ENCYCLOPEDIA *of*
COGNITIVE BEHAVIOR THERAPY

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ARTHUR FREEMAN

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Encyclopedia of

Cognitive Behavior Therapy

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Foreword

I am honored and pleased to have been asked to write the foreword for this encyclopedic (literally) compendium of cognitive behavior therapy (CBT). Being there at the beginning, I have had the great opportunity and pleasure to see this broad-based field grow in many directions—both in terms of breadth and depth—over the past several decades. It becomes a difficult task to be able to be familiar, much less knowledgeable, with every therapeutic strategy that can be found under the umbrella of CBT. I believe that this team of editors, led by Art Freeman, has done that admirably.

The *Encyclopedia of Cognitive Behavior Therapy* represents a culmination of a revolution that changed the face of psychotherapy during the second half of the twentieth century. Starting with both the initial enthusiasm and excitement and also resistance of the psychological and psychiatric community for therapies that directly helped people to improve the way they behave and think, CBT has now emerged, at the beginning of the twenty-first century, as an expansive and diverse field. Had you asked me in 1979 what I would recommend as the goal of cognitive approaches to therapy, I would have stayed with the existing data and told you that we would treat depression. As our "appetite" grew, we experimented with the applications of cognitive therapy to anxiety disorders and later personality disorders. I was fortunate to have many of the authors represented in this encyclopedia as students, postdoctoral fellows, research associates, and colleagues, over the years. They have flourished, just as the field has grown and flourished by their efforts.

As an overall approach that emphasizes the scientific and clinical application of cognitive and behavioral sciences to understanding the human condition, as well as developing interventions that enhance life, CBT provides practical solutions to the broadest range of problems that people face everyday. Moreover, it embraces the responsibility to replicate its success in measurable ways in order to move the science forward. As a result, there are now empirically supported psychotherapy interventions for problems as diverse as mood disorders, substance abuse, social skills, violence and aggression, academic performance, sexual dysfunction, cognitive rehabilitation, health-related problems (e.g., eating disorders, coping with chronic illness), and stress management. As one looks over the Contents for this fine volume, it becomes evident that there are few areas of human functioning (or few areas of psychotherapeutic treatment) that have not been helped or enhanced with CBT interventions.

Due to the explosion in popularity and efficacy of interventions based on cognitive–behavioral principles, the field has become rich with handbooks devoted to a range of these specialized areas of assessment and treatment subsumed under its rubric. Many populations of individuals have been helped through these interventions, including children, adolescents, adults, and older adults. CBT procedures have been successfully applied to improve the lives of individuals, couples, groups, families, classrooms, organizations, as well as a variety of settings (e.g., homes, schools, clinics, hospitals, workplaces, correctional facilities, and rehabilitation centers).

There are a few books, however, that cover the full and broad scope of CBT. The present *Encyclopedia of Cognitive Behavior Therapy* was conceived to occupy this important place in the cognitive and behavioral literature. Tapping into the expertise and innovation of almost 200 authors, this volume captures the breadth of CBT and encompasses the interests of cognitive and behavioral therapists around the world. At the same time, streams of conceptual thought grounded in learning theories, cognitive information-processing and decision-making models, the science of emotions, developmental, biological, and evolutionary aspects of behavior are the principles that tie the extraordinary wealth of entries together.

This is the time to provide a collection of the rich contributions of CBT in one place and confront the challenge of how to move the field forward. This volume faces that challenge by providing clinicians with important sections that guide the synthesis of the impressive array of CBT techniques available into meaningful case formulations and treatment plans.

I am delighted to have been asked to contribute the foreword for this handbook. A collection of this magnitude can help to transform clinical practice and move CBT forward well into the new century.

AARON T. BECK, M.D.

Preface

By definition, cognitive behavior therapy (CBT) is an active, directive, collaborative, structured, dynamic, problem-oriented, solution-focused, and psychoeducational model of treatment. From its earliest days, CBT has emphasized the importance of operational definitions as an essential ingredient in the therapeutic endeavor. The definitions were important to guide the therapy, enhance the collaboration, and stay problem-focused. After all, if the therapist and patient had not agreed on where they were going, had not agreed on the direction and focus of therapy, then it mattered little which road(s) they took. The working definitions of the patient's strengths, supports, and goals of therapy need to be explicated to give the therapy the needed structure. The *Oxford English Dictionary* defines an encyclopedia as a work "that aims at embracing all branches of learning; universal in knowledge, very full of information, comprehensive … and alphabetical." Following our own focus, we tried to meet the dictionary definition of an encyclopedia, and decided that we needed to meet several criteria.

