



Volume Number 5

Issue Number 2

ISSN 1555 - 7855

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International Journal of Behavioral Consultation and Therapy

VOLUME NO. 5, ISSUE NO. 2

ISSN: 1555 - 7855

Published: November 24, 2009

PUBLISHER'S STATEMENT

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ISSN: 1555 - 7855

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Cordially,

Joe Cautilli and BAO Journals

Editorial

James K. Luiselli, Ed.D., ABPP, BCBA-D

At the kind invitation of Dr. Jack Apsche and Dr. Joseph Cautilli, I have accepted the position of Editor-in-Chief of the *International Journal of Behavioral Consultation & Therapy (IJBC)*. I have functioned previously as Action Editor for the journal and will continue to assist with reviewing and soliciting manuscripts for publication. My objective is to maintain the steady dissemination of empirical research, literature reviews, positions papers, and commentaries that have been featured in *IJBC* since its inception.

This change in *IJBC* leadership was occasioned by health concerns confronting Dr. Apsche. Our hope and desire is that Jack will soon return as Editor. I know that everyone connected with the journal, as well as our readership, wishes him a full recovery.

Going forward, we will continue to publish special topic editions of *IJBC* as well as “mini-series” which include several theme-oriented articles within a typical issue. I would also like to expand our editorial board and to solicit other professionals to serve as ad-hoc reviewers. Finally, I’m interested in hearing from you about other directions for the journal and the quality of our publication. Receiving feedback from authors, reviewers, and readers is valued and desired!

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The Current Status of Behaviorism and Neurofeedback

Dwight E. Fultz

Abstract

There appears to be no dominant conceptual model for the process and outcomes of neurofeedback among practitioners or manufacturers. Behaviorists are well-positioned to develop a neuroscience-based source code in which neural activity is described in behavioral terms, providing a basis for behavioral conceptualization and education of neurofeedback providers and their clients.

Keywords: Neurofeedback, Behaviorism, Behaviorists, Neurotherapy, Source code, Neural activity

Neurofeedback, (also called, “EEG biofeedback” or “brainwave biofeedback,”) is one of several “neurotherapy” techniques, so-called because of their intended “direct” influence on brain processes. At the time of this writing, it still lags behind medication as the modern western or “scientific” method-of-choice for developing greater brain self-regulation, but the number of clinicians providing this intervention has grown yearly since the early 1980s. Language for describing the intended outcome of neurofeedback appears to be similar across clients, practitioners and researchers (and teachers, family members and journalists) who uniformly identify this outcome as “behavior change” or simply “learning.” It is in the description of the underlying process, the “how it works” section of the manufacturer’s or clinician’s explanation, that great differences are seen. These differences may be due, in part, to lack of standardization in neurotherapy training and therefore great differences in practitioners’ conceptual models of learning, and in part to the relative crudeness of the data that provide the feedback.

These data consist of faint electronic signals that are present on the cortical surface, trickle through the skull and skin to a grounded sensor at a specific location. They are then amplified and filtered into a variety of frequency bands or wavelengths, and presented to the client in a stimulating graphic and auditory format. Each behavior of an individual has a unique neural structure, discharged through a set of unique frequency patterns (measured in milliseconds), employing any number of cortical and subcortical regions. Behaviors, whether overt motor functions or covert operations, are not conditioned so much as particular brain states and the general self-regulation of brain states, through reinforcement of the amplitude of selected frequencies relative to other frequencies. Many distinct behaviors are frequency-specific, and neurofeedback, when successful, strengthens the relative amplitude of frequencies that facilitate target behavior.

For the behaviorist, behavioral descriptions trump cognitive (“he knows...”) phenomenological (“she is much better at...”), humanistic (“he wants to...”), educational (“she has learned that...”) and broad clinical (“it effectively changes his...”) explanations of behavioral change. O’Donohue and Kitchner (1998) pointed out the “many behaviorisms” that currently exist all have principles and language in common. The behavioral mainstream is a field formally recognized as Applied Behavior Analysis (ABA). ABA involves a conceptual structure that encompasses both broad and specific outcomes – and outcome measures, in terms that are related to the components of the identified problem. Any or all of these components may be addressed by interventions particularly suited to changing the parameters of problematic behavior so that they resemble the parameters of the goal or specified outcome. It is a prolonged lament by many behavioral practitioners (including this author -- see Fultz, 2001) that the nature of a particular learning process or behavior change event such as neurofeedback training, is unnecessarily obscured by a sloppy explanation. In a utopian therapeutic environment one’s language would merely reflect the worldview -- or perhaps the cosmology -- of the person, but one suspects it

often indicates a lack of understanding of ABA concepts. The primary intent of this article is not to dismiss the above-mentioned epistemologies, but to argue for the superiority of behavioral explanations of neurofeedback processes and outcomes, then to temper this hubris with caveats about one's audience and appropriate levels of analysis and explanation.

Manufacturers and marketers of neurofeedback equipment tend to emphasize outcomes in broad terms having to do with better grades, better behavior, better relationships, more positive emotions, and – conversely – fewer problems. Neurofeedback is often globally categorized as a powerful “noninvasive intervention” resulting in relatively permanent brain changes, a description meant to distinguish neurofeedback from medication-based therapies. Marketing of neurofeedback services by clinicians tends to involve broad outcome language, in addition to descriptions that appear to reflect practitioners' own epistemological orientation. It is presented as a teaching tool, a brain exercise machine, a mindfulness-training instrument, a catalyst for getting the brain “unstuck” and a “strange attractor generator,” exposure to which will free the human inside and foster the natural spontaneity, creativity and joy that is the birthright of every human being. Education and exercise metaphors are common, the “Rousseauian-Buddhist-Chaos Theory” perspective less so.

Neurofeedback was conceptualized, developed and presented as strictly an operant conditioning procedure in the 1960s and 1970s by pioneers such as Barry Sterman and Joel Lubar, and a number of clinicians continue to describe the procedure in operant language, although – from an ABA standpoint – conceptual purity is often lacking. Ubiquitous use of the term “reward” is one example of this conceptual impurity; it allows for a social, subjective and merit-based contingency as the operative mechanism, along with notions about what the client wants or thinks or “tries” to accomplish. A clear conceptual understanding of the nature -- and therefore the use of -- “reinforcement” would facilitate understanding of the operative mechanism (the “active ingredient”) in neurofeedback at macro- and micro-levels of behavior. Reinforced behaviors are strengthened as a function of the administration contingency, whether they are as complex and multidimensional as improved attitudes or skills, or as rudimentary as a single neuron firing at a lower stimulation threshold. In addition to the social and emotional baggage of “reward,” it is increasingly difficult to convey its intended meaning at increasingly microanalytic levels. For example, while neuroscientific research has continued to explore the nature of reinforcement as the altering of neurotransmitter and neural field configurations (see, for examples, Boucher, Palmeri, Logan & Schall(2007) and Arbib (2002) – several articles), it is inconceivable that a particular excitatory or inhibitory burst discharge at a specific location in the midbrain would be predictably produced by local, micro-level “rewards.”

The requirement of bilingualism is a point of solidarity for behavioral practitioners. One must speak to the public so that they understand, and speak to one's professional peers in the language of the profession. The esoteric nature of precision and expertise about the infinite patterning of organisms and environments requires a linguistic clarity that reeks of “arcane minutiae” to the general public. Neurofeedback processes and outcomes are (ideally) explained differently to children and psychology students. One is likely to question numerous neurotherapists and vendors and find that they are unable to transition from the language of “brain exercise” and “better control” to even slightly more specific descriptions involving “shaping,” “S_D” or “habituation.” Theoretically, behaviorism provides not just a descriptive but an explanatory structure that is widely applicable for many levels of analysis and practice. Staddon (1998) points out that both neuroscientists and therapists now generally see even cognitivism and behaviorism as entirely in agreement.

