranoid cases.) The interviewer expressed admiration for the patient's idealism and also expressed the interviewer's own hopes that such idealism should someday be implemented. They seem to he approaching a position in which they could agree to mildly disagree. Essentially, the interviewer was warning the patient that disappointments in his ideals might throw him into an alienating paranoia. The patient was warning the interviewer that his greater experience might render him disillusioned and cynical.

The patient then began to discuss the events preceding the persecutory experience, even suggesting a behavior of his own that may have contributed to that experience. The paranoid behavior stopped, and the discussions continued and deepened.

Note that the engagement between patient and interviewer quickly encompassed the social context of the patient's immediate experience and later the still earlier experience with family. What had happened was a toning down of each person's position and a new experience for both parties of a common ground in which the whole problem of both paranoid attitudes and their now acceptable disagreements could be explored and discussed out of that common experience.

Much has been left out of this discussion—for example, the usefulness of medication in controlling psychotic phenomena (medication was used in the present case) and, as important, the unconscious sources of both their beliefs: many therapeutic factors operate to bring about positive change. And there are certainly important similarities between, for example, psychoanalytic and existential conceptions of what is helpful. The analytic emphasis on deciphering the meaning inherent in behavior is comparable to the existential appreciation of existence as embodied self-interpretation. But there are also important differences in emphasis. Existential therapy, in particular, emphasizes the affective connections between patient and therapist, and the joining in or sharing of common perceptions and feelings, rather than understanding at a conceptual level, as crucial therapeutic factors.

This emphasis is also illustrated in the second case, a 25-year-old woman who entered treatment because of long and unsuccessful efforts to contain what were difficulties of a different sort. For much of her life she had been regarded as "strange" and came into the therapy when she refused medication and efforts to reach her by other means.

The patient repeatedly writhed. The psychopathological temptation was to see the writhing as diagnostic of catatonia and the patient as a victim of schizophrenia. Instead, an existential approach suggested that writhing might be a form of being-in-the-world, a statement about the patient's place in the world. (An analytic observer might see the same action as infantile regression, perhaps a conflict between demands on the mother and inhibitions about making those demands). One reason the therapist took an existential approach was his memory of an anecdote about Einstein. Early in the physicist's career he had found himself writhing when he contemplated Newtonian mechanics. Something discomforted him in that theoretical construction. It has been suggested that it took Einstein almost 20 years to translate those writhings into the differential equations of general relativity. Was the patient, too, experiencing a conflict between what she had been taught to believe and what she herself experienced in the world?

When the patient recited poetry and when she discussed poetry with children, the writhing stopped. The therapist wondered if conventional speech, as opposed to spontaneous remarks or speech close to particular feelings, might prompt the writhing. He therefore tried to avoid conventional speech with the patient and to wait upon spontaneous utterances. The writhing stopped.

It appeared that her yearning for heart-felt contact was of many years' duration and was only matched by her hesitation to discomfort others by calling attention to artificiality. It also seemed that her desire for honest observations and speech had not always been well received in her family, the parents being divided in their practice and counsel. When the therapist was with the parents, he observed that the father, like the patient, was reluctant to confront the mother's artificiality.

The existential therapeutic task was therefore to acknowledge and share both the patient's wish for honesty and her sensitivity to others' discomfort with honesty, and to do both these tasks in such a way that the therapeutic behavior modeled a comfortable dealing with this familiar conflict. It may be that this last was something that the two parents could not do for one another.

This clinical incident illustrates, and might be seen as, the existential "putting the world between brackets," that is, approaching the patient without preconceptions, especially pathological preconceptions, whether descriptive or analytic. Yet this fundamental rule of existential work may not be quite right. In fact, the therapist found a useful preconception in the Einstein anecdote. Such a preconception illustrates what may be still more fundamental to the existential task, that is, finding what can be termed thwarted or conflicted modes of being-in-the-world; the last two illustrations are of conflict over idealism and honesty. This points to what are perhaps the central features of existential work—its tendency to depathologize clinical situations and to address patients' strengths.

The final illustration concerns a woman of 65 who felt her existence had largely ended with the death of her husband. Happily, it had not altogether ended because she sought help in finding what she could not really believe in, an existence of her own. She had been a successful wife and mother to a world-famously successful husband, but she found little in those successes that she felt was her own. Long ago in her adolescence she had heard herself saying "I can write as well as Eudora Welty." Later this seemed like the memory of a nearly forgotten dream.

It was easy to celebrate what she had done. The children had completed their educations and had careers, marriages, and children of their own. In the case of one son, these goals had been achieved despite appalling difficulties, which called on the patient to guide the young man amidst terrible dangers, to an existence and set of purposes that seemed, of all her children, the most his own. The husband had been revered by these

children and by almost everyone except the patient. She knew how severely anxious he had always been and how much he required her judgment and steadiness to maintain both his face and his fame. She remained overshadowed throughout; only a very few knew what she had done.

She had given herself away, also to a charismatic mother who was the cynosure of all family eyes, to whom the patient had early subordinated herself. Even then she had been the mainstay of the large group of younger children enthralled by the exciting mother. She felt like a shadow in a world for which she was actually central.

It was easy to feel great admiration for what she had always done. It also would have been easy to go on celebrating what she had done and to rest on those laurels. How this challenged all the sexist biases of her male therapist! Why was she not content to have helped such a famous man? By chance, this therapist had seen enough of women's lives to know how extraordinary they often are.

It is the lesson of existential work that the dream of her early life could still be found. The treatment was like a long, quiet argument. The therapist took the part of the faint dream but also shared the almost overwhelming despair, against so many celebrations of the husband and the children's awed memories. The patient found the beginnings of her own rescue in the care of other sick and often dying old people. She began to write about them, all the while reflecting on the dying days of the husband and what felt like her own near demise. The accounts were remarkable, showing forth strong psychological gifts and a capacity for expression that belied the deadly themes. She was making something out of what had felt like almost nothing.

It recalled Proust. At the end of *In Search of Lost Time,* Proust, too, had seen the bankruptcy of his own purposes, his nearly fatal ambition to be part of the itself dying, empty French aristocracy he had worked so hard and long to join. He then made out of the wreckage of those hopes a book which was his own.

It was not enough to do what often rescues an existential despair—to welcome the despair into the therapeutic room, to give the despairing person perhaps the patient's first experience of having desperation welcomed and thereby partly left in that room. It is true the patient had not felt entitled to let her feelings be heard. The job she had was to hear others' despair and support them; she was most unsure that anyone would welcome any other part of her. Yet the need to share despair and honor the other, dependent part of herself sat side by side with a need to have the mother honored, so deeply was she in the mother's thrall, and most of all to have her own independence honored, in the emerging creative sphere.

A turning point seemed to be the obvious pleasure the therapist took in the dawning creativity. For a considerable period the therapist took more pleasure in it than she could. At first she doubted his sincerity—it might all be a therapeutic ploy. Then she wondered how anyone could take her seriously. At this point, she was like a brilliant lawyer giving the jury reason after reason for disbelieving the credibility of a witness. Wisely, the therapist read her early writing efforts with an appreciation for detail that, more then any general support, helped convince her of what she doubted. Deep doubt gave way to a tentative curiosity, and the curiosity to a growing enthusiasm that spread not only to her work but to the person who produced it. Yes, the work was hers, and being hers she might love a little the person who produced it.

The work of apprehending another's being-in-the-world had moved from appreciating what she had done to nurturing what she had not done, what she had long postponed. This meant fidelity to a dream almost forgotten and the capacities that were not so much neglected as pressed into the life of service she had been thrown into. The dream was rendered into mutually understandable language first in therapeutic discourse and then in exacting detail in the writings she made out of that long-deferred dream. The work went not from the manifest to the latent so much as from the latent to the manifest—in the language of analysis from being dreamlike and barely conscious to becoming the largest occupant of her consciousness.

VI. SUMMARY

The central objective of existential therapy is to enable the patient to live authentically: actively absorbed and involved with other people and things, while appreciating and accepting his nature as being-in-the-world. Appreciation of being-in-the-world as the fundamental structure of human being also informs the methods of existential treatment. Existential psychotherapy begins with the therapist seeking to enter the patient's world as it is experienced. This is accomplished by careful attention to the patient's experiential reports, suspension of theoretical presuppositions, and the development and expression of

affective involvement. Surface meanings, rather than unconscious depths, are explored and discussed. Behaviors, even those that appear symptomatic, are assumed to represent important aspects of the patient's past, as well as her values and goals for the future. The use of temporal perspectives—taking account both of the patient's past and the hoped-for future—informs the therapist's overall orientation in treatment.

See Also the Following Articles

Gestalt Therapy ■ History of Psychotherapy ■ Humanistic Psychotherapy ■ Jungian Psychotherapy ■ Language in Psychotherapy ■ Transference ■ Transitional Objects and Transitional Phenomena

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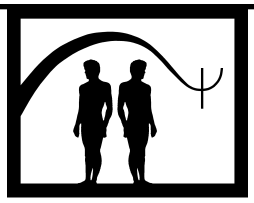

Exposure

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GLOSSARY

flooding Controlled, prolonged exposure to an intensely fear-evoking stimulus until fear reduces in magnitude.
graded in vivo exposure Reduction of fears by working up a hierarchy of fear-evoking stimuli.
implosion Imagining an intensely frightening stimulus until it no longer evokes fear. Implosion often involves embellishing the stimulus by exaggerating its fear-evoking properties.
systematic desensitization A form of imaginal exposure that involves gradually working up a hierarchy of fear-evoking stimuli. Typically combined with relaxation training.

Exposure is a form of therapy commonly used in treating phobias and other anxiety disorders. It involves presenting the person with a harmless but fear-evoking stimuli until the stimuli no longer elicit fear.

I. DESCRIPTION OF TREATMENT

Exposure is used in the treatment of a variety of psychological problems. Most commonly, it is used to treat excessive fears, which are a central component of many anxiety disorders, such as specific phobia, social phobia, panic disorder and agoraphobia, obsessive–compulsive disorder, and posttraumatic stress disorder. During exposure therapy, the person is presented with a fear-evoking stimuli in a controlled, prolonged fashion, until the fear diminishes. Treatment is collaborative, with the patient and therapist working together to decide how and when exposure will take place. Exposure duration depends on many factors, including the type of feared stimuli and the severity of the person's fears. Typically, an exposure session lasts 20 to 90 minutes, and sessions are repeated until the fear is eliminated. Sessions may be either therapist-assisted or may be completed by the patient as a form of homework assignment.