First, it was to be *comprehensive* and *inclusive*. We decided that we would try to cover as many of the major ideas, structures, and constructs that fell under the broad heading of CBT. We would scour the literature in an attempt to find just about every possible application and idea that had a relationship to CBT. When the relationship of the idea or construct was tangential to stricter CBT focus we had to then decide whether the omission of that topic would detract from the comprehensiveness of the volume. We worked to err more on the side of inclusion rather than exclusion.

Our second goal was to try to be *representative*. Given that there are many people who are working with, researching, and writing about a particular issue, we tried to be as even-handed as we could be and invite a broad range of individuals to participate in this project. We wanted to have a broad-based representation of individuals covering various theoretical and practice constituencies.

Third, we have endeavored to be as *enlightened* as we could be. Again, we chose to err on the side of a broad-based inclusion. Terms and issues that might be verboten to more strict adherents of one or another branch of CBT were included. We have chosen to not be parochially focused thereby limiting the areas to be discussed. Rather than try to limit CBT to the work of one theorist or one school, we have included contributors to CBT who may not typically be seen as "card-carrying" CBT persons.

Fourth, our collection of material was to be *multi-disciplinary*. We do not see CBT as the province of any one discipline, i.e., psychology, psychiatry, nursing, counseling, or social work. Our goal was to have representations by as many experts as we could gather without concern with their area of professional practice. We invited some individuals who are primarily therapists and others who are primarily clinical researchers and some who comfortably wear both hats.

Fifth, we would try to be *critical* and *selective/limiting* in our choice of contributors and contributions. There were in some cases individuals whom we had solicited to author a contribution but, for many reasons, were unable to participate. In other cases there were several persons who could equally represent a perspective and we had to make the incredibly difficult decision to have one person contribute the article rather than another. This selection was perhaps the most painful part of the process.

Our sixth goal was to make this encyclopedia an *educational* text that could be used as a reference for students, professionals, clinicians, or the lay public. We see this encyclopedia as a volume that will serve to share CBT with the broadest possible audience. We wanted the encyclopedia to be easily read, understandable, and available.

The seventh goal was one that was de facto in that the encyclopedia is by its very nature an *international* volume. We did not have to try to be international; it came about as we compiled the list of contributors, many from the United States, but many others from around the world.

Eighth, we determined that the volume would be *scholarly*. The contributors were asked to write at the highest level and to provide the broadest discussion of their area. This was

perhaps the easiest part of the process. The contributing authors were able to walk the fine line between scholarly contributions and ease of reading and understandable text.

Our ninth focus was on CBT to be seen in its *historical* context. The field did not spring whole from the work of a particular person or group. Rather, CBT must be viewed in its historical context as a model that has evolved over the past fifty years and has strong roots in behavioral, psychodynamic, and person-centered approaches. Many of the contributions trace the historical and developmental experience of CBT. As with all histories, there may be disagreement as to who was there first and who were the upstarts merely claiming to be first. We have not tried to define CBT in this way. The historical references are to be read as the view of that contributor.

Tenth was to attempt to make the encyclopedia as *up-to-date* and *cutting edge* as editors can possibly make any volume. We asked the contributors to include the historical focus but also bring their area of concern into the twenty-first century.

Eleventh, we asked each contributor to discuss his or her view of the future of CBT in his or her area of interest and practice. This volume is not the last word in CBT. It is, at best, a summary of the progress of CBT over the last 50 years. We do not expect the final word on CBT to be written soon.

Goal twelve was to be *apologetic* for all that we had to leave out. Invariably there will be those who wonder why a particular idea, person, context, treatment, or research was not given as proper due and recognition by inclusion in this compendium. We must draw a line and call a halt to our collection activities so that this volume could be in the hands of you, the reader. We hope that you will let us know what we have omitted so that we can possibly include it in the next edition of this encyclopedia.