Among modern behavioral psychologists the notion appears to be widespread that all manifestations of human activity, including emotions and personality characteristics, are not just “epiphenomena” but are manifestations of neural structure, and at the neural level “the psychologies of structure, function, and development” (Catania, 1973) are indistinguishable. Cacioppo and Decety's (2009) appeal to move

beyond a science of behavior (or a competing science of the mind) suggests that an integrating “science of the brain” is a realistic endeavor, given continued neuroscience achievements. Theoretically it is a small matter to propose that a complete description of the neural components and processes underlying behavior would be so precise as to brilliantly illuminate all aspects of an intervention such as neurofeedback. For the average client the utility of such a detailed description would be analogous to the process of reading a road map through a microscope, although it may be reassuring that one’s driver is able to do so.

Behavioral training is generally not required for providers of neurofeedback services, but the components and process of neurofeedback intervention are well-suited for behavioral conceptualization and articulation. Insights from neuroscience research about the nature of physiological processes underlying behavior provide behaviorists with a rich opportunity to develop the source code repertoire to which all neurotherapy participants may subscribe. Behaviorism as a personal and professional therapy model (and not just a mélange of terms and techniques used in a slipshod manner) may yet occupy a central role in neurofeedback and other neurotherapies. For those in the behavioral fold who retain antipathy toward “mentalism” and “black box empiricism,” who so easily dismiss “mindfulness” or personality epiphenomena as unworthy of the craft, an opportunity is knocking. What was once dismissed and scorned by staunch behaviorists may be translated into the behavioral model by those who will embrace Cacioppo and Decety’s (2009) science of the brain.

Computer science metaphors for brain activity are overused, but the field does provide a model of three language levels that may be of use here. Individuals are served through the user interface (software and hardware for specific applications/jobs, professional programmers use programming language for developing underlying functional processes – to solve specific problems or provide specific services, and these languages must be developed by those who have an understanding of central processors and the “machine language” through which all functions are propagated and modulated. The “machine language” of behavioral neuroscience is a firm basis on which to develop behavioral programs for neurofeedback-type applications.

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Dialectical Behaviour Therapy: Description, Research and Future Directions

Michaela A Swales, Ph.D.

Abstract

Dialectical Behaviour Therapy (DBT) is a cognitive behavioural treatment initially developed for adult women with a diagnosis of borderline personality disorder (BPD) and a history of chronic suicidal behaviour (Linehan, 1993a; 1993b). DBT was the first treatment for BPD to demonstrate its efficacy in a randomised controlled trial (Linehan, Armstrong, Suarez, Allmon & Heard, 1991). Adaptations of the treatment (Dimeff & Koerner, 2007) and further randomised trials followed this initial study. This paper provides an overview of the theoretical and philosophical foundations of DBT and how these inform the major treatment strategies. Next, structural aspects of the treatment are described, and how the treatment structure allows for the adaptation of the treatment to different clinical settings. Finally, the paper reviews research evidence for the efficacy and effectiveness of the treatment and considers future research directions.

Keywords: Dialectical Behaviour Therapy, Behaviourism, Zen, Dialectics, Acceptance.

Theoretical and Philosophical Foundations of DBT.

A central dialectic between acceptance and change lies at the heart of DBT. In developing DBT, Linehan initially attempted to apply behavioural theory and change strategies to clients presenting with BPD and suicidal behaviour. She experienced several difficulties in these early stages of treatment development. Clients' were frequently non-collaborative in-session, did not practise agreed homework assignments and often did not return for subsequent treatment sessions at all. Linehan hypothesised that these 'therapy-interfering behaviours' arose because the clients experienced the strong focus on changing emotions, thoughts and behaviours as invalidating. Indeed, as clients often believe they are incapable of change, the whole notion of a treatment based on change is fundamentally invalidating. In response to these concerns, she searched for a philosophy / theoretical approach that strongly emphasised acceptance. Zen principles and practise underpin the acceptance-based components of DBT. To house these two contrasting approaches, Linehan uses dialectical philosophy. The following sections of this paper discuss these three foundations of the treatment in more detail.

Pushing for Change: Behavioural Theory & Problem-Solving

DBT like 'first wave' cognitive-behavioural treatments emphasises *behavioural* theory, rather than *cognitive* theory common to second wave treatments such as Cognitive Therapy for depression (Hayes, Follette & Linehan, 2004). Like 'first wave' therapies 'third wave' therapies, of which DBT was perhaps one of the first, take a radical behaviourist perspective to mental phenomenon. Thus, any response of an organism, such as thinking, emoting, sensing, as well as overt motor behaviour constitutes behaviour. The emphasis on behavioural theory in DBT influences the treatments approach to diagnosis and case conceptualisation.

Consistent with a radical behaviourist stance, DBT views the diagnostic criteria of BPD (DSM-IV, 2000, p. 710) as simply descriptions of the overt and covert behaviours of the client and, crucially, that when these behaviours stop the diagnosis ceases to exist. Indeed, to a radical behaviourist:

'A self or personality is at best a repertoire of behaviour imparted by an organized set of contingencies' (Skinner, 1974, p. 167).

This approach contrasts with other theoretical models of personality and personality disorder that consider the diagnostic criteria as symptoms of an underlying ‘borderline personality’ organisation. A behavioural approach to diagnosis provides a more hopeful perspective to clients. In pre-treatment, DBT therapists describe the behavioural understanding of the diagnosis, identify behavioural targets for treatment and describe and demonstrate how DBT delivers behavioural change. Outlining that changing both their overt and covert behaviours removes the diagnosis orients clients towards recovery.

DBT emphasises classical and operant conditioning in case conceptualisation. DBT therapists conduct behavioural analyses to comprehend both the classically conditioned links in the chain of events leading up to problematic behaviour and the functional (operant) consequences of the behaviour. For example, a client with a history of childhood sexual abuse frequently experienced increases in guilt and suicidal ideation whilst preparing for bed. Analysis of the increases in ideation revealed a classically conditioned association between going to bed and thoughts of suicide. The client learnt this association in childhood as the perpetrator would tell her she deserved to die during the abusive episodes, which occurred in her bed, for which she experienced intense guilt. In the present, following the increases in suicidal ideation, the client would search for self-harm implements. As she began to search, she experienced relief from guilt as she now believed that she was doing ‘the right thing’. Substantial relief from both guilt and suicidal ideation occurred when the client acted on her self-harm or suicidal urges. Client and therapist identified that the relief from the negative affect and the suicidal thoughts negatively reinforced suicidal and self-harming actions, whereas the belief that the client was now doing ‘what was right’ positively reinforced these same behaviours. Behavioural analyses enable clients and therapists to understand what triggers and maintains problematic behaviours and thus they form the first step in problem-solving, the core set of change strategies in DBT.

DBT therapists use the conceptualisation derived from behavioural analyses to develop comprehensive solution analyses. DBT employs standard cognitive behavioural problem-solving procedures, albeit with some novel twists (Linehan, 1993a; Swales & Heard, in press), to decrease problematic behaviours and increase the acquisition, strengthening and generalisation of new more skilful behaviours. The therapist both assists the client to acquire new behaviours but also analyzes and solves motivational factors that interfere with the utilisation of new behaviours. In developing solution analyses, DBT therapists use four sets of change procedures from the cognitive-behavioural canon: skills training, exposure, contingency management and cognitive modification. During the process of repeated behavioural and solution analyses, DBT therapists determine which of these four procedures will deliver maximum benefit to the client in stopping problematic behaviours and shaping new more functional behaviours. If the therapist identifies that the client has a skills deficit, for example, the client does not know how to be appropriately assertive, then the therapist will teach the client relevant skills. If the client does possess the relevant skills but unwarranted emotion or dysfunctional cognitions inhibit the client from using them, the therapist will use exposure and cognitive modification respectively to ameliorate the difficulty. For example, a client may have assertion skills but not use them because they experience overwhelming anxiety or think ‘I’m a bad person for asking for what I want’. The therapist in this circumstance may teach anxiety management techniques, cognitive restructuring of the judgement that asking for what you want is ‘bad’ combined with exposure to making appropriate requests. If the skilful behaviour is too low in the response hierarchy, then the therapist will use contingency management procedures. For example, the client may know how to ask for what they want but both past and current environments punish such requests. In this circumstance the therapist encourages and reinforces the client asking for what they want, helps the client find environments that reinforce requests for help and coaches the client in how to manage environments that punish requests for help.