There are several ways that exposure can be conducted. The person may be exposed to real stimuli or may simply imagine the stimuli. Exposure may be to intensely fear-evoking stimuli, or may be gradual, working up a hierarchy of feared stimuli. These two dimensions—real versus imaginal and intense versus gradual—combine to form the four basic exposure techniques: flooding, implosion, graded *in vivo* exposure, and systematic desensitization.

Flooding involves intense exposure to real stimuli. A person with a dog phobia might be exposed to a large boisterous dog until the person is no longer afraid. The advantage of flooding is that it rapidly reduces phobias; four 2-hour sessions are often all that is required. However, there are several disadvantages. First, flooding requires the person to tolerate a great deal of distress.

Some people, particularly those with severe phobias, are unable to do this. Second, flooding can produce temporary but intense side effects such as irritability and nightmares. Third, flooding is often too difficult for patients to conduct alone, and so this form of treatment does not teach patients a skill that they can readily use on their own. When used, flooding is typically implemented with the support and encouragement of a therapist. It is most often used when there is some pressing need for the person to rapidly overcome his or her fears. If a person had a phobia of hospitals and medical staff, for example, flooding would be used if the person was to be soon admitted to hospital for an urgent operation.

Implosion similarly involves exposing the person to intensely fear-evoking stimuli, but in this case the stimuli are imagined. Often exposure is embellished by having the patient imagine an extremely terrifying form of the stimuli. Implosion is often used in the treatment of posttraumatic stress disorder, where the goal is to reduce the fear and associated distress associated with traumatic memories. A person who developed posttraumatic stress disorder as a result of being held hostage in an airplane hijacking, for example, would be asked to repeatedly imagine the traumatic experience, typically for 30 to 45 minutes per treatment session over several sessions. The narrative of the experience might be spoken into a tape recorder or written down, and the person would be encouraged to repeatedly go over the tape or transcript until the memory of the traumatic event no longer evokes distress.

The advantage of implosion is that by reducing the distress associated with traumatic memories the other symptoms of posttraumatic stress disorder also may abate. Thus, implosion can lead to reductions in reexperiencing symptoms (e.g., nightmares, flashbacks), hyperarousal symptoms (e.g., irritability, increased startle response), and avoidance and numbing symptoms (e.g., avoidance of reminders of the traumatic event). A further advantage is that implosion enables the patient to overcome fears for which live exposure is impossible or impractical. Fear of thunderstorms, for example, can be reduced by having the patient repeatedly imagine such events.

The disadvantages of implosion are the same as those of flooding. Even if a patient is able to complete a course of implosion, it is often necessary to add some form of real-life exposure in order to completely reduce the fear. A hijacking survivor might need to resume traveling on airplanes in order to fully reduce the distress associated with the traumatic memories.

Graded *in vivo* exposure is the method most commonly used to reduce fear. It has two components. First, the patient is instructed how to rate his or her fear using a Subjective Units of Distress Scale (SUDS). This measure of fear and distress ranges from 0 to 100, where 0 = none, 50 = moderate, and 100 = extreme. Second, the therapist and patient devise a hierarchy of real fear-evoking stimuli, ranging from stimuli that evoke little or no fear or distress, through to extremely frightening or upsetting stimuli. Table 1 shows an example of a hierarchy used in the treatment of intense public speaking fears, which are a common feature of social phobia. This hierarchy was used to help the patient attain the goal of being able to present a short report at a weekly staff meeting.

TABLE 1
Graded *in Vivo* Exposure: Hierarchy for Treating Fear of Public Speaking

Stimulus	*SUDS*[a]
1. Reading a 1-min prepared speech to a friend.	25
2. Reading a 1-min prepared speech to two colleagues at a business meeting.	35
3. Reading a 3-min prepared speech to two colleagues at a business meeting.	45
4. Reading a 3-min prepared speech to six colleagues at weekly staff meeting.	55
5. Presenting a 3-min prepared speech to two colleagues at a business meeting, relying only on rough notes.	60
6. Presenting a 3-min prepared speech to two colleagues at a business meeting, using no notes.	70
7. Presenting a 3-min prepared speech to six colleagues at weekly staff meeting, relying only on rough notes.	80
8. Presenting a 3-min prepared speech to six colleagues at weekly staff meeting, using no notes.	90

[a] Subjective Units of Distress Scale, ranging from 0 (no fear or distress) to 100 (extreme fear or distress).

Typically there are 8 to 10 stimuli in the hierarchy, separated by SUDS increments of approximately 10 points, so that the stimuli are not too discrepant in the levels of fear or distress they evoke. Patients begin by exposing themselves to items lowest on the hierarchy. Exposure to a given stimulus is repeated until the fear or distress abates. Once fear of this stimuli is reduced, the other stimuli on the hierarchy also become less fear evoking. The patient gradually works up the hierarchy; once the fear associated with one stimuli is diminished, then exposure to the next stimulus is attempted. This continues until all the stimuli on the hierarchy no longer evoke fear or distress.

Sometimes it is necessary to develop more than one hierarchy to reduce all the patient's fears. For a person with generalized social phobia, a patient might work through a public speaking hierarchy, a hierarchy of situations involving one-to-one conversations with a person of the opposite sex, and a hierarchy involving asserting oneself to authority figures. The disadvantage of graded *in vivo* exposure is that it is slower than flooding. The advantage is that it teaches patients a skill for overcoming their phobias in a simple, step-by-step fashion. By progressively working up a hierarchy patients can overcome their phobias gradually, without enduring extreme fear or distress.

Systematic desensitization consists of gradual, imaginal exposure to stimuli organized on a hierarchy. The stimuli in Table 1, for example, could be used in systematic desensitization by having the patient imagine each stimulus. Typically, systematic desensitization is combined with some form of relaxation training. The patient is asked to sit back in a comfortable chair and practice a relaxation exercise. Once a state of deep relaxation is attained, the patient is asked to imagine the least upsetting stimulus on the hierarchy. Exposure duration might be only for a few minutes, alternating relaxation with imaginal exposure until the stimulus image no longer evokes fear or distress. The procedure is then repeated with the next stimulus on the hierarchy. The disadvantages of systematic desensitization are that it is slow, and that it is often necessary to eventually implement some form of live exposure in order to fully reduce the fears. The advantage of systematic desensitization is that it is easily tolerated and is therefore a good place to start with reducing extremely severe fears.

II. CASE ILLUSTRATION

Joseph K. was a 27-year-old man with a 5-year history of panic disorder and agoraphobia. He experienced recurrent, unexpected panic attacks. These typically occurred whenever he experienced cardiac sensations (e.g., rapid heartbeat), which he misinterpreted as a sign of impending heart attack. His catastrophic misinterpretations of these sensations increased his autonomic arousal, thereby escalating the feared symptoms to the point that he panicked. Joseph's agoraphobia was characterized by intense fear of traveling far from home, fear of driving over bridges and through tunnels, and fear of entering supermarkets and shopping malls. A detailed medical evaluation revealed no physical problems, including no cardiac abnormalities.

In order to select the exposure methods to be used in treating Joseph's problems, it was necessary to develop a formulation or working hypothesis about the causes of his difficulties. The therapist hypothesized that Joseph's primary problem was his fear of cardiac sensations, which arose from the patient's belief that these sensations meant that he was having a heart attack. As a result, Joseph feared and avoided situations in which he had experienced these sensations (e.g., while driving over bridges or standing in supermarket lines), and also feared and avoided situations in which it might be difficult to gain speedy medical attention if he actually had a heart attack (e.g., while traveling far from home). Thus, Joseph's agoraphobic fear and avoidance was hypothesized to be a consequence of his fear of arousal-related sensations.

The therapist shared this formulation with Joseph, who agreed that it was a plausible explanation of his problems. The next step was to use the formulation to select the most appropriate exposure interventions. Interoceptive exposure was selected as the method for reducing Joseph's fear of arousal-related sensations. This involves having the patient deliberately bring on the feared sensations (e.g., running up and down stairs to induce rapid heartbeat). Joseph was very frightened of these sensations, so interoceptive exposure was implemented as a form of graded *in vivo* exposure. A hierarchy of fear-evoking activities was constructed, beginning with mildly feared activities (e.g., walking quickly) through to very frightening activities (e.g., running up a long flight of steps). As Joseph worked up the hierarchy he gradually became less frightened of cardiac sensations, and came to see that the sensations would not cause him to have a heart attack. As this fear abated, he became less disturbed by naturally occurring cardiac sensations, and was less likely to panic when those sensations occurred. Four 60-minute sessions of graded interoceptive exposure were required to eliminate his cardiac fears and panic attacks.

Joseph's agoraphobic fear and avoidance slightly abated as a result of interoceptive exposure, although his agoraphobia was still in need of treatment. In particular, he was still extremely frightened of driving through tunnels, to the point that he was too frightened to attempt any form of real-life exposure to tunnels. As a result, the therapist began with systematic desensitization to treat this problem. Joseph was instructed to repeatedly imagine driving through tunnels. Such exposure went on for 30 minutes in the therapist's office. An audiotape was made of the imagined scenes, where Joseph described in detail the experience driving through various tunnels, including a description of all sensations involved (e.g., sights, sounds, smells, bodily sensations) and thoughts he might have (e.g., catastrophic thoughts). Joseph was

asked to listen to the tape once each day for the following week. During his next treatment session his fear of tunnels had abated to the point that he was ready to commence a course of graded *in vivo* exposure. A hierarchy was constructed. The least fear-evoking stimulus involved driving four times through a short, well-lit tunnel during a time with there would be little traffic on the road. Joseph completed this exercise as a homework assignment until his fear abated. He then gradually worked through more challenging assignments, such as driving through longer tunnels until his fear had abated. His other agoraphobic fears, such as fear of entering shopping malls, were similarly treated with a combination of systematic desensitization and graded *in vivo* exposure.