Finally, we know that we must be *grateful*. We are especially grateful to all of the contributors for their contributions. We are grateful to the editorial staff at Kluwer Academic Publishers who had the job of encouraging and challenging us to take on a job that was, at times, like herding cats. There were just so many things happening at once. We are especially grateful to Mariclaire Cloutier who initiated this volume. There are few editors with the patience, skill, and clear thinking of Sharon Panulla. Joe Zito helped to pull the diverse pieces together from the publisher's side. Herman Makler has been a joy to work with in moving this volume through the production process. We are immensely grateful for all of their work.

We are also grateful to all of the heroes, listed and unlisted, known and unknown who have contributed so much to the growth of CBT over the years as a treatment for a broad range of disorders. We are grateful for their contributions to the empirical base for CBT, we are grateful for the questions that they asked that then generated other ideas and possible solutions, and we are grateful to the many front-line therapists who have sought information about CBT so as to enhance their practices.

ARTHUR FREEMAN, STEPHANIE H. FELGOISE,
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A

Acceptance and Commitment Therapy

Steven C. Hayes and Heather Pierson

Keywords: acceptance, cognitive defusion, values, commitment, mindfulness, contextualism

PHILOSOPHICAL FOUNDATION: FUNCTIONAL CONTEXTUALISM

Acceptance and commitment therapy (ACT) is an experiential therapy that is based in clinical behavior analysis. Philosophically, ACT (as with clinical behavior analysis more generally) is based on the pragmatic world view of functional contextualism. In all forms of pragmatism, truth is measured by how well something works in the accomplishment of a particular goal. Functional contextualism (as compared to social constructionism or other forms of contextualistic thinking) seeks as its goal the prediction and influence of psychological events with precision, scope across phenomena, and depth across scientific domains and levels of analysis. Psychological events are treated as actions of the whole organism, interacting in and with a context. According to the contextual philosophy underlying ACT, the environment, behavior, history, and outcome of the behavior are all part of the context and need to be considered while proceeding through the therapy. The underlying philosophy especially can be seen in ACT's focus on the function of behavior, in its ontological approach to language (both of clients and of scientists), and in its holistic approach.

THEORETICAL FOUNDATION: RELATIONAL FRAME THEORY

Relational frame theory (RFT), a behavioral theory of language and cognition, is the theoretical foundation of ACT. ACT views language as the primary root of human suffering, particularly due to its creation of experiential avoidance and cognitive fusion. RFT offers an explanation of how this may happen and elucidates the processes by which ACT techniques work. RFT has a growing amount of empirical support, both its basic and applied aspects.

Framing events relationally has three features: mutual entailment, combinatorial entailment, and the transformation of function. Mutual entailment refers to the derived bidirectionality of stimulus relations. For example, if A is specified to be the same as B, it can be derived that B is the same as A. Combinatorial entailment refers to the ability to derive relations among two or more relations of this kind. For example, if A is smaller than B, and B is smaller than C, it can be derived that A is smaller than C and C is larger than A. Finally, functions can transform through relations of this kind. If in the previous example shock is paired with B, for example, a person may then respond more emotionally to C than to A. Entailment and transformation of functions are all regulated by context. A verbal event is any event that participates in a relational frame.

Relational frames explain the cognitive source of a great deal of human pain. For example, the bidirectionality of language means that a person's description of an aversive event may have some of the functions of that event. Thus, when a trauma survivor describes the traumatic event,

through the transformation of function, the feelings that were present during the trauma may again be present during the description.

The root of several maladaptive behaviors according to an ACT model can be expressed with the acronym FEAR (fusion, evaluation, avoidance, reasons). Cognitive fusion refers to the domination of verbally derived behavioral functions over other, more directly acquired functions. People become fused with their verbal depictions, evaluations, and reasons. They no longer see them as their behavior, but as objective situations and thus, if they are aversive, as events to be avoided. For example, if a person is fused with the thought, "there is something deeply wrong with me," he or she will want to avoid situations that bring up that thought. Unfortunately, such experiential avoidance often paradoxically strengthens the avoided events because they strengthen the verbal/evaluative processes that give rise to such events. For example, a person avoiding the thought "there is something deeply wrong with me" strengthens the apparent literal truth of that thought since it confirms that something needs to change before one is acceptable—the very essence of the originating thought.

The source of cognitive fusion, and thus experiential avoidance, is thought to be the bidirectionality of verbal processes and their general utility in many domains. Because this process is thought to be under contextual control, the behavioral impact of thoughts and feelings is dependent on context. Therefore, ACT holds that thoughts and feelings are not mechanical causes of behavior, and that the impact of thoughts and feelings can be most readily influenced through a change in the context of verbal behavior. ACT has several techniques for doing so.