DBT therapists generate, evaluate and implement comprehensive solution analyses using the full range of procedures to problematic responses in the behavioural analysis. For example, in the situation of the client experiencing increased suicidal ideation on getting ready for bed described above, the therapist employed several procedures. To decrease the classically conditioned increases

in suicidal ideation and guilt occurring on preparing for bed, the therapist conducted imaginal exposure to the bed-time sequence in session. For the client to experience non-reinforced exposure during this intervention, the therapist first rehearsed the client in some of the mindfulness skills that the client had learnt in skills group. A more detailed analysis of the bed-time routine revealed that the client tended to recall past distressing events and to anticipate an increase in suicidal thinking as she prepared for bed. The therapist encouraged the client to remain very mindful of the present moment by describing, in detail, her current actions in preparing for bed and to simply notice intrusive thoughts about the past or worry thoughts about the future, if they occurred, before refocusing on the present. During the exposure, the therapist remained alert to the client becoming unmindful and coached her on refocusing on the present. Following exposure during sessions, the client practised remaining more mindful at home when preparing for bed. When the client began to use these new skills at home in the evening, she called her therapist for additional coaching in the application of the skills in vivo (see section on Treatment Structure). To address the functional consequences of the behaviour, therapist and client focussed on solutions both to decrease guilt and suicidal ideation and to increase a sense of 'doing what was right'. Cognitive restructuring of thoughts of self-blame for the abuse proved effective in reducing guilt. To decrease the suicidal ideation and to increase her sense of 'doing the right thing', the client reminded herself of the negative consequences to herself and her family of self-harm and reviewed her DBT skills manual to identify a skill to utilise during the current crisis. As she practised the chosen skills she repeated to herself, 'Now I really am doing what's best for me and my family'.

Focussing on Acceptance: Validation & Zen

Balancing the behavioural focus on change, DBT strongly emphasises acceptance. Linehan drew on her knowledge of Zen principles to inform the use of acceptance in the treatment. Zen principles recognise the perfection of each moment, as each moment is caused by all that preceded it, and could not, therefore, be otherwise or more perfect than it is (Aitken, 1982; Swales & Heard, in press). Acceptance in the context of Zen implies an acknowledgement of what is rather than approval or agreement. The practice of validation within DBT draws on both this sense of acceptance and the recognition of the perfection of each moment. The client is perfect as he or she is, so is the therapist, as is the relationship between them – for how could the client, the therapist and the relationship be anything other than they are given all that has occurred prior to this moment. Zen principles also inform two significant aspects of Zen practise within DBT: mindfulness and radical acceptance. Each of these aspects of the treatment will now be considered further.

In validating the client, the DBT therapist seeks to find the truth, wisdom and accuracy in the client's responses and to highlight these. Clients with a BPD diagnosis have long histories, and often current realities, of invalidation where those around them have described their beliefs, emotions, inner experiences and behaviours as inappropriate. Consequently, clients may experience confusion about which aspects of their responses are valid and legitimate in any one context. Focussing on which aspects of the clients' behaviours, emotions and thoughts make sense enables them to begin to accept their responses and ultimately themselves.

Validation helps clients tolerate the extreme difficulty of change. Swann's Self-Verification Theory (Swann, Stein-Serussi, & Giesler, 1992) supports Linehan's early conceptualisation of validation (Linehan, 1993a). Swann highlights that arousal results when individuals receive feedback inconsistent with their self-construct. For some individuals, inconsistencies between feedback received and self-constructs may lead to extremely high levels of arousal. In the presence of high levels of arousal, the client both works hard to regain emotional control, resulting in less collaboration, and becomes less able to learn i.e. change. The therapeutic challenge for clients with a borderline diagnosis in a therapy with a strong focus on change is that the therapy invalidates their belief in their incapacity to change. Thus, whenever the therapist attempts to help the client to change the client's arousal increases, their capacity to learn decreases and non-collaboration increases. Given this challenge, the therapist must titrate pushing for change with validation of both the difficulty of change and the understandable disbelief in the possibility of change.

Since the publication of the treatment manual, Linehan's conceptualisation of validation has developed significantly (Linehan, 1997). In her revised formulation, she describes six levels of verbal validation and introduces the concept of functional validation. Verbal validation involves essentially saying to the client that his or her responses make sense in some way. The first four levels of verbal validation (unbiased listening and observing, accurate reflection, articulating unverballed thoughts and emotions and validation in terms of past learning or biological dysfunction) are common in many psychotherapeutic models. The two higher levels of verbal validation (validation in terms of present context and radical genuineness) although not necessarily unique to DBT, are highly characteristic of the treatment. For example, clients frequently report that self-injurious behaviour reduces anxiety, subjective tension or other negative affective states. In this circumstance, self-injury is valid if the client's goal is to reduce anxiety. So a DBT therapist faced with a client who has cut herself may say, 'It makes sense to me that you cut yourself. This is the only way you know to reduce your anxiety and most people in a similar situation would want to get their anxiety down' (current context validation). The DBT therapist would also push for change. For example, the therapist may say, 'We need to work on other ways for you to get your anxiety down though, as the cutting has serious negative consequences for you'. In this response the therapist invalidates the invalid aspects of the behaviour. For example with a client whose goals are to improve her relationship with her spouse and to train as a nurse, continuing to harm herself is an invalid behaviour in relation to these goals.

Radical genuineness describes a way of responding to the client as the therapist would respond to anyone else in his or her life i.e. the therapist does not treat the client as fragile. For example, a client returned to the therapy room and apologised grudgingly for storming out of the session and threatening not to return. The therapist said, 'You're right, that was not your shining moment'. The client looked visibly relieved at the response, as she knew that her behaviour of storming out was a problem and the therapist's response confirmed her own response to her behaviour. The client then gave a more fulsome apology, to which the therapist responded with further validation, 'I'm glad you came back to work on it as I know change is hard for you'. This example illustrates the difference between validation and making positive comments about the client. Validation requires the therapist to verify or ratify the *accuracy* of the client's self-perception, behaviour or experience even when these are negative. Such responses (regardless of valence) may not be easy for the client to hear but they increase the client's capacity to accept and understand herself and also can increase trust in the therapist.

In functional validation the therapist validates the veracity of the client's responses by responding to them with problem-solving. For example, the client reports that her boss has said that if the client's behaviour does not improve at work she will fire her. The DBT therapist may say "That sounds like a complete disaster we have to solve that problem now." The therapist then moves immediately to defining the problem and helping the client generate and implement solutions for the problem (functional validation).

The Zen principle of the essential perfection of each moment links to two key aspects of Zen practice within DBT, mindfulness and radical acceptance. Kabat-Zinn, who was perhaps the first practitioner to introduce mindfulness into Western psychological treatment, defines mindfulness as 'paying attention in a particular way: on purpose, in the present moment and non-judgementally' (Kabat-Zinn, 1994, p.4). To help clients learn mindfulness DBT teaches three *what* and three *how* component skills. The former describe the practices and the latter, the manner in which to conduct the practices. *Observing* requires noticing the raw experience of reality both inside and outside the self. *Describing* involves using words to articulate the contents of observation remaining aware of the possibility that language may introduce constructs or interpretations that obscure seeing reality as it is. Indeed *describing* does not form part of traditional Zen practice because of the risk that using words may hinder direct contact with experience. Linehan introduced *describing* as a mindfulness skill, however, to assist clients with borderline personality disorder to approach the difficult task of *observing*. *Participating* refers to the experience of becoming 'at-one' with the current moment, where the division between self and the world dissolves and there is an experience of 'flow'.