In all, Joseph received 16 weekly 60-minute sessions of therapy. At the end of therapy he was almost free of symptoms of panic disorder and agoraphobia. He was instructed to use the methods learned during therapy to overcome any other fears that might arise. A series of check-up appointments were scheduled, so that Joseph's progress could be monitored. At the 3- and 6-month check-ups he was symptom-free. However, at the 12-month check-up he reported a return of panic attacks, which arose after his grandfather had suddenly died of a heart attack. The death renewed Joseph's fears of cardiac sensations, thereby leading to the reoccurrence of panic. Three booster sessions of interoceptive exposure were sufficient to reduce the fears and panics.

III. THEORETICAL BASES

The rationale for exposure therapies was originally based on the conditioning models of fear acquisition. An early influential account was O. H. Mowrer's 1960 *two-factor model,* which proposed that fears are acquired by classical conditioning and maintained by operant conditioning. Classical conditioning involves one or more learning experiences that teach the person to associate a particular stimulus (e.g., riding in a car) with an aversive outcome (e.g., a road traffic collision). Clinically, the most important form of operant conditioning is negative reinforcement, where avoidance or escape from fear-evoking stimuli is reinforced by the avoidance or escape from unpleasant states of fear or distress. In turn, avoidance and escape prevent classically conditioned fears from being unlearned.

With subsequent research it became apparent that beliefs and expectations play an important role in both operant and classical conditioning, and theories of fear became correspondingly more complex. According to later models, fear was not directly determined by a stimulus (e.g., driving in the rain), but by the person's expectation of what the stimulus would lead to (e.g., a road traffic fatality). Expectations are strengthened by full or partial confirmation of one's expectations (e.g., a "near miss" while driving).

The major contemporary theory of fears is E. B. Foa and M. J. Kozak's 1986 emotional processing model. Here, fears are represented in networks (fear structures) stored in long-term memory. The networks contain representations of feared stimuli (e.g., oncoming trucks, driving at night), response information (e.g., palpitations, trembling, subjective fear, escape behaviors), and meaning information (e.g., the concept of danger). In the network the three types of information are linked (e.g., links between oncoming trucks, danger, and fear). Links can be innate or learned. Fear structures are activated by incoming information that matches information stored in the network. Activation of the network evokes fear and motivates avoidance or escape behavior. According to this model, fears are reduced by modifying the fear structure through the incorporation of corrective information (e.g., safety information acquired durign behavioral exposure exercises). Although the emotional processing model is considerably more sophisticated than the original two-factor model, both models predict that fears—including phobias—are reduced by the various exposure interventions described in this article.

IV. APPLICATIONS AND EXCLUSIONS

Exposure therapies have been applied to all kinds of disorders in which excessive fears play an important role. Apart from the disorders discussed earlier, exposure therapies have been successfully used in treating obsessive–compulsive disorder. Here, the treatment consists of exposure and response prevention. A person with contamination obsessions and cleaning compulsions, for example, would be exposed to a "dirty" object such as a doorknob, and then asked to refrain from engaging in handwashing compulsions. In this way, the contamination-related distress gradually diminishes, and the obsessions about contamination and associated compulsions similarly abate. Exposure and response prevention are most often used in the form of graded *in vivo* exposure, although flooding is sometimes used.

Other anxiety disorders can be similarly treated with exposure methods. Acute stress disorder, which is in many ways similar to posttraumatic stress disorder, can be successfully treated with implosion or systematic desensitization. Generalized anxiety disorder, for

which excessive worry is a central feature, can be treated by exposing the person, in a prolonged fashion, to their worries. The person might spend 20 minutes each day writing out his or her main worries. The distress associated with the worries gradually abates, and the person correspondingly learns to dismiss the unrealistic concerns.

Exposure therapies should only be implemented by a suitably trained therapist. The therapist should not only be skilled in exposure therapy, but should have a good understanding of psychopathology and psychiatric diagnosis, and should be skilled in the psychotherapeutic interventions commonly used in conjunction with exposure therapy (e.g., cognitive therapy, social skills training, relaxation training). If the patient experiences intense anger or guilt during exposure, as sometimes happens when treating patients with posttraumatic stress disorder, it is often necessary to combine exposure with cognitive therapy. The latter is used to address any dysfunctional beliefs associated with anger or guilt.

The patient should be a willing participant in the process of exposure therapy, with complete control over the nature and timing of any exposure exercises. Exposure may be traumatizing if it is forced on an unwilling patient. Exposure should be used only if the patient is able to tolerate some degree of distress, and is sufficiently motivated to overcome his or her fears. Patients should be told about the side effects of exposure treatment (e.g., transient increases in irritability), so that they can make an informed choice about whether or not to participate in treatment. The therapist needs to consider the patient's other problems before initiating a course of exposure. If a patient had social phobia and alcohol abuse, then one would need to consider whether the distress caused by exposure therapy would cause an increase in alcohol abuse. If this is likely, then the alcohol problem would need to be treated first.

V. EMPIRICAL STUDIES

There have been hundreds of clinical studies of the use of exposure therapy in treating the fears associated with anxiety disorders. Exposure therapies are among the most effective treatment for fears, with success rates typically ranging from 60 to 80%, depending on the severity and complexity of the disorder Treatment-related gains have been shown to be maintained at follow-up intervals ranging from 1 to 5 years. Patients who do not fully benefit from exposure may be successfully treated by other psychotherapeutic interventions, such as cognitive therapy.

VI. SUMMARY

Exposure methods are used to help people overcome excessive fears or phobias. Exposure therapy is the treatment of choice for specific phobias, and is an important intervention for use in treating other anxiety disorders. It involves having the person repeatedly expose himself or herself to a feared stimulus until fear abates. Patients play an active role in choosing what they will be exposed to, and when the exposure will occur. For patients who are extremely phobic, the least demanding form of exposure (systematic desensitization) is typically the exposure intervention to be used first. Exposure therapies are often used in combination with other interventions, such as cognitive therapy, social skills training, or relaxation training.

See Also the Following Articles

Anxiety Disorders ■ Classical Conditioning ■ Emotive Imagery ■ Flooding ■ Logotherapy ■ Systematic Desensitization

Further Reading

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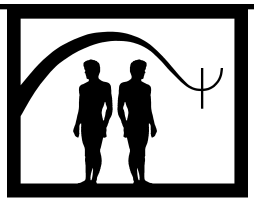

Exposure *in Vivo* Therapy

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GLOSSARY

exposure in vivo Behavioral procedure based on confrontations with anxiety-provoking stimuli in real life.
exposure in vitro Behavioral procedure based on confrontations with anxiety-provoking stimuli in the imagination.
extinction Decrements in responding through repetition of unreinforced responding.
flooding Exposure to high fear-provoking stimuli.
habituation Decline of a response over repeated exposures to fear-provoking stimuli.
hierarchy List of fearful situations ranging from no fear (0) to extremely anxious or panicky (100).
interoceptive stimuli Bodily sensations such as increased heart rate.
return of fear Reappearance of fear after the end of treatment.
sensitization Increase in fear responding after repeated exposures to fear-provoking stimuli.

I. DESCRIPTION OF EXPOSURE *IN VIVO*

Exposure *in vivo* therapy is a common behavioral procedure used in many treatments. The purpose of exposure *in vivo* therapy is to diminish avoidance behavior and decrease subjective anxiety. This article will present an overview of the current status of exposure *in vivo* in patients with anxiety disorders. Exposure *in vivo* has also been used in patients with substance abuse disorders and eating disorders, but this so-called cue exposure will not be discussed here.

In 1958 Joseph Wolpe developed a behavioral procedure named systematic desensitization. This was presumably the first behavioral procedure, which entailed systematic and repeated confrontation to anxiety-provoking stimuli. During this procedure, patients were first trained in muscular relaxation. After that, patients were encouraged to move gradually up a hierarchy of anxiety-arousing situations, while remaining relaxed. Systematic desensitization may be applied either *in vitro* (in the imagination) or *in vivo* (in real life), but given the fact that it most often was used *in vitro*, systematic desensitization will not be discussed here.

Traditionally, exposure *in vivo* was limited to external circumscribed situations, objects, or animals. Specific phobics were confronted with, for example, snakes or spiders, heights, or small spaces; social phobics with social encounters; agoraphobics with busy or crowded places away from home; and obsessive–compulsive patients were confronted with dirt. However, exposure can also be applied to feared internal (interoceptive) stimuli such as increased heart rate in the case of panic disorder. Examples of interoceptive stimuli are bodily sensations such as trembling or shaking and dizziness. The bodily sensations can be elicited by climbing up

the stairs (increased heart rate), by pushing against a wall (trembling of the muscles of the arms) and by turning around on a chair (dizziness), or by hyperventilation provocation. Specific bodily sensations related to social anxiety can also be evoked in social phobics who fear that others see that they are trembling, sweating, or blushing. In this case, the primary fear is not the sensation itself—as is the case in panic disorder—but the fear of negative evaluation of the physiological responses by others.

The selection of the exposure stimuli depends on the primary focus of concern of the specific patient with his or her specific complaints. It is of central importance to select those stimuli that are most relevant for the individual patient, that is, those situations or objects that are avoided and elicit anxiety or distress.

The rate at which the exposure can be conducted varies from massed schedules (e.g., treatment sessions within 1 day or 1 week) to spaced schedules (e.g., treatment sessions once a week for several months). A promising new schedule is the expanding-spaced exposure (ESE) sessions, in which the intertrial intervals double between sessions. Exposure according to an expanding-spaced schedule is conducted at day 1, day 2, day 4, day 8, day 16, day 32, and so on.

Another central parameter is the optimal duration of exposure to the phobic stimulus during an exposure session. The usual recommendation for clinical practice is to continue exposure until a marked reduction of fear is established. Mostly, exposure duration of one-and-an-half hours to two hours for one hierarchy item is recommended. Sometimes it is difficult or impossible to realize exposure *in vivo* for such a prolonged period of time (e.g., social encounters usually have a shorter time span). In those cases, repeated exposures (i.e., re-exposures) have shown to be effective.