ACT COMPONENTS

ACT uses metaphors, logical paradox, and experiential exercises throughout its different components. The main reason for their use is that they are ways of undermining excessive literal language, basing action instead on experience.

The components in ACT are not a fixed or rigid set of techniques that occur in a definite order. In accordance with functional contextualism, they are a functional set of components that can be changed and rearranged to meet the client's needs. Nevertheless, what is present below is a typical sequence.

An ACT therapist first gathers information about all the different ways a client has tried to change his or her suffering and how these attempts have worked or not worked. The domination and workability of experiential avoidance is a primary focus. In this phase of treatment clients are asked to examine directly how successful their efforts to avoid have been, and if (as is most common) they have not been successful to consider the possibility that it is that agenda itself, not the technique or method, that might be the source of their difficulty.

What has not been working is gradually brought out: the deliberate control of private events. Many people struggle with their unwanted thoughts and feelings by trying to control them or get rid of them. In their experience, most clients have found that this ultimately leads to more unwanted thoughts and feelings. Conscious, deliberate control usually works when applied to the world outside the skin. When applied to private experiences, however, control usually works only temporarily. Exercises and metaphors are used as examples of how control does not work long term, of how language engrains unworkable control strategies.

Instead of avoidance, ACT clients are taught willingness and defusion as methods of coping with difficult psychological context. Willingness is the deliberate embrace of difficult thoughts, feelings, bodily sensations, and the like. Exposure exercises are used to contact troublesome private experiences. Cognitive defusion techniques are used to reduce the dominance of the literal meaning of thoughts and instead to experience them willingly as an ongoing process occurring in the present. In this phase, clients may be taught to watch their thoughts float by without trying to alter them; they may be asked to repeat thoughts until they lose all meaning; or they may be asked to think of thoughts as external objects and will be asked a variety of perceptual/sensory questions about them (e.g., What color are they?). Cognitive defusion undermines evaluation and teaches healthy distancing and nonjudgmental awareness. When this phase is successful the client will seem to notice reactions from the level of an observer and will take a more willing stance toward unwanted thoughts.

Much of the time people identify themselves by psychological content. They are the content of their thoughts. As cognitive content is defused, more emphasis is placed in ACT on self as context. The self as context is the observing self. It is the experience of an "I" that does not change or judge, but just experiences. Meditation and mindfulness exercises are used to help the client experience consciousness itself as the context for private experiences, not as the content of those experiences. Self as context work provides a safe psychological place from which acceptance, willingness, and defusion are possible.

When clients are no longer running from experience, direction in life is supplied by the client's values. Values are desired qualities of ongoing behavioral events that can only be instantiated, never obtained as an object. For example, a person who values being loving toward others can work to maintain those qualities in his or her human interactions, but

this process will never be finished or obtained, as one might obtain a degree or buy a car. All ACT techniques are in the service of helping the client live life in accordance with his or her values. The exercises and metaphors in the values phase are geared toward helping clients identify what they want to stand for in their lives in a variety of domains (relationships, health, citizenship, and so on). Once values are identified, specific goals that fit with these values are identified along with behaviors that might produce these concrete goals. Finally the barriers to those actions are identified and dealt with through other ACT methods (e.g., defusion, acceptance, and willingness).

The final phase of ACT, the commitment phase, involves working with the client to apply what he or she has received in therapy to living life in accord with one's chosen values even if it involves experiencing psychological pain. This phase focuses on the client's willingness to experience whatever may come up and helps the client commit to acting in accordance with his or her values. Commitment is presented as an ongoing, never-ending process of valuing and recommitting. It assumes that the old change agenda has been abandoned, that some willingness has been contacted, and a valued life direction has been identified. The commitment stage looks the most like traditional behavior therapy, as the client passes through cycles of values, goals, actions, barriers, and dissolution of barriers. When this phase is completed, therapy is terminated. However, often with ACT, clients will come in for "tune-up" sessions after termination.

REVIEW OF RELEVANT LITERATURE

There is a growing amount of research that supports both ACT outcomes (see Hayes, Masuda, Bissett, Luoma, & Guerrero, 2004, for a review) and ACT processes. For example, controlled trials have shown ACT to be effective in several different areas including stress reduction (Bond & Bunce, 2000) and coping with psychotic symptoms (Bach & Hayes, 2002) among others. In addition to the efficacy research available, ACT has been shown to improve clinical outcomes in an effectiveness study (Strosahl et al., 1998).