Becoming so engrossed in an activity that time seems to stand still, represents an everyday experience of participating. Regardless of the nature of the practice, mindfulness requires the application of all three of the *how* skills. Non-judgemental practice requires noticing and letting go of value judgements. For example, a client frequently stated that she was 'stupid' whenever she had difficulty applying a new skill. The therapist noticed that as a consequence of using the judgement the client's motivation to work in therapy decreased. The therapist encouraged the client to simply notice the judgement ('I'm stupid') as a judgement and either to just notice it or to restructure the judgement by describing the facts ('I find learning new skills hard'). Applying mindfulness in this way prevented major decreases in motivation during the application of new skills. *One-mindfully* simply requires doing one thing at a time. So if walking, walk; talking, talk; eating, eat. But do not walk, talk and eat at the same time! For example, every time the client who described herself as 'stupid' tried a new skill, she would think back over all her previous failures. Unsurprisingly this process generated hopelessness and demotivated her further. The therapist encouraged the client to remain focussed on this present moment so that whenever her mind wandered, to notice that it had done so and to then gently escort her attention back to the task at hand. Focussing on being effective asks both therapists and clients to do what works most effectively in any given situation rather than focussing on what is right or wrong.

DBT therapists practise, model and teach radical acceptance. This strong focus on acceptance of the client as he or she is and of reality as it is in this moment provides a further counter-point to the behavioural focus on change. Radical acceptance requires a complete and total acceptance of the facts of current reality and involves the supposition, based in Zen principles, that all events are caused and as such reality as it is in this moment can not be other than it is because of all that has preceded it. Radical acceptance also relates to the assumption that suffering arises from the combination of pain and non-acceptance of the pain. For example, a client with a substance abuse problem was working very hard to remain abstinent from alcohol and cocaine. After 8 months in treatment she had been abstinent for four months. She reported increasing frustration and dissatisfaction with her family who refused to believe she was abstinent and if any money or possessions went missing accused her first. The client thought that her family should now believe her and that their response was unjustified and unfair. The DBT therapist encouraged the client to practice radical acceptance of the facts of the situation. Firstly, that at present her family did not believe that she was abstinent. Secondly, that she, the client, experienced extreme sadness and frustration about their stance. Finally, that a natural consequence of having a past where you have lied and stolen is that it takes a long time for people to trust you again, and some people will not. Practising radical acceptance enabled the client to become more validating of her family's position and to respond more effectively when she was unjustly accused. Perhaps unsurprisingly, this led to a gradual reduction in accusations by her family.

DBT teaches both mindfulness and radical acceptance to clients during skills training modules that emphasise acceptance of the present moment rather than changing a current situation. Clarifying with clients that the aim of such skills is not to help them feel better but rather to assist in tolerating and managing difficult and painful experiences more effectively is important in motivating them to both learn and persist in the practice of these challenging skills. Paradoxically, however, if the client succeeds in fully accepting herself and the current moment most likely she has fundamentally changed!

Dialectical Philosophy

To house the two contrasting principles of acceptance and change, Linehan uses dialectical philosophy. Dialectical philosophy encompasses both a world view and a conceptualisation of the process of change (Linehan, 1993a; Linehan & Schmidt, 1995). Both aspects are relevant in DBT. A dialectical world view describes reality as complex, inter-related and consisting of opposing forces. Dialectics acknowledges the relationship between parts of a system to the whole and consequently has a systemic perspective on reality. DBT thus considers how multiple systems within the individual impact on one another (for example, emotional dysregulation impacts on systems of behavioural and cognitive regulation, interpersonal functioning and sense of self) and how the individual and his or her

social and cultural contexts mutually influence each other. The connection and tension between opposing forces leads to change. Dialectics as a process of change recognises the validity in opposing or contradictory positions or perspectives and synthesises these positions into a new perspective which then develops further tensions requiring synthesis. The dialectical approach in the treatment influences the balancing of treatment strategies and the constant search for synthesis of contrasting views.

The central dialectic in DBT is that of acceptance and change. All treatment strategies align on this central dialectic. In addition to the core strategies of the treatment already described, problem-solving (change) and validation (acceptance), the stylistic and case management strategies are also positioned on this dialectic. The stylistic strategies consist of reciprocal communication strategies on the acceptance side and irreverent communication on the change side. Reciprocal strategies subsume the standard psychotherapy style of warmth and genuineness, but in DBT also include self disclosure. Self disclosure is of two types: personal and self-involving. Modelling self-disclosures, in which the therapist discloses ways in which he or she has utilised the principles or skills of the treatment to solve a problem in his or her own life, are a distinctive form of self-disclosure used in DBT. The therapist uses irreverent communication strategies when the client or client and therapist together have reached an impasse in therapy. Irreverence challenges the established ways of perceiving, experiencing and acting to facilitate movement within the therapy. The most basic level of irreverence uses a matter-of-fact tone to discuss topics which ordinarily elicit a more affective response. For example, DBT therapists discuss suicidal behaviours and communications in a matter-of-fact tone, often to the surprise of clients frequently used to therapists increasing their levels of warmth and concern during discussions of current suicidal behaviours. Therapists may also employ 'off beat' irreverence. For example, in response to a client threatening to kill herself a therapist may say 'But you can't possibly kill yourself - you promised not to drop out of therapy'. If the client becomes more flexible and willing in response to an irreverent strategy, the therapist usually responds with reciprocal communication strategies to reinforce the change on the client's part.

Case management strategies are also aligned on the acceptance and change dialectic. Consultation to the patient, in which the therapist consults primarily with the client about how to obtain maximum help from the treatment network, lies on the change end. This stance of the treatment contrasts with the often standard approach to suicidal clients that frequently emphasises communication between members of the treatment network about the client, rather than emphasising the client's role in communicating with the treatment network. Environmental intervention by the therapist on behalf of the client acts as a dialectical counter-point to consultation-to-the-patient strategy and recognises those circumstances in which the client cannot act effectively on his or her behalf. As such this set of strategies lies on the acceptance end of the dialectic.

DBT therapists teach four sets of skills to clients also arranged on the acceptance and change dialectic. Mindfulness and Distress Tolerance, of which radical acceptance is a component part, constitute the acceptance modules. As described, these modules teach skills to assist clients to remain in the present moment and to tolerate crises without engaging in behaviours that may worsen a situation. The other two modules, interpersonal effectiveness and emotion regulation, focus on teaching skills to manage relationships more effectively and to understand and regulate affect. Practitioners familiar with cognitive behavioural approaches to assertiveness and emotion regulation will find much that is familiar in these two modules.

In addition to balancing treatment strategies on the acceptance and change dialectic, DBT also uses a set of dialectical strategies that embody both acceptance and change within them. For example, DBT therapists may use and develop metaphors to help clients both recognise where they are (acceptance) but also how they might change. A therapist may also highlight paradoxes within therapy. For example, to a client so attached to her therapist that her desperation to remain in therapy outweighs her desire to move forward in her life, the therapist may say 'the harder you work on decreasing your dependency on me, the longer I'll work with you!'