Escape during exposure therapy is assumed to reduce anxiety and to strengthen avoidance, because the reduction of anxiety reinforces the avoidance behavior. Therefore, patients are instructed to remain in a fearful situation until the fear has been reduced. It seems, however, that escape behavior is not necessarily followed by increases of fear and avoidance. The amount of control patients experience during the exposure probably plays an important role in the reduction of fear and avoidance.

Exposure can be performed in a gradual manner (starting at the bottom of the hierarchy), or very steep in the form of flooding (starting at the top of the hierarchy). It should be noted, however, that flooding could lead to noncompliance and dropping out. On the other hand, if progress is slow during gradual exposure patients may become disheartened. Despite the relative effectiveness of flooding *in vivo* techniques, exposure tasks are mostly performed using a hierarchy of progressively more anxiety-provoking situations (i.e., graded exposure).

Distraction is expected to interfere with fear reduction. It would impede long-term fear reduction, although it may have a positive effect on short-term reductions of fear because it limits the salience of the feared stimulus. The usual recommendation for clinical practice is to avoid distraction during exposure, if possible. This kind of distraction is also referred to as subtle avoidance behavior, and can include behaviors such as counting, deliberately thinking of something else, or talking to other people in order to distract oneself.

Exposure can be conducted with the aid of a therapist, with the aid of the partner of the patient (spouse-aided therapy), or in a self-directed manner. The therapist is most active in guided mastery treatment. Guided mastery treatment encompasses a range of mastery techniques (e.g., therapist-assisted performance, modeling, graduated tasks, proximal goals, physical support, and mechanical aids).

During self-exposure instructions can be given via a self-help manual, via a computer program (or internet), or via videotapes, or self-exposure can be telephone guided. Finally, an exposure program can also be conducted in a group of patients.

II. THEORETICAL BASES OF EXPOSURE *IN VIVO*

Exposure is not a theory, but merely a description of a common behavioral procedure used in many treatments. Several theories of fear and anxiety reduction explaining therapeutic change in exposure *in vivo* therapy have been formulated and empirically tested. The most important theories will be reviewed.

A. Habituation and Extinction Models

Processes often cited as explanation for the effects of exposure are habituation and extinction.

Habituation refers to a decline in fear responses, particularly the physiological responses, over repeated exposures to fear-provoking stimuli. Habituation is regarded as an unlearned temporary reaction. Habituation is supposed not to be affected by cognitions. The

classical habituation theory predicts that habituation would not occur if (baseline) arousal were high. Then, arousal would further increase and lead to sensitization (i.e., increase in fear responding after repeated exposures to fear-provoking stimuli). However, the literature revealed that, for instance, during exposure to high fear-provoking stimuli (e.g., flooding therapy), a reduction instead of a further increase in psychophysiological and subjective anxiety could be expected. Recent habituation theories have been extended to accommodate these findings. These dual-process theories describe complex interactions between habituation and sensitization, in which habituation can eventually occur after exposure to high fear-provoking stimuli.

Several studies have provided supportive evidence for a role of habituation in exposure therapy. First, in several studies self-reported fear and physiological arousal show a declining trend across exposures consistent with habituation. Second, findings in specific phobics have revealed that physiological habituation is related to improvement, whereas nonhabituation is not. Third, variables independent of habituation (e.g., level of arousal, rate of stimulation, and regularity of presentation) seem to affect habituation and fear reduction in a similar manner.

A major difficulty in the habituation theories is the presumed short-term effect of habituation. The habituation theory would predict a return of fear after a certain time interval without stimulus exposure. Studies, however, show that a considerable proportion of patients report to be free of anxiety during long-lasting periods of time. To account for the long-term effects of exposure, several theorists have made a distinction between short-term and long-term habituation. For example, it was suggested that long-term habituation depends on higher cognitive processes, whereas short-term habituation represents mostly autonomic damping. There are more limitations to the habituation theory. For example, the habituation model cannot adequately explain the persistence of some fearful responding despite repeated exposures.

Extinction refers to decrements in responding through repetition of unreinforced responding. Thus, extinction-based theories suggest that anxiety reduction results from repeated encounters with anxiety-provoking situations without aversive consequences. Unlike habituation, extinction is supposed to be affected by cognitions. In other words, it is assumed to be an active instead of a passive process. The extinction theory presupposes that phobic behavior has been learned and therefore can be unlearned. Several cognitive explanations have been put forward to explain what is learned during extinction of phobic behavior. For example, it is postulated that what is learned is disconfirmation of outcome expectations, or enhanced self-efficacy, or the fact that the arousal associated with exposure is not dangerous. These cognitive-oriented theories will be discussed in more detail in the following paragraphs.

Still another explanation is that the context determines which meaning a situation becomes. It has been suggested that the joint presence of the stimulus (e.g., palpitations) and the context (e.g., far from home) determine the meaning (e.g., heart attack). The latter theory is in line with evidence that return of fear may be minimized with prolonged exposure sessions to a variety of contexts.

Evidence that is in conflict with the extinction theory in explaining fear and anxiety reduction during exposure comes from "escape" studies. According to the extinction theory, patients have to remain in the fear-provoking situation until anxiety decreases substantially in order to learn that nothing bad happens. Several studies have demonstrated, however, that anxiety reduction can occur, even though patients were allowed to escape from the feared situation before reaching maximum anxiety. In these studies, it is unclear what is learned. The patients did not seem to have the time and chance to learn about the possible feared consequences associated with the feared situation.

B. Cognitive Change Models

In 1993 Jack Rachman explained the success of exposure *in vivo* by the acquisition of fresh, disconfirmatory evidence (e.g. "no heart attack," "did not lose control"), which weaknes the catastrophic cognitions. From this perspective, exposure is viewed as a critical intervention through which catastrophic cognitions may be tested. This is in line with the cognitive-behavioral therapy (CBT) based on the perceived danger theory according to Aaron Beck and colleagues. Within this model exposure (i.e., behavioral experiments) is generally regarded as a necessity for testing the validity of dysfunctional thoughts next to other strategies such as socratic questioning of probabilities.

So far, it remains to be shown whether exposure changes cognitions and thereby lessens anxiety, or whether cognitions are less likely to arise when anxiety diminishes. The traditional outcome (pre- versus post-test) studies do not reveal whether cognitive change occurs as a function of exposure therapy. To answer these questions, process-oriented studies are required. Process

studies require repeated measurements of relevant variables during the treatment process.

Several process studies have been performed into the cognitive processes of exposure *in vivo*. In these process studies, thoughts are generally collected by means of *in vivo* assessment (e.g., thoughts are reported into a tape recorder) during exposure, or using thought-listings (i.e., free report of all thoughts on paper) directly following exposure. In general, inconsistent findings are reported in these process studies designed to measure the relationship between cognitive change and improvement during *in vivo* exposure in phobic patients. However, the production techniques used to measure cognitive change show some flaws, for example, the inability to recall all thoughts (thought-listings), and social discomfort with publicly talking to themselves (*in vivo* assessment). Furthermore, the *in vivo* assessment may distract the patients from being engaged in the exposure situation with possible consequences for treatment outcome. Finally, the thought-listing procedure is, generally, utilized following the exposure sessions, and therefore cannot reveal the process during treatment.

More consistent results were found in a process study using a short self-report questionnaire to measure the frequency of thoughts during exposure *in vivo*. Results showed that cognitive change (decrease in frequency of negative self-statements) was achieved by exposure *in vivo* therapy. However, cognitive change per se was not related to a positive treatment outcome. The results suggested that the magnitude of the frequency ratings of negative self-statements at the start, during, and at the end of exposure therapy was the most critical factor. The most improved patients reported overall less negative thoughts.

C. The Self-Efficacy Theory

According to the self-efficacy theory of Albert Bandura, published in 1977, therapeutic change can be brought about by experiences of mastery arising from successful performance. Bandura has proposed that phobic behavior is influenced more by self-efficacy judgments than by outcome expectations. He argues that a person's self-efficacy can be improved by those psychological procedures, which enhance the level and the strength of the self-efficacy. Implicity, he states that an exposure procedure is not a necessary condition to obtain therapeutic change. Self-efficacy can be improved by various treatment procedures. Field mastery experiences are, however, considered a critical ingredient of treatment of phobic disorders. Thus, in the self-efficacy theory, the psychological mechanism of change is a cognitive one, whereas the most effective psychological procedure is a behavioral one (performance-based). According to Bandura, perceived self-efficacy through performance successes depend on various personal and situational factors, for example, difficulty of the task, amount of effort subjects expend, and the temporal pattern of their successes and failures. The model posits a central role to information processing. It states that subjects process, weight, and integrate information about their capabilities, and they regulate their behavior and effort accordingly. Strong relationships have been found between perceptions of self-efficacy and changes in phobic behavior by different treatments (including exposure therapy) for various phobias. On the other hand, there is also some evidence that seems in conflict with the self-efficacy theory. Some studies found that although self-efficacy predicted self-reported change, it did not have a significant relationship with behavioral or physiological change.

More recently, Bandura extended the self-efficacy theory by stating that phobic anxiety derives from both low self-efficacy for performing overtly, and from low self-efficacy for exercising control over scary thoughts. Overall, self-efficacy seems a powerful measure in predicting dysfunctional behavior. The self-efficacy mechanism has recieved considerable support from research in describing the relationship between what subjects think they can manage and what they can manage both before and after treatments for phobic complaints.

D. The Match–Mismatch Model

Rachman and colleagues have suggested that anxiety expectancies might play a mediating role in exposure therapy. They found that phobics typically overpredict the amount of fear they expect to experience in a threatening situation.