COMPARISON TO TRADITIONAL CBT

ACT is part of the behavioral tradition and is similar in some ways to different forms of CBT. ACT shares the focus on cognition, emotion, and behavior. It incorporates traditional behavioral components like many forms of CBT. Some elements of acceptance and defusion can be found in mainstream CBT approaches, for example in Ellis's inclusion of acceptance of self or Beck's idea of distancing.

ACT differs from traditional CBT approaches in several ways as well. Perhaps the central theme of traditional CBT is the attempt to test and change the content of thought—an effort that ACT assiduously avoids. ACT relies on a functional contextual theory of cognition, and because of that emphasizes context over content. Its antimechanistic and explicitly contextualistic qualities differ from traditional CBT. Also, although some elements of acceptance and defusion are found in mainstream CBT, ACT dramatically increases the emphasis on these elements and disconnects them from their possible use as indirect change methods still focused on the content of private events. Finally, the strong emphasis on values and self-as-context is unlike traditional CBT.

FUTURE DIRECTIONS

At the present time there are 11 published randomized controlled trials of ACT, but there are many more outcome and process studies under way or under review which allow us to assess the future direction of ACT research. ACT seems to be a broadly applicable technology and future research seems likely to broaden the range of application even further. ACT is one of a family of new behavioral and cognitive therapies that are focusing on contextual change methods, including mindfulness, acceptance, and the like, and ACT studies are increasingly focused on the theoretical understanding of processes of this kind. More ACT research will be done in combination with other technologies, and more will be done to link ACT to RFT.

SUMMARY

ACT is a therapy that is based philosophically in clinical behavior analysis. Functional contextualism is the world view that underlies ACT. Theoretically ACT is based on RFT, which offers an account of how language creates pain and useless methods of dealing with it, and which suggests alternative contextual approaches to these domains. ACT uses metaphors, experiential exercises, and logical paradox to get around the literal content of language and to produce more contact with the ongoing flow of experience in the moment. The primary ACT components are challenging the control agenda, cognitive defusion, willingness, self as context, values, and commitment. ACT is part of the CBT tradition, although it has notable differences from traditional CBT. The main purpose of ACT is to relieve human suffering through helping clients live a vital, valued life.

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GLOSSARY

Experiential avoidance: Any behavior that functions to avoid or escape from unwanted experiences despite psychological costs for doing so

Acceptance: An open and noncontrolling stance toward all experiences

Choice: A section among alternative that is not based on verbal formulations of pros and cons

Cognitive defusion: Reductions in the behavioral regulatory functions of verbal events, particularly thoughts, based on a reduction in the dominance of the literal content of those events as compared to the ongoing processes of formulating them

Values: Ways of living life that a person cares about deeply

Willingness: Openness to experiences that may be contacted in the process of living a valued life

Self as context: Also called the observer self; a psychological context from which thoughts, emotions, sensations, judgments, evaluations, and so on are observed as what they are and not what they say they are

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Addictive Behavior—Nonsubstance Abuse

Frederick Rotgers and Ray W. Christner

Keywords: addiction, process addiction, gambling, sexual addiction, Internet addiction

When one thinks of addictive behavior, there is often reference to the use and/or abuse of chemical substances. However, in recent years theorists and clinicians have begun to include other excessive behaviors including eating, gambling, exercise, and sex under the umbrella of "addictions" (Greenfield, 1999; Koski-Jannes, 1999). Several researchers have classified problematic Internet use as an "addiction" (Bingham & Piotrowski, 1996; Young, Pistner, O'Mara, & Buchanan, 1999). Common to all the aforementioned behaviors are characteristics of preoccupation, impaired control, concealment of performing the behavior, and performance of the act despite being adverse to daily functioning (American Psychiatric Association, 2000; Greenfield, 1999; Ladouceur, Sylvain, Letarte, Giroux, & Jacques, 1998; Toneatto, 2002). The consequences of ongoing involvement in these behaviors include family discord, financial debt, employment loss, legal issues, and social difficulty.