Dialectics encourages a search for synthesis when tensions arise in the treatment and thus describes the process of change within the treatment. Tensions can arise within the client (e.g. “I’m to blame for my problems” versus “Others are to blame for my problems”) between the client and the therapist (e.g. “Suicidal behaviour is the solution” [client] versus “Suicidal behaviour is the problem” [therapist]) and between different members of the treatment team (e.g. “This client is a vulnerable victim” versus “This client is a manipulative bully”). Dialectics as a philosophy accepts that there is no absolute truth and that truth evolves and develops through the synthesis of opposing views and the emergence of new theses. DBT views the occurrence of dialectical tensions in the therapy as an opportunity to work on synthesis thus promoting growth and change. Synthesis of opposing views requires the therapist to work with the client or other therapists to identify, non-judgmentally, the validity in both poles of the dialectic and to work on finding syntheses that recognise this validity. For example, suicidal behaviour is a solution to the client who experiences relief from tension and shame when she thinks of suicide or engages in suicidal behaviour. Suicidal behaviour also constitutes a problem as the client feels ashamed and guilty about the behaviour and feels increasingly stressed by continuing the behaviour. The synthesis requires finding solutions for the client that involve relieving shame and tension without suicide and solving the problems that lead to contemplation of suicide as a solution.

Structure of DBT.

DBT therapists use the principles of the treatment described above within a highly structured treatment frame. DBT programmes address clients’ problems with a comprehensive multi-function treatment with multiple modalities. As a therapy, DBT also structures the therapeutic journey into stages, and within stages hierarchically addresses clients’ problems.

Functions & Modes of treatment

DBT programmes have five functions designed to comprehensively address the problems of clients with a borderline diagnosis (see Table 1). DBT presumes a capability and motivational deficit model of borderline personality disorder. Linehan hypothesised that, as a consequence of a biological vulnerability transacting with invalidating environments, clients develop deficits in key self-management skills (e.g. emotion regulation, interpersonal effectiveness, distress tolerance) and in sustaining motivation to change. Each function of the treatment addresses some aspect of these capability and motivational deficits. For example, DBT programmes devote an entire modality of treatment to skill acquisition; most commonly skills training groups fulfil this function. Without sustained attention to the motivational factors that interfere in changing behaviour and the effective utilization of new skills, skills’ training alone is unlikely to be effective. DBT individual psychotherapy is the most common modality addressing motivational problems. The DBT therapist, through repeated behavioural and solution analyses reaches a comprehensive understanding of the motivational difficulties of the client and implements strategies to ameliorate them. DBT recognises, however, that for clients with high levels of emotional dysregulation whose skill level is highly context dependent, these two modalities alone will not comprehensively solve the clients’ difficulties. To ensure effective generalisation, DBT treatment programmes develop modalities to assist clients in transitioning new behaviours acquired and strengthened in therapy to their non-therapy environments. The most frequently used modality to fulfil this function is telephone consultation, where the DBT therapist provides skills coaching to the client in vivo. DBT therapists may also involve significant others from the clients’ environments in the change process if the response of those in the environment significantly affects the capacity of the client to change.

Table 1: Functions and treatment modalities in DBT

FUNCTION	AIM	EXAMPLE MODALITIES
Capability enhancement	Acquisition and a degree of strengthening of new skills.	Skills training groups.
Motivational enhancement	Identification and treatment of factors that inhibit the utilisation of more skilful means, such as emotions, cognitions, reinforcement contingencies.	Individual DBT psychotherapy.
Generalisation	Further strengthening and generalisation of new skills to the non-therapy environment.	Telephone consultation.
Structure the environment	<ol style="list-style-type: none"> 1. Assist environment of the client to support and reinforce behavioural change. 2. Intervene in the system around the treatment programme to ensure effective delivery of the treatment. 	<ol style="list-style-type: none"> 1. DBT Family Therapy. 2. DBT Project group meetings.
Enhance Therapist Capabilities and Motivation	Acquisition of new skills and sustaining motivation of therapists.	DBT Consultation Team.

Consistent with dialectical philosophy, DBT recognises the impact of the process of therapy on the therapist and places a strong emphasis on enhancing the therapists' capabilities and motivation to treat the clients. Treating clients with multiple comorbidities and high risk where change is often slow places a significant demand on therapists and can frequently lead to burnout. DBT programmes, therefore, mandate that all therapists on the team meet regularly, usually weekly, for case consultation. Distinctively DBT is a *recursive* treatment i.e. it encourages therapists to apply the treatment to themselves to resolve problems that arise for them in therapy and explicitly requires that consultation team members use the therapy to treat each other when problems arise for the therapist or within the therapy. For example, a team noticed that one client was not making progress in reducing self-harm. On discussing this in the team, the therapist described extreme difficulty in conducting behavioural and solution analyses of the self-harm behaviour as the client became very angry and threatening towards the therapist during the analysis. The therapist often became highly anxious when threatened and frequently terminated analyses the moment the client became mildly angry, thus reinforcing the client's angry response to conducting chain analysis. The team rehearsed with the therapist several components to a solution to this problem: orienting the client to the current reinforcement contingencies, motivating the client to work on the problem by linking reducing anger and threats in therapy with the client's stated goal of becoming more interpersonally effective, conducting a chain analysis of the links leading to the angry response and possible solutions for these, including helping the client manage shame about her self-harm, the most important link in the chain leading to the anger response, in order to proceed with the chain analysis. The team also helped the therapist let go of judgements that she was a 'bad' therapist when she experienced urges to abandon chain analyses, as this judgement interfered with her implementing more effective solutions to the client's angry and threatening behaviour, by simply stating more mindfully 'I notice I am avoiding

dealing with my client's anger and threats – which strategy might be helpful for me to try now to return to the analysis.”

The use of treatment functions to structure treatment delivery allows for a degree of flexibility in adapting the treatment to different settings. For example, in inpatient settings, milieu therapists may provide in vivo skills coaching on the unit to promote generalisation (Swenson, Witterholt & Bohus, 2007), or in adolescent programmes parents or guardians may be included in skills training groups to enhance skills generalisation or to structure the adolescents' environment to reinforce clinical progress (Miller, Rathus & Linehan, 2007). Since the initial development of the treatment clinicians have adapted the treatment to new populations and for different treatment settings. Several adaptations are described in the book edited by Dimeff & Koerner (2007).

Stages & Targets

DBT structures the treatment in stages (Linehan, 1999). Before treatment can begin the therapist engages the client in the pre-treatment stage, during which the therapist establishes the client's goals and links them with the treatment. The therapist also completes orientation and commitment to the treatment during this stage. This stage usually lasts between four and six sessions. DBT therapists shape commitment to the goals of treatment such as stopping suicidal and self-harming behaviour and working to resolve difficulties in the therapy (therapy-interfering behaviour). Following completion of pre-treatment, clients enter Stage 1 that focuses on the achievement of behavioural stability. Once the client has achieved a more stable life, if appropriate, he or she may enter Stage 2, emotionally processing the past, including the resolution of childhood trauma if appropriate. The majority of research in DBT has involved clients in Stage 1 treatment.

Treatment in stage 1, involves tackling identified problems in a hierarchical manner. The top target in this stage of treatment is life-threatening behaviours encompassing suicidal, parasuicidal, homicidal and other imminently life-threatening behaviours. Therapy-interfering behaviours form the second target for treatment. Therapy interfering behaviours include both client and therapist behaviours that interfere in the effective delivery of the treatment. Examples of client behaviours may include not practising skills, not attending therapy sessions and repeatedly saying 'I don't know'. Therapist therapy-interfering behaviours may include avoidance of targeting identified target behaviours, too little or too much validation or irreverence. The third target is quality-of-life interfering behaviours that severely destabilise the client. Behaviours that form part of other psychiatric diagnoses are included here, for example, low mood in the depressed client or flashbacks in the client with PTSD, as would behaviours such as seeking frequent psychiatric hospitalisations, forming or maintaining seriously abusive relationships or forensic behaviours.