A number of researchers investigated the overprediction of fear in a series of laboratory studies, in which they asked the subjects to rate their predicted fear before they were exposed to a threatening situation, and to indicate their reported fear just after the exposure trial. Subjects overpredicted their fear when the predicted fear was higher than the reported fear. On the other hand, subjects underpredicted their fear when the predicted fear was lower than the reported fear. A match was defined as no discrepancy or a very small discrepancy between predicted and reported fear. Subjects participated in several trials to observe whether their predictions changed over time. Accord-

ing to Rachman, fearful subjects tend to overpredict their fear during exposure to a fearful situation. Further, the match–mismatch model states that inaccurate fear predictions are followed by adjustments of these predictions. For example, when a subject underpredicts a fearful event, it is likely that he or she adapts his or her prediction in the form of an increase of predicted fear for future events. On the other hand, when overpredictions are followed by disconfirmations, future predictions will be lowered. The model also states that other variables, like anticipatory fear and avoidance behavior, are influenced by inaccurate predictions. Increases in these variables are expected after underpredictions, and decreases are expected after overpredictions of fear. Furthermore, it is assumed that underpredictions have stronger and more long-lasting effects on fear expectations, avoidance, and anticipatory anxiety than overpredictions, which are assumed to have moderate effects on reductions of these variables. For example, one underprediction of fear can lead to a substantial rise in fear expectations. Overpredictions, on the other hand, need several disconfirmations to become more accurate, but have a less dramatic influence on the decrease of expectations. In addition, it is assumed that predictions of fear become more accurate with practice. Lastly, during exposure, it is assumed that the fear reduction process is not influenced by inaccurate predictions; reports of fear tend to decrease, regardless of the accuracy of earlier predictions. Thus, the model assumes that a second process is responsible for the process of habituation/extinction.

Reviewing the empirical evidence for the match–mismatch model it can be concluded that the studies report strong relations between inaccurate predictions and future predictions in subclinical and clinical patients. So far, it is unclear whether mismatches of fear influence the habituation or extinction process. In sum, overpredictions of fear lead to avoidance behavior and anticipatory anxiety because subjects expect to be more fearful during exposure than should actually be the case. Subjects, thereby, reduce the chance of disconfirmation of the predictions. The effects of exposure are assumed to be due to repeated disconfirmations, because predictions become more accurate with repeated exposures. During exposure, it is expected that underpredictions have far more influence than overpredictions. The underlying mechanisms of overpredictions are as yet not clear.

Most support for the match–mismatch model derives from studies performed in a laboratory setting with relatively mild phobic subjects. A recent study investigated whether the results of the laboratory studies could be replicated in a clinically relevant situation, namely exposure *in vivo* therapy, with a clinical group of agoraphobic patients. Many of the findings of the laboratory studies were replicated. However, although patients tended to overpredict their fear, they did not show a tendency to become more accurate in the course of exposure therapy.

E. Emotional Processing

Emotional processing is defined as the modification of memory structures that underlie emotions. This model of anxiety reduction is partly based on Peter Lang's model of bioinformational processing and Jack Rachman's work on the concept of emotional processing.

According to Lang emotion is represented in memory structures as action tendencies that contain (1) information about the feared stimulus situation; (2) information about verbal, physiological, and overt behavioral responses; and (3) interpretative information about the meaning of the stimulus and response elements of the structure. Treatment should aim at activating all aspects of the prototype fear image stored in memory, so that the information can be processed and a new prototype can be formed that contains less fearful or nonfearful response to the stimulus information. Because emotion is considered an action set, it is assumed that it generates physiological output.

Rachman suggested indices of satisfactory and unsatisfactory emotional processing, and concrete factors that are expected to impede and promote emotional processing. In his view, satisfactory emotional processing leads to evidence that subjective distress and disturbed behavior decline, and to evidence of a return of normal (routine) behavior.

Foa and Kozak offered a framework about the mechanisms of therapeutic change and specified indicators of emotional processing. They suggested that the fear structure is a program to escape from danger. The fear structure is distinguished from a normal information structure by excessive response elements (e.g., avoidance and physiological arousal), and by the meaning of the stimuli and responses. The fear structures can be modified during exposure therapy when two conditions are satisfied: (1) the fear structure must be activated; and (2) new information must be incorporated. Exposure to information consistent with the fear structure would be expected to strengthen fear, whereas information incompatible with the fear structure would reduce fear.

It is assumed that measurable physiological activity and self-reports reflect the fear structure during fear

evocation. Especially, physiological activity is considered as an index that information is processed: Fear activation cannot occur without preparatory changes in physiological activity. That is, within a fear structure defined as a program to escape or avoid, fear will produce physiological activity regardless of whether one actually avoids the fearful object or not. The following responses occurring in patients who improve with exposure-based treatments are seen as indicators of emotional processing: (1) activation of psychophysiological responses and subjective fear responses during exposure, (2) decrease of these responses within exposure sessions (within-sessions habituation), and (3) decrease in initial reactions to feared stimuli across sessions (across-sessions habituation). Activation of the fear structure can be complicated by, for example, cognitive avoidance or other distractions, as was also mentioned by Rachman. Incomplete emotional processing can occur when the duration of exposure is not long enough for habituation to occur. Finally, initial high arousal would interfere with anxiety reduction (habituation).

This model is generally supported by research findings. It should be noted, however, that the model also faces several difficulties. For example, the emotional processing theory cannot explain controlled escape exposure.

III. EMPIRICAL STUDIES

Empirical outcome studies have proved that exposure *in vivo* is an effective treatment in reducing phobic complaints in specific phobias, in social phobias, in agoraphobia with or without panic disorder, and in hypochondriasis. Studies have shown that exposure to anxiety-provoking situations also has a positive effect on frequency and intensity of panic attacks in agoraphobics. Obsessive–compulsive disorder patients benefit from exposure *in vivo* treatment with the addition of response prevention (i.e., the prevention of behaviors that reduce fear).

A. Parameters of Exposure *in Vivo*

Wolpe explained the relative effectiveness of systematic desensitization by the fact that it would be impossible to feel anxious and relaxed at the same time; he called this reciprocal inhibition. Research, however, has demonstrated that the addition of relaxation to the exposure element is not essential for improvement. In the eighties, Lars Göran Öst introduced "applied relaxation". The purpose of applied relaxation is to teach the patients to monitor and recognize the early signs of tension and to apply a relaxation technique when confronted *in vivo* with phobic situations. It has not been proven that the addition of applied relaxation enhances the effects of mere exposure *in vivo*.

Massed exposure sessions are expected to be related to higher dropout rates, more return of fear, and more stressfulness in comparsion to spaced sessions. However, research into the optimal format of exposure does not provide firm evidence to justify this expectation. For example, in agoraphobics massed exposure was generally more or as effective as spaced exposure in reducing avoidance behavior and self-reported anxiety. Furthermore, the dropout rate, relapse rate, and stressfulness were comparable for patients who received spaced or massed sessions. In addition, for specific phobics and for obsessive–compulsive patients, no differential effect was found between spaced and massed exposure in relapse rate or dropout rate. As to the ESE sessions, in which the intertrial intervals double between sessions, research showed that the ESE sessions led to no clear return of fear, whereas a massed condition (four exposure trials within 1 day) did lead to return of fear 1 month after the end of treatment.

Another central parameter is the optimal duration of exposure to the phobic stimulus during an exposure session. Several studies have consistently indicated that long continuous sessions (prolonged exposure) are more effective than shorter or interrupted sessions. However, some studies on escape behavior during exposure have shed a different light on this issue.

Several studies compared endurance conditions with escape conditions. During the endurance condition, patients stayed in the fearful situations until the anxiety markedly decreased, whereas in the escape condition patients were allowed to leave the exposure situation at high fear levels. In general, results revealed no differences in effectiveness between the treatment conditions on measures of fear and avoidance. It is assumed that the option of escaping during exposure may serve to increase the patients' sense of control, which would in return lead to a reduction of their fears. This form of escape is also referred to as controlled escape. Thus, the amount of control patients experience during the exposure probably plays an important role in the reduction of fear and avoidance.

Another parameter is the amount of arousal patients experience in relation to improvement by exposure. Some studies indicate that patients who were most aroused before treatment (mostly measured by heart

rate) were also most likely to be improved after exposure therapy. Other studies showed that patients with relatively high heart rate demonstrated the most return of fear at follow-up as compared to patients with relatively low heart rate levels. Still other studies found no relationship between heart rate and return of fear or found inconsistent results.

The results with respect to distraction versus attention-focused exposure on fear reduction and improvement are inconclusive. Either no differences are found in the amount of fear reduction between distracted and focused exposure, or the fear levels during distracted exposure remained stable whereas during focused exposure fear ratings increased. With respect to return of fear, results showed that distracted exposure led to return of fear, or the distracted exposure condition experienced more fear reduction at follow-up compared to the focused exposure condition.

The results of the studies on agoraphobia and obsessive–compulsive disorder indicated that the participation of the spouse in the exposure treatment did not enhance the treatment effects. Further, results with respect to the comparative effectiveness of therapist controlled versus self-exposure are inconclusive. However, in six out of eight studies, guided mastery was substantially and significantly more effective than mere exposure. In all these studies the duration of the treatment conditions was equal, and both conditions were therapist-assisted.

B. Long-Term Efficacy of Exposure *in Vivo* Therapy

Despite the effectiveness of exposure therapies on group level, the results show that not all patients benefit equally at posttreatment from exposure therapy or maintain their gains at follow-up. A proportion of phobic patients, about 25 to 30%, either fail to respond, or show only modest improvement after a standard exposure treatment and therefore need more treatment, or do not maintain their gains in the long run. The efficacy figures, however, tend to differ somewhat among the studies on the same disorders and also among the same phobic disorders over studies.

In general, exposure techniques have led to long-term improvement in about 75% of obsessive–compulsives. Also, the long-term efficacy of exposure treatment for agoraphobics has been well established. About 75 to 80% of the patients are rated as "improved" or "much improved" at the end of treatment. Furthermore, posttreatment effects of exposure therapy are maintained during the follow-up period in panic and agoraphobic patients. Results from a recent study investigating the long-term effectiveness of exposure *in vivo* revealed that of the 93 treated panic disorder patients with agoraphobia, 67.4% continued remission up to 7 years.

The efficacy figures of *in vivo* exposure therapy for social phobic patients are less encouraging. For example, one study reported that 47% of the social phobics needed more treatment at the end of exposure treatment.

In sum, although, exposure *in vivo* therapy is effective for most patients, the efficacy is limited; some patients show only moderate clinical improvement or do not maintain their gains. It is not clear why some patient(s) (groups) benefit more from *in vivo* exposure than others.