Complicating the conceptualization and treatment of addictive behaviors is the incongruence in the terms and definitions of addictive behaviors. While the *Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition—Text Revision* (DSM-IV-TR; American Psychiatric Association, 2000) classifies pathological gambling as a disorder of impulse control, some question whether it is best classified in this manner or as an addiction or obsession (Moreyra, Ibanez, Liebowitz, Saiz-Ruiz, & Blanco, 2002). This debate also extends to Internet use (Greenfield, 1999) and sexual behaviors (Harnell, 1995; Swisher, 1995). Further complicating the nosological picture is a failure among theorists to agree on what specific factors must be present in order to define an excessive behavior as "addiction" (e.g., cognitive distortions, behavioral reinforcement, physiological factors). Finally, there is great debate as to the appropriate treatments for these excessive behaviors (e.g., cognitive–behavioral, multimodal, self-help). We adopt the term "addictive behaviors" to summarize these nonsubstance use excessive behaviors (sex, gambling, Internet use, eating, exercise). We recognize that this is an arbitrary use of the term "addictive," and do so only for ease of communication.

To date, much of the understanding of addictive behaviors stems from research on pathological gambling.

Studies regarding other addictive behaviors are emerging, yet there continues to be much that is unknown. Research on cognitive and behavioral underpinnings and interventions with addictive behaviors is relatively young compared to other disorders (e.g., anxiety, depression).

THEORETICAL FOUNDATIONS

Although the impact addictive behavior has on one's daily functioning (e.g., family problems, employment difficulties) is often clear, there is less knowledge of the underlying processes contributing to the onset, maintenance, and relapse of these behaviors. The basic tenets of CBT suggest a relationship exists between cognitive, behavioral, and emotional factors in human functioning. The cognitive–behavioral conceptualization of addictive behaviors, therefore, focuses on the specific interaction between cognitive and behavioral processes resulting in maladaptive behavior. Subsequently, changing maladaptive or dysfunctional thought patterns will ultimately lead to behavioral change.

As mentioned earlier, much of the research with addictive behaviors concentrates on pathological gambling. Ladouceur and colleagues (1998) noted the importance of understanding the primary motivation to gamble—the acquisition of wealth. What differentiates "professional" from potentially addicted gamblers is the cognitive restriction that limits the amounts wagered. Nonprofessional gamblers who become "addicted" often lack this cognitive structure (among others). Thus, cognitive factors may explain the unrelenting play in the face of the odds, as the gamblers expect to win (e.g., "I will win this time"). Langer (1975) described this as the "illusion of control," in which the gambler thinks his or her probability of winning a "game of chance" is greater than that dictated by random chance. This is consistent with findings of Ladouceur and colleagues (Gaboury & Ladouceur, 1989; Ladouceur & Walker, 1996) who demonstrated cognitive biases and erroneous beliefs about gambling among problem gamblers. They found that problem gamblers engage in inaccurate verbalizations or thoughts (e.g., predicting outcomes, explaining losses, and attributing causal significance) during episodes of gambling, and the gamblers believe their "skill" or employment of various strategies and/or rituals improves the odds of winning.

Many studies highlight the importance of cognitive factors in the onset and maintenance of gambling behaviors. The cognitive perspective of gambling suggests that distorted cognitive factors (e.g., automatic thoughts, schemata, core beliefs) lead gamblers to maintain an inaccurate perception that they have a greater level of skill or control, which influences the gambling outcome. Blaszczynski and Silove (1995) indicated that gamblers also selectively recall wins over losses, they anticipate a win following a "near miss," or they await the end of the losing streak.

In addition to gambling, cognitive factors play a role in other addictive behaviors as well, although the research with other addictive behaviors is scant. Neidigh (1991) applied the relapse prevention model of Marlatt and Gordon (1985) to the treatment of sexual offenders/addicts. Consistent with the relapse prevention model, Neidigh (1991) noted that sex offenders often engage in distorted cognitions that place them in situations in which relapse is probable. Others have described the sex addict as having an "illusion of self-control" (Harnell, 1995). This illusion of self-control leads sex offenders/addicts to place themselves in high-risk situations. For instance, an individual with sexual impulses toward children may frequent a grocery store across from a school or playground. Cognitive distortion used by sex offenders/addicts may serve as a means to justify their sexual desires or behaviors (Neidigh, 1991). For instance, a child offender may make erroneous statements such as "she looked mature for her age" or "it's okay to have sex with her if she agrees."