Distinctively each function of DBT has its own unique hierarchy. The target hierarchy in individual therapy follows the overarching target hierarchy of Stage 1 of treatment as outlined above. In modalities devoted to enhancing capabilities, the therapists' top priority is reducing therapy destructive behaviours (e.g. self-harm in group). In practice, such behaviours occur rarely. The next target, that forms the main focus, is skills acquisition and some strengthening. Therapy-interfering behaviour follows this target. The ordering of targets in this way results in two major characteristics of DBT skills training groups. Firstly, the groups operate more like a class than a psychotherapy group and secondly, skills group leaders mostly ignore therapy-interfering behaviours. DBT skills group therapists will remain aware of group process and manage it proactively but such processes do not form part of group discussion. In telephone coaching the top target is reduction of suicidal crisis behaviours followed by increasing generalisation of skills. Therapy-interfering behaviours occurring during telephone calls are not targeted during the call itself. The therapist may highlight them when they occur and agenda them for the next scheduled therapy session.

Research Evidence

As a behavioural treatment, DBT strongly emphasises collecting empirical data in relation to efficacy and effectiveness. Consistent with the dialectical philosophy, the treatment also endeavours to respond to new theoretical and technical developments in psychotherapy. The following two sections review the current evidential basis for DBT and consider future research directions.

DBT for adult women with BPD and suicidal behaviour

There are now five randomised clinical trial examining the efficacy of DBT for women with BPD and suicidal behaviour; investigators other than the treatment developer conducted three of these trials. The first clinical trial of DBT (Linehan, Armstrong, Suarez, Allmon & Heard, 1991) demonstrated that recipients of DBT, in comparison to recipients of treatment as usual (TAU), had significantly fewer, and less medically severe, parasuicidal acts, higher treatment retention rates (DBT=83% vs TAU=42%) and spent less time as in-patients in psychiatric hospital. In addition, those in the DBT condition had significantly lower anger scores and higher social and global functioning. Both the DBT and TAU groups demonstrated improvements in suicidal ideation and depression. Treatment gains, although less marked at one year follow-up, were generally maintained (Linehan, Tutek, Heard & Armstrong, 1994). A recent replication of this study by the Linehan group (Linehan, Comtois, Murray, Brown, Gallop et al, 2006) utilised a more rigorous control condition, comparing a year of DBT treatment with non-behavioural treatment by experts (TBE). Both treatments were community based. Intention-to-treat analyses revealed that recipients of DBT were significantly less likely to make a suicide attempt, to require hospital admission for suicidal ideation and to drop out of treatment. DBT clients also had fewer psychiatric hospitalisations and psychiatric emergency room visits. Their medical risk scores for all parasuicidal behaviours were lower than for those receiving TBE.

Verheul, van den Bosch, Koeter, dr Ridder, Stijnen & van den Brink (2003) also compared DBT to TAU. DBT resulted in greater reductions in self-mutilation, decreases that were especially marked in those with the highest rates of the behaviour at baseline, and self-damaging impulsive behaviours (e.g. substance misuse, gambling, binge-eating). At 6 months follow-up, DBT treatment gains in parasuicidal and impulsive behaviours and alcohol use were sustained, although improvements in drug use other than alcohol were not (van den Bosch, Koeter, Stijnen, Verheul & van den Brink, 2005).

Koons, Robins, Tweed, Lynch, Gonzalez et al, (2001) compared DBT with a predominantly CBT control condition with women veterans, only 40% of whom had a recent history of parasuicidal behaviour. After six months of treatment, reductions in suicidal ideation, depression, hopelessness and anger expression were evident in the DBT group. Parasuicidal acts (low in both conditions), treatment retention, anger experienced and dissociation were equivalent in both groups.

Clarkin, Levy, Lenzenweger & Kernberg (2007) conducted the first 'horse race' study involving DBT. This study was also the first to include male as well as female participants. Their study was a three-armed trial comparing DBT, Transference Focussed Psychotherapy (TFP) and a dynamic supportive treatment. As is common in such studies, all treatments performed well on a substantial number of measures; in this case on depression, anxiety, global functioning and social adjustment. Both TFP and DBT showed significant improvements in suicidality. TFP and supportive treatment demonstrated additional gains in impulsivity. TFP recipients also had decreased verbal and direct assaults, as well as reductions in irritability.

These data support the efficacy of DBT as a treatment for adult women with suicidal behaviour. A recent study by Comtois and colleagues (Comtois, Elwood, Holdcraft, Smith & Simpson, 2007) demonstrated that the results obtained in efficacy studies may translate into effective clinical services. This study summarised the outcomes of clients from a DBT programme in a

community mental health centre and benchmarked them against the results from three of the efficacy studies. Results from the community clinic sample were comparable to those in the randomised trials.

DBT for adult women with BPD, suicidal behaviour and substance dependence

Clients with personality disorder and drug dependence frequently fall between two-stools in terms of service delivery. Personality disorder services frequently require that clients with drug dependence have this problem treated prior to treatment of their personality disorder; drug dependence services often do not treat individuals with a diagnosis of a personality disorder. In response to this dilemma Linehan & colleagues adapted DBT for individuals with a diagnosis of BPD who met criteria for drug dependence or abuse (Linehan & Dimeff, 2007). In a randomised controlled trial of this modification (Linehan, Schmidt, Dimeff, Craft, Kanter & Comtois, 1999), DBT participants had significantly greater reductions in substance misuse compared to TAU at one year and greater treatment retention rates (DBT=55%; TAU=19%). During the follow-up period of four months, DBT participants had significantly greater reductions in substance abuse and greater gains in global and social adjustment. In a second trial of this adaptation with women diagnosed with BPD and opioid dependence, Linehan and colleagues again used a more rigorous control condition, Comprehensive Validation plus 12-step (Linehan, Dimeff, Reynolds, Welch, Heagerty et al, 2002). Both treatments effectively reduced opioid use. Treatment retention was excellent in the Comprehensive Validation condition (100%) although still high in the DBT condition (64%). Clients in the DBT condition were significantly more likely to maintain treatment gains during the follow-up period.

DBT for diagnoses other than BPD and for other age groups

Several researchers have adapted DBT for the treatment of other conditions and other age groups. Some of these adaptations show limited if promising evidence for the efficacy of DBT. Telch, Agras & Linehan, (2001) demonstrated significant benefits for an adapted form of DBT in the treatment of binge-eating disorder. An adaptation of DBT for the treatment of older adults with comorbid personality disorder, not specifically BPD, and depression has also shown promise in two randomised controlled trials (Lynch, Morse, Mendelsohn & Robins, 2003; Lynch, Cheavens, Cukrowicz, Thorp, Bronner & Beyer, 2007). Miller, Rathus & Linehan (2007) describe the adaptation of DBT for adolescents. A controlled trial of this adaptation demonstrated some preliminary evidence for the effectiveness of the treatment (Rathus & Miller, 2002). Adolescents in the DBT-A condition despite more severe pre-treatment pathology, had significantly fewer psychiatric hospitalisations during treatment and better treatment completion than a comparison group also receiving treatment. Adolescents receiving DBT demonstrated a trend towards fewer parasuicidal behaviours during treatment and a significant pre-post reduction in symptoms of BPD, suicidal ideation and general psychiatric symptoms.