C. Exposure *in Vivo* Therapy versus Cognitive Therapy

One of the theoretical problems in the comparison of the effectiveness of exposure *in vivo* therapy and cognitive therapy is that cognitive restructuring without any form of exposure is rare in cognitive therapy. The use of exposure exercises called "behavioral experiments" or "hypothesis testing" is seen as clinically important aspects to test the validity of the beliefs.

In specific phobias, cognitive therapy was generally less effective than *in vivo* exposure. Several studies found cognitive therapy and exposure *in vivo* therapy with the addition of response prevention about equally effective in obsessive–compulsives. Similarly, cognitive therapy is as effective as exposure *in vivo* therapy alone for social phobic complaints. In general, studies find that cognitive therapy alone is of limited value for agoraphobia as compared to exposure *in vivo*. More recently developed cognitive approaches focusing on catastrophic cognitions are effective with respect to reduction of panic attacks in patients with panic disorder with no or limited avoidance, but less effective than exposure *in vivo* in severe agoraphobic patients. However, these cognitive restructuring packages contain an "exposure" component (i.e., behavioral experiments). Finally, exposure *in vivo* was as effective as cognitive therapy in hypochondriasis.

Overall, the literature suggests that cognitive therapy does not enhance the effects of exposure *in vivo*. For example, results of several studies showed that exposure with and without cognitive modification was equally effective in social phobia. Similarly, studies with acrophobics revealed that exposure with self-statement training was as effective as exposure alone. Further, a number of studies found cognitive-behavioral packages not more effective than exposure *in vivo* for panic disorder with agoraphobia. In addition, in obsessive–compulsive disorder,

cognitive therapy did not enhance the effects of exposure *in vivo*. Possibly these findings can be explained by the fact that cognitive changes also naturally accompany exposure *in vivo*.

IV. SUMMARY

Exposure *in vivo* therapy is a behavioral procedure in which patients are confronted in real life with those situations or objects that they fear and/or avoid. The purpose of *in vivo* exposure is to reduce subjective anxiety and avoidance behavior. There are many variations in the way exposure is conducted. The efficacy of these varied procedures differs somewhat between the disorders. Research has shown that exposure *in vivo* therapy is an effective strategy for most phobic patients. About 70 to 80% of the phobic and obsessive–compulsive patients who complete treatment benefit from exposure *in vivo* therapy and maintain their gains in the long run. On the basis of the efficacy studies that have been conducted, a task force of experts in the field judged exposure *in vivo* as one of the few well-established psychotherapies.

Several theories on fear and anxiety reduction during exposure *in vivo* therapy have been formulated and empirically tested. Most theories assume that some kind of cognitive change is essential for improvement by exposure. However, it is still unknown what is exactly modified. Are dysfunctional thoughts modified as suggested by several cognitive models? Does the confidence of the ability to perform successfully change as suggested by the self-efficacy theory? Are the fear predictions becoming more accurate as suggested by the match–mismatch model? Or does the fear memory alter as suggested by the emotional processing theory? It is unlikely that one process can explain fear reduction during exposure therapy. Different processes may change different responses in different patients.

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See Also the Following Articles

Avoidance Training ■ Extinction ■ Implosive Therapy

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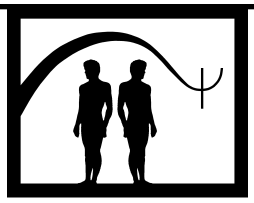

Extinction

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GLOSSARY

extinction burst A temporary increase in the rate or intensity of a behavior on extinction.

extinction-induced aggression Aggressive behaviors that occur following the introduction of extinction to a target behavior. These behaviors have no other identifiable causes.

intermittent schedule of reinforcement An arrangement under which not every occurrence of a behavior is reinforced, although some occurrences are reinforced.

planned ignoring Deliberate withholding of attention, including verbal exchanges and physical interaction, for a brief period following inappropriate behavior.

respondent extinction A procedure in which respondently conditioned behaviors are weakened by breaking the pairing between a conditional stimulus (CS) and an unconditional stimulus (US), either by presenting the CS alone or by presenting the CS and US independently of one another.

resurgence The appearance of behaviors that were previously extinguished when extinction is introduced for a more recently reinforced response.

spontaneous recovery The reappearance of behavior substantially weakened by extinction following a period of time despite no resumption of reinforcement.

The term extinction is used to refer to two different kinds of response-weakening operations, respondent extinction and operant extinction. In one, respondently conditioned behaviors are weakened by breaking the pairing between a conditional stimulus (CS) and an unconditional stimulus (US), either by presenting the CS alone or by presenting the CS and US independently of one another. Although respondent extinction can be a component of the treatment of some behavioral problems (e.g., phobias, sexual fetishes), operant extinction is a more widely used procedure and only it will be covered further here.

I. DESCRIPTION OF TREATMENT

Operant extinction is a procedure in which reinforcement of a previously reinforced behavior is discontinued. Reinforcement occurs when a behavior is strengthened by its consequences. When such consequences no longer occur, the behavior eventually weakens and occurs rarely, if at all. This is operant extinction (hereafter called "extinction"). During extinction, emission or omission of the response in question produces neither a negative nor a positive reinforcer.

Therapeutic applications of extinction involve four steps:

1. The behavior to be reduced must be defined and a system for accurately quantifying the behavior must be

selected. This step is a prerequisite to treating any behavioral problem.

2. The events that follow and maintain the behavior, that is, its reinforcing consequences, must be determined. Isolating the consequences that reinforce a behavior, and the situations under which those consequences are evident, is termed functional assessment. Functional assessment is often, although not necessarily, accomplished through direct observation and interviews with care providers. It must be done prior to the use of extinction.

3. Conditions must be arranged so that the consequences that previously served as reinforcers no longer follow the inappropriate behavior. Moreover, the behavior must not be followed by new reinforcing consequences. The exact procedures required to arrange extinction depend on the nature of the reinforcing consequences and the situations in which they occur.

4. As with any treatment, the effects of extinction must be evaluated carefully. If necessary, the procedure should be modified to produce the desired effects. Although extinction is simple in principle, in practice it often is difficult to arrange and initial attempts frequently are unsuccessful. Moreover, extinction sometimes produces undesired and unacceptable changes in behavior that may require termination of the procedure.

The most common application of extinction is to behaviors that are maintained by positively reinforcing consequences that are delivered by other people, such as social attention. By definition, positively reinforcing consequences (or positive reinforcers) are stimuli that strengthen a behavior by being added to an individual's environment. That is, they are not present in the absence of a particular behavior, but are produced (or increased in intensity) by its occurrence. For example, the self-injurious behavior of some people with developmental disabilities is maintained, although unintentionally, by the attention of caregivers. That is, when the person hurts himself or herself, attention is immediately forthcoming, and this is why the behavior occurs. If it is possible for a therapist, or some other invested party, to determine that this is the mechanism responsible for the self-injury, and to convince caregivers to stop attending to the self-injury, then extinction would be arranged and the behavior should eventually disappear. Because responding may persist for a substantial period when extinction is arranged, and may even increase in intensity, the procedure would be used in such a case only if the self-injurious behaviors did not pose significant risk to the client.

Planned ignoring is a procedure related to extinction that is often used as an intervention for reducing inappropriate behavior in children. Planned ignoring involves the deliberate withholding of attention, including verbal exchanges and physical contact, for a brief period (typically no more than 1 or 2 minutes) following inappropriate behavior. This procedure involves extinction if the inappropriate behavior historically was maintained by events that are withheld during the period of planned ignoring and the behavior actually occurs during this period.

Arranging conditions such that the event that previously served as the positive reinforcer is presented independently of the previously reinforced behavior is another procedure for arranging extinction. If, for example, a baby's screaming is positively reinforced by parental attention—the parents attend to the baby only when it screams—extinction could be arranged by having the parents attend to the baby regardless of whether or not it was screaming. Although this procedure might be effective in reducing screaming, it probably would be less effective than simply ignoring the behavior.

Presenting the reinforcer independently of responding is rarely used clinically to reduce responding maintained by positive reinforcement. An exception is a procedure commonly (but inaccurately) termed noncontingent reinforcement (NCR), which has recently generated researchers' interest as a treatment for high-rate problem behaviors maintained by positive reinforcement (e.g., attention) in people with developmental disabilities. NCR usually involves presenting the stimulus that historically maintained a troublesome behavior under a fixed-time (FT) schedule. Under an FT schedule, something is done to an individual every time a specified time passes, regardless of the individual's behavior during that period. When NCR is arranged, the interval initially is very short (e.g., 5 seconds) and is gradually increased over time, typically to a terminal value of around 5 minutes. For example, if functional assessment reveals that a client's self-injurious behavior is maintained by caregivers' attention, NCR might involve having caregivers attend to the client almost continuously, regardless of whether or not self-injury occurred. Over time, the frequency of attending to the client would be gradually reduced, perhaps to a brief interval of attention every 5 minutes. Such procedures have been demonstrated to be effective in reducing troublesome behaviors in controlled settings for relatively short periods, but their value in the long-term management of inappropriate responding in everyday settings is unknown. When NCR is effective, extinction and satiation (a reduction in the reinforcing effectiveness of a stimulus because of repeated exposure to that stimulus) appear to be its mechanisms of action.

In some cases, troublesome behaviors are maintained by automatic and positively reinforcing sensory consequences. It may appear that extinction cannot be arranged when this occurs, but that is not necessarily so. A procedure called sensory extinction, in which sensory consequences are altered or removed, may be effective in reducing inappropriate behaviors maintained by automatic reinforcement. For example, in the first published study in which this procedure was used, Arnold Rincover successfully reduced plate spinning in a client with developmental disabilities. Rincover proposed that the behavior, which occupied a great deal of the client's time and was disruptive, was maintained by the auditory stimulation produced by the moving plate contacting the top of the client's desk. Covering the top of the desk with carpeting eliminated the noise produced by spinning the plate and, over time, virtually eliminated the behavior.