Internet use is another addictive behavior in which cognitive explanations are useful. While there is still little research in this very new area, there is some consensus regarding the function of maladaptive cognitions in pathological Internet use (Davis, 2001; Hall & Parsons, 2001). The maladaptive cognitions exhibited by those involved in pathological Internet use can be broken down into thoughts of self and thoughts of the world (Davis, 2001). Specifically, these individuals hold cognitive distortions including self-doubt, negative self-appraisal, and a lack of self-efficacy. Thus, they may have the core belief that "I am a better person on the Internet than I am in reality." Thoughts about the world may be generalized and have an all-or-nothing quality. For example, one may believe, "I can only make friends on the Internet."

While researchers have categorized addictive behaviors into distinctly different problems—gambling, sex, and Internet—it is important to emphasize the complexity and interrelationship that may exist between them. With the increased amount of information available on the Internet, these specific addictive behaviors can occur in the confines of one's home. Technological advances provide access to gambling, shopping, pornography, and so on with a simple "click of a button." Because of this, Davis (2001) proposed *specific pathological Internet use* in which the individual's overuse of the Internet serves a specific purpose (e.g., pornography, gambling) rather than general Internet use. Some have suggested a possible evolution from online sexual behavior toward actual sexual contact (Greenfield, 1999). While these interactions are only now becoming

more apparent, common to all addictive behaviors appears to be the vicious cycle of cognitive distortions or maladaptive thinking, which ultimately results in negative behaviors.

CBT TREATMENT STRATEGIES FOR ADDICTIVE BEHAVIORS

Individuals seeking treatment for addictive behaviors may experience serious financial, social, and interpersonal losses, as well as possible legal problems. There may be an initial motivation for these individuals to avoid engaging in the addictive behavior in order to prevent further psychosocial implications. Thus, the use of cognitive–behavioral treatment for addictive behaviors may play a more vital role in the long-term maintenance of behavioral change or in relapse prevention (Neidigh, 1991; Toneatto, 2002).

For example, Toneatto (2002) noted that if gamblers continue to believe in their abilities to predict outcomes or to control the situation, then they are more likely to relapse and reengage in excessive gambling once the difficulties leading them to treatment subside. Similarly, when working with sex offenders/addicts, it is necessary to become aware of cognitive distortions leading to them placing themselves in high-risk situations (Neidigh, 1991).

Strategies used for addictive behaviors vary depending on the case conceptualization of the client and the specific addiction presented. However, there are commonalities in the use of CBT across the treatment of addictive behaviors. Stress reduction techniques, social skills training, problem solving skills, and cognitive restructuring have been useful in the treatment of pathological Internet use (Bingham & Piotrowski, 1996; Davis, 2001; Hall & Parsons, 2001), sexual addictions (Neidigh, 1991), and pathological gambling (Sharpe & Tarrier, 1992; Sylvain, Ladouceur, & Boisvert, 1997).

EMPIRICAL SUPPORT OF CBT FOR ADDICTIVE BEHAVIORS

While clinicians are presently using CBT interventions for the treatment of addictive behaviors, few treatment programs exist and controlled studies are scarce. This is particularly true of sexual addictions and pathological Internet use, as no controlled studies were available as of this writing. Despite the lack of literature on a number of addictive behaviors, research on pathological gambling is emerging.

Sharpe and Tarrier (1992) offered a case study of a 23-year-old self-referred gambler. The treatment program focused on increasing awareness of the cognitive errors associated with gambling, teaching self-control, identifying replacement behaviors, and changing the relationships between cognitive distortions and physiological arousal and gambling. The investigators used relaxation training, imaginal and in vivo exposure, and cognitive restructuring as primary modalities. Following treatment the client showed a significant decrease in frequency and intensity of gambling impulses. With the exception of placing a single bet, the client did not gamble for 10 months. Additionally, the client reported a decrease in anxiety based on the Beck Anxiety Inventory.

In an experimental design, Bujold, Ladouceur, Sylvain, and Boisvert (1994) evaluated the effectiveness of a treatment program consisting of cognitive correction, problem solving training, social skills training, and relapse prevention with three male pathological gamblers. Individual intervention occurred once per week until the subjects maintained a high perception of control. Following treatment, the subjects terminated gambling behaviors, increased their perceptions of self-control, and reported ensuing problems as less severe. The subjects sustained the results at the 9-month follow-up.