Future Research Directions

At the time of writing, compared to other treatments for BPD, DBT has the most extensive evidence base in support of its efficacy. Future directions to build on this success lie in three main areas. Firstly, DBT encompasses a wide range of strategies, many of them apparently contradictory as highlighted in the section of dialectics. It is probable that only a proportion of these are necessary for effective outcomes. Indeed, the Linehan et al (2002) study with substance dependent clients demonstrated that a treatment based on validation alone demonstrated certain therapeutic benefits. Future studies may find examining the relative importance of the change procedures (skills training, exposure, contingency management, cognitive modification) useful in increasing the effect sizes obtained by the treatment. Secondly, DBT is a multi-function, multi-modal treatment that requires a significant degree of organisational commitment for implementation. At present, evidence is lacking to indicate whether all or only a proportion of modalities is necessary to obtain effective outcomes. A three armed study is underway currently comparing standard out-patient DBT, Individual DBT psychotherapy plus a coping group and DBT Skills Training groups plus case management. Other

studies examining the importance of the telephone modality to support generalisation may also prove useful, as many services find this component of the treatment the most challenging to implement. A second area for future research also relates to implementation, in particular to the levels of adherence and competency in the treatment required to deliver effective outcomes. Efficacy studies select therapists for the potential to learn and deliver the treatment, indeed some studies only select already competent therapists to participate. Study therapists also receive training, supervision and monitoring in the delivery of the treatment. Consequently, in most studies, therapists deliver treatment that is both adherent to the manual and competent. In routine clinical settings, staff rarely receive extensive training in any specific treatment model and supervision is often limited. Supervision frequently relies on self-report rarely using more reliable monitoring methods, such as audio or video-recording. Staff are also unlikely to receive feedback in the form of routine outcome monitoring of the effectiveness of their work. The impact of these differences in staff training and supervision form a useful focus for research. For most psychotherapeutic interventions the levels of adherence and competence necessary to obtain effective outcomes is unknown, and which methods of training are the most successful in achieving these levels of therapeutic skill also remain a matter of opinion. Research into these areas would move forward the implementation of DBT specifically and evidence-based psychotherapies more generally.

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A Relational Frame Theory Account of Empathy

Roger Vilaradaga

Abstract

The current paper proposes a Relational Frame Theory (RFT, Hayes, Barnes-Holmes, & Roche, 2001a) conceptualization of empathy and perspective taking that follows previous literature outlining a relationship between those phenomena and general functioning. Deictic framing, a relational operant investigated by RFT researchers, constitutes the behavioral core of perspective taking and empathic concern towards other individuals. Given (a) the recent evidence supporting the importance of deictic framing in the areas of child development and autism and (b) the reported success of several studies in implementing perspective-taking procedures, it is reasonable to conclude that deictic framing is a psychological process that can play an important role in the development of new interventions that can be extended to the adult population and to other human phenomena, such as social coordination, helping behaviors, stigma/prejudice reduction, and clinical problems.

Keywords: empathy, deictic framing, perspective taking, RFT, contextual behavioral science, relational responding, social coordination, helping behaviors, clinical problems.

The term empathy comes from the Greek “*empathia*” which is a composite of the words “*en*” and “*pathos*”, and translates into “being in some sort of suffering, feeling or emotion”. This term was incorporated to western culture by the Germans at the beginning of the 20th century in the context of theories of art appreciation, and it became used in psychology by Titchener as a form of perspective-taking that referred to the psychological process of objectively perceiving another person’s situation.

The current literature on empathy has evolved after that original conceptualization. As discussed by Batson (1991, p. 87), although Titchener originally conceptualized empathy in its cognitive dimension, research during the 60s and 70s emphasized its emotional side, with perspective-taking as a precursor of that ability. Empathy as a result came to have an important emotional component and it was defined as a set of congruent vicarious emotions that were other-oriented and barely distinguishable from pity, compassion and tenderness.

In contrast with that social emphasis, other authors proposed that when those emotions are oriented towards reducing someone else’s suffering those should be called sympathy, and empathy should be simply defined as “an affective response that stems from the apprehension or comprehension of another’s emotional state or condition and is similar to what the other person is feeling or would be expected to feel” (Eisenberg, 2000, p.671). For these authors, pure empathy turns into sympathy or personal distress after some “cognitive processing” where the individual learns to differentiate between his own emotional states and those of others.

A third main approach to empathy conceptualizes it as a multidimensional phenomenon, resolving the dispute by integrating the cognitive and the emotional dimensions of empathy and arguing that empathy is a composite of perspective-taking, fantasy orientation, empathic concern and personal distress (Davis, 1983). Fantasy orientation is the individuals’ tendency to identify with fictitious characters, empathic concern refers to the feelings of sympathy and concern for others, and personal distress to the feelings of anxiety and difficulty in interpersonal settings.

Nonetheless, there seems to be a strong consensus about the relationships between those psychological processes and other important areas of functioning. For example, it has been reported that those processes are strongly related to general well functioning (Eisenberg, 2000, p.672), pro-social behaviors (Underwood & Moore, 1982; Batson, 2002; Scaffidi-Abbate, Isgro, Wicklund, & Boca, 2006b),

conflict resolution (Corcoran & Mallinckrodt, 2000; Drolet, Larrick, & Morris, 1998), and marital adjustment (Long, 1993), whereas a lack of them has been observed in autism and mental retardation (Baron-Cohen, Leslie, & Frith, 1985; Charlop-Christy & Daneshvar, 2003; Blacher-Dixon & Simeonsson, 1981), and in some psychological disorders (Imura, 2002; Rupp & Jurkovic, 1996; Schiffman et al., 2004; Wells, Clark, & Ahmad, 1998).

The evidence seems to indicate not only that a lack of emotional and cognitive perspective taking skills is associated with the development of those problems, but that when we manipulate or try to change this ability, children become more intelligent, understanding, productive, capable of solving problems and less impulsive (Saltz, Dixon, & Johnson, 1977; Rosen, 1974). Perspective taking has also shown to reduce delinquency (Chandler, 1973), group conflicts (Corcoran et al., 2000) and stigma (Galinsky & Ku, 2004).

However, as stated by Eisenberg, “empirical work in the field is starting to move from attention to mere correlation to concern about moderating influences, mediational processes, and the direction of causality between morally relevant variables and emotionality and regulation” (2000, p.688). What seems to be missing from the literature on empathy is precisely what contextual behavioral scientists would be eager to provide, which are principles of change that provide philosophical clarity, theory and data (Vilardaga, Levin, & Hayes, 2007) and a broader range of methodologies to explore psychological events (e.g., basic laboratory research, analog studies or randomized controlled trials) with the aim of producing rules of generalization with increasing levels of precision, scope and depth (Vilardaga, Hayes, Levin, & Muto, 2008). Such an approach and the basic account provided by Relational Frame Theory (RFT, Hayes, Barnes-Holmes, & Roche, 2001b) has guided the writing of this paper.

RFT is a contextual behavioral account of language and cognition that incorporates the body of research from behavior analysis and focuses on complex human phenomena. The core of this behavioral theory is that relating is an operant that emerges after a particular history of reinforcement (Berens & Hayes, 2007).

Early research on relational responding and stimulus equivalence showed that this behavioral process has two additional properties which are mutual and combinatorial entailment. Mutual entailment is exemplified by the fact that in the same way that an individual will be able to respond by saying the word “house” in the presence of a house, he would most likely be able to imagine a house when hearing the word “house”. In the same way, combinatorial entailment is the phenomenon that occurs when an individual learns that a house is bigger than a condo and a condo bigger than a studio, and then he derives that a house is bigger than a studio without further instruction.

Those properties of relational responding have innumerable benefits for the human species. It allows organisms to better adjust to their environments, because language itself becomes an additional part of the environment that increases the scope of the organism’s interactions with it. When organisms respond not only to external events but also to verbal stimuli, the possibilities of manipulating and changing the world are largely increased, and by virtue of this process, the functions of its objects are amplified. For example, individuals can learn to respond to the words “it’s hot today” in ways that will prevent feeling that sensation. Those words become a social/verbal context that brings to bear a set of responses by part of the organism that allows certain consequences to happen.

One of the most interesting additions of RFT goes beyond responding to the formal properties of the objects of the world. Human beings have been considered “social by nature”, but what this point highlights is that it is not only important to manipulate and control static objects that we can compare and classify, we also need to learn to control and influence other verbal organisms for the purposes of survival. This aspect of the environment is extremely important. It determines our success as a species,

and this is probably why many different notions of empathy and perspective-taking have received such a large amount of attention in the psychological literature.