Extinction can be arranged for behaviors maintained by negative, as well as positive, reinforcement. Behaviors maintained by negative reinforcement are strengthened because they eliminate a stimulus (or reduce its intensity), in which case they are escape responses, or because they prevent the occurrence of an otherwise forthcoming stimulus, in which case they are avoidance responses. A child who has tantrums soon after being placed in a bathtub because, historically, doing so ended baths is engaging in escape responding. A child who pleads to a sympathetic grandparent at bedtime "I'm too tired for a bath, Gram, can I just sleep now?" because, historically, doing so prevented the parents from bathing the child, is engaging in avoidance responding.

Effective extinction for escape responding can be arranged by maintaining the stimulus once escaped regardless of whether the behavior that once controlled that stimulus occurs or not. The child in our example will eventually stop having tantrums in the tub if such behavior is ineffective in terminating baths.

Extinction often is not a useful strategy for reducing avoidance responding. In this case, extinction can be construed as failing to present the stimulus that once was avoided, regardless of whether or not the avoidance response occurs. In our example, the parents might decide simply to forgo bathing their child when the grandparent was present, regardless of the child's behavior. Under such conditions, the historical avoidance response, although no longer effective in controlling baths, might persist indefinitely. In large part, this is because it would be difficult for the child to ascertain that conditions have changed. Successful avoidance responses prevent something from happening—the child did not have to take a bath after pleading with Gram—and that same something does not happen when extinction is arranged in this way—the child still does not have to take a bath, although this is not because of pleading.

Arranging extinction in a different way, that is, by presenting the once-avoided object or event regardless of whether or not the historical avoidance response occurs, makes extinction easy to discern and is likely to weaken the response rather quickly. In our example, forcing the child to take a bath regardless of whether or not pleading occurred probably would eliminate the behavior fairly quickly.

In general, extinction is likely to be effective in reducing troublesome behavior if five conditions are met:

1. Reinforcers that historically strengthened the behavior are accurately identified.
2. Reinforcement of the troublesome behavior never occurs.
3. Extinction is arranged for a sufficient period to reduce the behavior to acceptable levels, probably indefinitely.
4. Conditions of extinction are explained clearly and accurately to verbal individuals who are exposed to those conditions.
5. Arrangements are made so that the reinforcers that once maintained inappropriate behavior are available dependent on appropriate behavior, unless the reinforcers themselves pose problems.

II. THEORETICAL BASES

Like punishment and reinforcement, extinction is a term that describes a particular relation among behavior and other environmental events. There is no "theory" of extinction as the term is commonly used. As discussed in the article "Operant Conditioning," it may eventually be possible to disclose the physiological changes responsible for the behavioral effects of extinction. For the most part, however, behavior analysts have been content to describe relations among behavior and other environmental events and to ascertain the variables that modulate those relations.

From the beginning of his career early in the 20th century to his death in 1992, the eminent psychologist B. F. Skinner claimed that the effects of consequences on behavior are not permanent. If the reinforcers that initially established and maintained an operant response no longer follow such behavior, then the behavior eventually weakens and rarely occurs. Skinner used the term

"extinction" to refer to the discontinuation of reinforcement for a previously reinforced response, and the term has persisted. Many laboratory studies of nonhumans, and a smaller number of basic (i.e., not clinical) studies with humans have investigated the effects of extinction and documented the general effectiveness of the procedure in reducing operant responding. Those studies also have isolated the variables that influence responding during extinction.

Early clinical applications of extinction involved procedures that were close parallels of those used in basic laboratory studies and, like those laboratory procedures, were effective in reducing behavior. Over the years, extinction has been arranged in various ways in clinical settings, but all of these variations share a common feature: Reinforcement is no longer available for a response that historically was reinforced. It is consistent with the principles of operant conditioning that responding will decline when this occurs, and theoreticians expect this to happen. Moreover, as explained in the following section, it characteristically does.

III. APPLICATIONS AND EXCLUSIONS

Operant behavior in any human being is sensitive to extinction; therefore, the procedure may be appropriate for reducing a given behavior in clients regardless of their diagnosis or presenting problems. Extinction is appropriate for reducing specific target behaviors—it is not sufficient for dealing with the confluence of signs and symptoms that commonly occur in people with psychiatric labels. For instance, extinction might be useful in reducing a particular operant behavior in a person diagnosed as schizophrenic, but it would not be appropriate for dealing with the full spectrum of problems characteristic of the disorder (e.g., hallucinations, flat affect, thought disorders). Therefore, extinction often is part of a treatment package, not a stand-alone treatment, for people with psychiatric disorders.

In the literature, extinction has been used most often with children or persons with developmental disabilities. This is not because the procedure is effective only in such individuals. Instead, behaviors that are good candidates for treatment with extinction probably appear especially often in these populations, and it is often relatively easy to control their environments so that troublesome behaviors are extinguished.

There is nothing intrinsic to extinction that makes it unacceptable to particular ethnic or racial groups, although cultural practices and personal preferences should be considered in considering a specific extinction procedure. For example, some parents will object to ever withholding attention from their child, even if the goal is to reduce an inappropriate behavior. Obviously, such parents would not be good candidates for using extinction. There also are factors that limit the use of extinction in general; these factors are discussed in the next section.

IV. EMPIRICAL STUDIES

In principle, extinction can be applied to any operant behavior over which control of its consequences can be arranged. Published studies have documented the use of extinction to control a wide variety of undesired behavior, including crying, whining, tantrums, food refusal, stealing, night waking, self-injurious behavior, self-stimulatory behavior, and disruptive classroom behavior. The effects of extinction are long-lasting and use of the procedure typically is not constrained by the legal and ethical considerations raised by punishment. These are points in its favor.

Even though extinction can be used to reduce a variety of behaviors in a wide range of individuals, extinction has characteristics that limit its utility. One limitation is that it may not be possible to arrange conditions so that the consequences that historically reinforced an inappropriate behavior are no longer available. For example, a middle-school student's swearing may be maintained by the laughter of peers. Trying to arrange the world so that the peers stopped laughing following jokes would be, at best, difficult. More likely, it would be impossible. Similarly, nicotine is a powerful positive reinforcer that plays a major role in the maintenance of cigarette smoking. There is presently no way to eliminate nicotine as a consequence of smoking, although some pharmacological technique for producing such an effect may eventually be developed. Drugs such as naltrexone block the physiological, subjective, and positively reinforcing effects of heroin, and have potential for the treatment of heroin abusers. Their primary mechanism of action is extinction. Scientists eventually may develop drugs that block the reinforcing effects of nicotine. The problem with such drugs, of course, is that cigarette smokers may refuse to take them. Escape from or avoidance of extinction is not unusual.

The most common reason that attempts to reduce behavior with extinction fails is inconsistent application of the procedure. That is, reinforcement typically is not available, but occasionally it does occur. The result is that

the troublesome behavior is maintained under an intermittent schedule. For instance, parents taking away a toddler's bottle may ignore requests for the bottle on many occasions, then give in to a midnight crying fit and provide a bottle "just this one time so we can sleep." The result is that asking for the bottle has been reinforced under an intermittent schedule and, therefore, has become more resistant to extinction. The rate and pattern of responding in extinction is strongly influenced by how reinforcement was arranged prior to extinction. As a rule, the more intermittently reinforcement occurred prior to extinction, the longer behavior persists when extinction is arranged. Inconsistent use of extinction is apt to constitute an intermittent schedule that reduces the effectiveness of subsequent, consistently arranged, extinction. Effective clinicians recommend the use of extinction only when they are relatively sure that the procedure can be implemented consistently over long periods.

Keeping extinction in effect over long periods sometimes is rendered difficult by a behavioral phenomenon known as extinction-induced bursting. Extinction-induced bursting refers to a transient increase in the rate of responding that often occurs soon after extinction is implemented. For instance, a child whose requests for a bottle are unsuccessful is apt to increase the rate of asking over the short run. This may be intolerable for the parents, who eventually "give in." The intensity as well as the rate of behavior may increase briefly during extinction, which can also cause problems. So, too, can the increase in variability of responding that characteristically occurs during responding. For instance, an increase in the intensity of self-injurious behavior, or a change in its form, might pose an unacceptable risk of serious harm to the client. Although such effects rarely limit the use of extinction, they can occur and therapists must be alert for them. Therapists must also understand that extinction also often induces negative emotional responding and may induce aggressive responding. Such behaviors may be unacceptable in some circumstances.

Resurgence, which refers to the reappearance of behaviors that have been previously extinguished when extinction is arranged for a current behavior, potentially could cause problems in therapeutic settings. For example, a preschool student may have historically gained attention from teachers by crying, which was successfully treated by extinction. At a later date, "whining" produced the same reinforcer, and was treated successfully in the same way. Most recently, the child has begun to secure attention by making "animal sounds." Extinction has been introduced for this latest problem behavior, which has begun to decrease in frequency. As it does so, however, it is possible that whining, and subsequently crying, will occur more often than before extinction was arranged for making animal sounds. If so, resurgence has occurred.

Although resurgence conceivably could create problems in therapeutic settings, this is unlikely to occur. Perhaps the primary significance of resurgence is that its existence emphasizes that responses weakened by extinction are not absent from an individual's repertoire, even though those responses have not been observed for a substantial period. A change in stimulus conditions, a substantial increase in motivation for the reinforcer in question, or verbal mediation may lead to the reappearance of an extinguished response. In fact, the passage of a substantial period of time during which the response that is undergoing extinction is not emitted may be sufficient for the response to recur. This phenomenon sometimes is called spontaneous recovery. If a response that has been exposed to extinction is reinforced, the troublesome behavior can rapidly be reestablished. In essence, extinction controls troublesome behavior only so long as the procedure is consistently in effect.

Verbal mediation is another variable that may also limit an individual's sensitivity to ongoing extinction. Human behavior can be controlled by rules, which are descriptions of relations among responses and stimuli (objects and events). If a rule describes a relation between a particular kind of behavior and its consequences that is contrary to the relation that actually obtains in a person's world, then following that rule will limit the sensitivity of the person's behavior to actual environmental events. As an example, consider a college student participating in an experiment who is told before the experiment begins to "press the e key fast to earn points exchangeable for money." This individual is likely to do so, even if pressing the key slowly produces far more points and, in the absence of the verbal instruction, the student would readily learn to press slowly. The verbal rule probably would also reduce the student's sensitivity to extinction. That is, if conditions were first arranged so that pressing the "e" fast produced points (reinforcement), then they were changed so that no points were available (extinction), substantially more responding would occur during extinction if the person were given the rule at the start of the experiment than if this were not done.