Sylvain et al. (1997) assessed a treatment program consisting of the four components described above by Bujold et al. (1994)—cognitive correction, problem solving training, social skills training, and relapse prevention. The sample consisted of 29 individuals seeking help for gambling problems. The results demonstrated that CBT interventions significantly improve pathological gambling. Following treatment, 86% of the subjects no longer met the criteria for pathological gambling according to DSM-III-R. The investigators reported prolongation of the therapeutic gains at both 6- and 12-month follow-up.

Ladouceur et al. (1998) conducted a study evaluating the efficacy of cognitive interventions exclusively. The investigation involved the treatment of five pathological gamblers and used a single case experimental design across subjects. Cognitive intervention targeted the subjects' inaccurate perceptions of randomness and consisted of explaining the concept of randomness, offering an understanding of the illusion of control, increasing awareness of inaccurate perceptions, and correcting maladaptive verbalization and beliefs. Subsequent to the intervention, four of the participants lessened their urge to engage in gambling behavior and increased their perception of control, thus no longer meeting the DSM-IV criteria for pathological gambling. The subjects maintained these outcomes 6 months after treatment.

In a recent randomized controlled study, cognitive interventions targeting the erroneous perceptions of randomness reported by gamblers were evaluated (Ladouceur et al., 2001). The strategies involved cognitive correction (as described above in Ladouceur et al., 1998) and relapse prevention. Posttest outcomes indicated significant changes

in the treatment group on measures of greater perception of control and increased self-efficacy. Additionally, 86% of the participants in the control group no longer met the criteria for pathological gambling. Participants retained improvement 6 and 12 months after treatment.

The studies reviewed demonstrate the growing empirical basis for the use of CBT with addictive behaviors, particularly gambling. While the use of CBT has been reported with sex addictions (Neidigh, 1991) and pathological Internet use (Davis, 2001; Hall & Parsons, 2001; Young et al., 1999), there is no empirical research demonstrating its efficacy and effectiveness with these populations. The nature of CBT lends itself well to the treatment of various addictive behaviors; however, there is a need for controlled studies to provide a firmer empirical base for its use with these disorders.

CRITICISMS OF CBT FOR ADDICTIVE BEHAVIOR

The use of CBT in the treatment of addictive behaviors is a recent phenomenon, and published critiques have not yet appeared. While the research in this area remains minimal, the use of CBT is promising and research outcomes largely favorable, especially with pathological gambling (Lopez Viets & Miller, 1997). There has been minimal research supporting the use of CBT with other addictive behaviors (e.g., sex addiction, Internet addiction).

In addition to the necessity for empirical treatment, there continues to be a need to better define and classify nonsubstance addictive behaviors, though this is not unique to CBT. The ongoing disagreement of whether these behaviors are best described as addictions, obsessive and compulsive behaviors, or impulse control disorder further clouds the conceptual picture. In order to develop and investigate effective and efficacious interventions for addictive behaviors, a consistent conceptual framework is essential.

FUTURE DIRECTIONS

A priority in the addiction field is the development of a conceptual structure in order to understand the processes of nonsubstance addictive behaviors. To facilitate progress in treatment and intervention, experts must reach consensus as to what these excessive and detrimental behaviors encompass. Current DSM-IV-TR (APA, 2000) nosology includes pathological gambling, although this and other nonsubstance addictive behaviors are not included in the same class of disorders (Substance-Related Disorders) as are substance use-related addictions. Achieving agreement on the description of addictive behaviors would allow for standard assessment criteria, the determination of similarities between various addictive behaviors, and perpetuate a consistent conceptualization to facilitate treatment. While recent studies are beginning to develop a knowledge base for gambling (e.g., Ladouceur et al., 1998; Toneatto, 2002) and Internet use (Davis, 2001; Greenfield, 1999), literature addressing the factors composing other addictive behaviors remains sparse.

There is also a dearth of investigative efforts into effective treatments for nonsubstance addictive behaviors. The current literature consists of a few controlled studies for gambling problems, but none addressing treatment of other nonsubstance addictive behaviors. Studies are needed to evaluate both the short- and long-term efficacy of treatments for addictive behaviors. The use of CBT with nonsubstance addictive behaviors is promising, though continued research efforts and efficacy studies are needed.

See also: Addictive behaviour—substance abuse, Relapse prevention

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