Like people in contrived experimental settings, people exposed to therapeutic applications of extinction can generate, or be given, rules that reduce their sensi-

tivity to the procedure. Therapists need to be aware of this possibility and to take steps to ensure that the extinction procedure is adequately explained, which would tend to foster rules and rule-governed behavior consistent with therapeutic objectives. Therapists also need to be aware that inappropriate rules can interfere with the effectiveness of extinction, and take steps to prevent this from occurring.

V. CASE ILLUSTRATION

Extinction is an easy procedure to understand, although it is often a difficult procedure to implement consistently. As a case in point, consider the parents of a preschooler who sought help in dealing with their child's persistent demands for attention at bedtime. During consultation with a psychologist, it became apparent that each night after his father or mother took the boy to bed at 9, he made repeated requests that, if granted, increased the time spent with his parents.

For example, he might ask to go to the bathroom, to have a drink of water, or to have another story read. Many such requests occurred in sequence, and it was not unusual for the parents to spend over 2 hours in attempting to get the child asleep. Typically he fell asleep while listening to the last in a long sequence of stories. Occasionally, when his parents were very tired, they allowed the boy to sleep in their bed. On these occasions, few demands were made and everyone got a longer night's sleep. This arrangement did not suit the parents, however. Neither did the lengthy bedtime routine, which left them frustrated and exhausted.

The psychologist asked the couple to record how long it took them to get the child into bed and asleep each night for a week, then suggested a simple intervention using extinction combined with some environmental arrangements. Specifically, a modified bedtime routine was recommended, in which the parents were instructed to approach the child each night at 8:30 and say, "It's getting time for bed; go to the potty and have a drink, then we'll go to your bed and read two stories. After that, we'll all go to sleep." The psychologist recommended that the parents guide the child through these activities, using verbal or physical redirection as necessary, to minimize dawdling (i.e., avoidance of the undesired activity of going to bed). After story reading was over, the parents were to tell the child goodnight, to remind him to remain in his bed, and then to kiss him and leave the room and not return. The psychologist cautioned the parents to expect temper tantrums (e.g., yelling out or throwing toys) and other misbehaviors. In the event the child left his room, the parents were to return him to his bed with little discussion. The parents were instructed to ignore crying and demands by the child for attention, and were warned that such behaviors could occur for relatively long time periods (e.g., 2 hours). The psychologist also warned the parents that the boy might engage in some aggressive behaviors during the procedure. Again, they were instructed to minimize interactions with the boy when dealing with such behaviors, and to return him to bed with as little interaction as possible.

The parents, somewhat discouraged, returned to the psychologist after 1 week. Each night the child had cried himself to sleep, and on the third night the boy began throwing toys around his room. On the fourth evening, he had torn the ear of his favorite cuddly bunny and had cried and screamed for 3 hours before sleeping. On a positive note, on the evening before returning to the therapist's office, the boy had cried for only 30 minutes before sleeping. And, according to the parents, the crying was less intense. The psychologist praised the parents for their diligence and consistency, and encouraged them to try the intervention for another week.

When the parents visited the psychologist the following week, the boy was following the bedtime routine without protest. The parents reported satisfaction with the outcome of the intervention, but indicated that implementation of the procedure was emotionally and physically draining and that they often were tempted to abandon it and give in to the child's demands. Had they done so on even a single occasion, their subsequent task would have become considerably harder. For extinction to work, it must be implemented with utter consistency.

VI. SUMMARY

Operant extinction is a procedure in which reinforcement of a previously reinforced behavior is discontinued. Published studies have demonstrated that the procedure, which is conceptually sound and logically simple, is effective in reducing a wide range of troublesome operant behaviors in a variety of clients. Although extinction is a useful and generally accepted response-

reduction procedure, it can be difficult to arrange consistently. Moreover, troublesome behavior may persist for a substantial time, and even briefly increase in rate and intensity, under extinction. These and other considerations occasionally preclude the use of extinction to deal with particular behavioral problems.

See Also the Following Articles

Avoidance Training ■ Fading ■ Negative Punishment ■ Negative Reinforcement ■ Operant Conditioning ■ Positive Punishment ■ Positive Reinforcement

Further Reading

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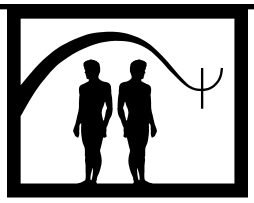

Eye Movement Desensitization and Reprocessing

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GLOSSARY

adaptive resolution A state that occurs as a result of complete information processing; learning takes place, information is stored with appropriate affect and is available to guide future action.

desensitization Elimination or reduction of anxiety elicited by specific environmental or internal stimuli.

dysfunctionally stored information A situation that occurs as a result of incomplete processing; information is stored in a memory network with a highly negative emotional charge and isolated from more adaptive information.

information processing The process by which new perceptual information is sorted, connected with associated memory networks, encoded, and stored in memory.

information processing system A physiologically based system that is geared to process information to a state of adaptive resolution.

memory networks Neurobiological associations of related memories, thoughts, images, emotions, and sensations.

post-traumatic stress disorder An anxiety disorder that can occur following exposure to a traumatic event. Symptom criteria include intrusive memories, avoidance of reminders, emotional numbing, physiological hyperarousal, and functional impairment.

reprocessing The process of forging new associative links between dysfunctionally stored information and adaptive information, resulting in complete information processing and adaptive resolution.

stabilization State of equilibrium maintained by the client prior to reprocessing of distressing events; includes safety, affect regulation, and impulse control.

state-dependent learning Information that is learned in a specific physiological state and is most accurately recalled when the individual is in the same or similar physiological state and is most accurately recalled when the individual is in the same or similar physiological state.

Eye Movement Desensitization and Reprocessing (EMDR) is an eight-phase treatment approach that facilitates resolution of distressing historical events, desensitization of present triggering stimuli, and acquisition of desired behaviors. While originally designed to alleviate the distress associated with traumatic memories, EMDR is now implemented within comprehensive treatment plans to address a range of experientially based complaints. This entry provides an overview of the treatment process, its conceptual underpinnings, the studies of treatment efficacy, and EMDR's various clinical applications.

I. DESCRIPTION OF TREATMENT

Eye Movement Desensitization and Reprocessing (EMDR) is an integrative psychotherapy treatment that synthesizes elements of many orientations, in-

cluding psychodynamic, cognitive-behavioral, body-based, person-centered, and interactional therapies, and that incorporates several unique elements, including eye movements or other bilateral stimulation. EMDR appears to expedite the accessing and processing of disturbing memories and an attendant learning process. It focuses directly on all the perceptual components of memory (cognitive, affective, somatic) and creates new links with the adaptive information contained in other memory networks. This reprocessing results in an adaptive resolution, as indicated by the desensitization of triggers, elimination of emotional distress, elicitation of insight, reformulation of associated beliefs, relief of accompanying physiological arousal, and enhancement of personal growth and functional behaviors.

A. The Information Processing System

The physiologically based information processing system can be compared to other body systems such as digestion in which the body extracts nutrients for health and survival. The information processing system sorts perceptions of experience and stores memories in an accessible and useful form. Information processing is essential for learning and involves the forging of associations with experiences previously stored in memory. The strong negative affect or dissociation induced by a traumatic event may impair information processing, inhibiting associative links with adaptive information in other memory networks. The memory is then dysfunctionally stored without appropriate associative connections and with negative emotion and physical sensations intact. When triggered by similar situations the memory is reexperienced, rather than simply recalled as an historical event. A prime example involves the intrusive thoughts, emotional disturbance, and negative self-referencing cognitions of post-traumatic stress disorder (PTSD).

B. The Eight Phases of Treatment

During EMDR, the unprocessed dysfunctionally stored material is linked to more adaptive material, and new associations are made. The client attends to emotionally disturbing material in multiple brief doses while simultaneously focusing on an external stimulus (e.g., therapist-directed eye movements, hand-tapping, bilateral tones). EMDR's three-pronged protocol ensures that all past, present, and future aspects of the problem are thoroughly addressed. Current conditions that elicit distress are processed to eliminate sensitivity, and a template for appropriate future action is incorporated to enhance positive behaviors and skill acquisition.

Contrary to a common misconception, EMDR is not a simple by-the-book procedure dominated by the use of repeated eye movements, but rather an integrated therapy incorporating aspects of many traditional psychotherapeutic orientations. EMDR structures these elements in a unique combination to enhance information processing. It utilizes an eight-phase approach, with each phase augmenting and consolidating positive treatment effects. In addition, specific protocols guide the application of EMDR to a variety of clinical complaints.

1. Phase One: Client History and Treatment Planning

During Phase One the therapist takes a full history, assesses the client's readiness for EMDR, and develops a treatment plan. The therapist evaluates aspects such as diagnosis, comorbidity, suicidality, dissociation, existing support system, life stability, presence of current stressors, physical health, secondary gain issues, and substance use. Although acquisition of a full history and evaluation of the overall clinical picture are standard psychotherapy procedures, they have an additional purpose in EMDR and are used to identify suitable targets for treatment.

Targets are chosen according to theories about information processing. It is assumed that (a) processing may be accompanied by intense emotions; (b) processing of memory networks may activate related prior incidents; (c) if related early events are not processed, treatment may be incomplete and possibly ineffective; (d) treatment effects are likely to generalize to similar events, but not to unrelated incidents; and (e) processing should include a focus on past events, present stimuli, and future situations or behaviors. Therefore, treatment targets can include affect management resources, recent distressing events, current situations that stimulate emotional disturbance, historical incidents, and the development of specific skills and behaviors.

Targets are prioritized for sequential processing and evaluated according to patterns of generalization within memory networks. Treatment effects tend to generalize from memory to memory when features are similar. Only one representative event from a cluster of similar experiences (e.g., several related instances of molestation by the same perpetrator) may need to be treated. Such generalization of treatment effects should not be expected if the client reports a variety of dissim-