From this point of view, the RFT account of perspective taking and empathy resolves some of the problems observed in the psychological literature since it provides a theoretical and functional description of that phenomenon that explains some of the outcomes to which it has been related.

Deictic Framing and Empathy

In order to understand the RFT conceptualization of empathy, it is necessary to describe other aspects of this theory. In addition to mutual and combinatorial entailment RFT investigators have proposed the use of different terms to refer to different kinds of relational responding. They have argued that we can talk about different types of relational operants, such as coordination framing, hierarchical framing and comparison framing. Our RFT account of empathy starts with the description of one of those relational operants, deictic framing (Hayes, 1984).

Deictic framing is a relational operant that allows distinctions between I-YOU, HERE-THERE and NOW-THEN. The emergence of deictic framing does not depend upon the abstraction of the properties of the objects (such as “more than” or “less than”), instead, is the result of the abstraction of the perspective of the speaker. To understand someone’s distinction between “I” and “YOU”, one needs to know who the speaker is. Imagine there are two people in a room. There is a telephone call and both individuals provide the following contextual cue at the same time: “Will that call be for *you* or for *me*?”. The words “you” and “me” will be topographically identical for both individuals, but responding effectively to that question will require taking each other’s perspective, otherwise the interaction would be incomprehensible. The same applies to understanding NOW-THEN and HERE-THERE contextual cues, since a speaker’s perspective is necessary to make sense of them.

The emergence of deictic framing is a core behavioral process that starts at an early age. Research has shown that a particular history of reinforcement that prompts for deictic discriminations would be necessary for the discrimination of a sense of I-YOU and that this ability can be trained (Weil, 2007). This operant is present in normal adults (McHugh, Barnes-Holmes, & Barnes-Holmes, 2004), and it goes from simple statements such as “this toy is mine” to more complex verbal contexts such as understanding the different characters of a story. For that reason it can be argued that deictic framing enhances people’s coordination of their social behavior, and as a matter of fact, deficits in deictic framing have been found in children with autism and developmental disorders (Rehfeldt, Dillen, Ziomek, & Kowalchuk, 2007), which points out to the idea that a lack of deictic framing may be linked to poor social skills. Deictic framing would allow a transformation of stimulus functions in the listener as a result of statements such as “How would you feel if you were me?” If sadness is experienced by that speaker, the listener can respond in ways that would both reduce the sadness experienced by the speaker and the sadness evoked by that question in himself. But that relational process and its associated functions could never take place without a deictic framing repertoire in the first place.

However, arguing that deictic framing allows individuals to supply reinforcement to each other effectively and enforce social coordination does not fully explore the extent of this phenomenon. People behave towards each other in multiple ways, but they also behave with regards their own behavior and they do so in a special way. From an RFT point of view an human organism is “not simply behaving with regard to his behavior, but is also behaving *verbally* with regard to his behavior” (Hayes & Wilson, 1993, p. 297). When applied to our topic this means that people behave verbally towards their own experiences, such as judgments, evaluations or emotional interpersonal reactions.

The question remains about what is the behavioral process by means of which individuals interact more effectively with their own private reactions towards each other. Following Skinner's account (Skinner, 1974), RFT researchers have proposed that "If I ask many, many questions of a person, the only thing that will be consistent is not the content of the answer, but the context from which the answer occurs. 'I, HERE, NOW,' is the self that is left behind when all of the content differences are subtracted out." (Barnes-Holmes, Hayes, & Dymond, 2001a, p.129). Following that rationale, the discrimination of an invariant "I" that is the result of a history of deictic framing reduces the dominance of the derived transformations of functions of particular thoughts and feelings about others. For example, the thought that a person that I know "is miserable" is a particular relational discrimination that brings to bear a set of aversive functions, such as feelings of rejection, disgust, etc. However, after a sufficient history of prompts that would allow me to discriminate that there is always "an ever-present division between the speaker (always HERE and NOW) and the spoken about (always THERE and THEN)" (Barnes-Holmes, Stewart, Dymond, & Roche, 2000, p.64), a process of discrimination would occur that would allow me to see that this particular thought is just a relational response that has arisen after a particular history of interactions with that individual. Furthermore, I would become aware that there is a distinction between who another individual really is (in behavioral terms a locus or perspective: YOU-THERE-THEN) and my thoughts, feelings or relational responses about him/her.

This sense of division between the speaker and the spoken about is central in the RFT conceptualization of empathic concern and it constitutes a particular instance of the construction of the verbal other (Barnes-Holmes, Hayes, & Dymond, 2001b). Behavior under such circumstances operates under better contextual control and this sense of "I-YOU as perspective" integrates the discriminative functions evoked by others, a larger set of social contingencies can be contacted, and the social behavioral repertoire of the individual becomes more flexible. In addition, this process does not imply that the aversive functions of a history of contact with a particular individual will be omitted; the individual instead is responding as a result of a more inclusive set of discriminations that provide more flexibility (or sensitivity) to what is really possible in the interactions with this particular organism. This self-relational perspective-taking is the opposite to the blurring effect of the dominance of particular thoughts and judgments, and self-awareness studies seem to confirm that this is the case (e.g., Scaffidi-Abbate, Isgro, Wicklund, & Boca, 2006a).

This would also explain why when the experience of an individual is under the contextual control of a sense of "I-YOU as invariant," his activity is socially more organized and effective. The correlations between empathy, general functioning, social cohesion, conflict resolution and altruistic behaviors reported at the beginning of this paper can be explained through this behavioral process. In addition, other natural phenomena, such as what has been referred as spirituality and mindfulness practices, could be accounted by the integrated sense of permanence and unity of an "I-YOU as invariant" (Hayes, 1984; Barnes-Holmes, Hayes, & Gregg, 2001; Vilardaga, Yadavaia, Levin, Hayes, & Harper, 2007).

In summary, deictic framing, as an operant, allows individuals to coordinate their behavior and make sense of the meaning of other individual's statements, which is crucial for social interactions at the most basic level. Likewise, individuals who have been prompted by their social/verbal community to achieve a sense of "I-YOU as invariant" are more likely to discriminate their own discriminations about themselves and others without being necessarily under their control. In addition, RFT suggests that given the formation of an "I-YOU as invariant", individuals will experience more satisfactory psychological well being and more healthy social relations due to the fact that they will be more likely to respond effectively to other individuals and themselves in ways that take into account a larger set of relational discriminations, and that will result in a broadening of their repertoire.

Conclusions

As I mentioned at the beginning of this paper, the empathy literature has outlined several approaches for how to conceptualize this phenomenon, however, the body of research that has investigated empathy has utilized a narrow methodological strategy (mostly cross-sectional research), which has resulted in a weak approach to the contextual analysis of empathy and therefore in a lack of emphasis in the development of actual principles of change that would lead to more useful scientific findings.

In this paper we have argued that previous developments in RFT and deictic framing have opened the path for (a) a conceptualization of the emergence of feelings of empathy among individuals (b) a theoretical link between empathy and actual indicators of well being, and (c) a principle based approach to the manipulation of specific components of the social/verbal community that would enhance those processes.

One of the main features of RFT and Contextual Behavioral Science at large are its aim of producing rules of generalization with increasing levels of precision, scope and depth (Vilardaga et al., in press). Further research is needed to show that deictic framing is actually linked to empathy and psychological well being but in this paper I have attempted to show that this theoretical model might constitute an integrative account of the observations described in the larger literature and a useful path to further explore it.

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Recent Trends in Conducting School-based Experimental Functional Analyses

Stacy L. Carter

Abstract

Demonstrations of school-based experimental functional analyses have received limited attention within the literature. School settings present unique practical and ethical concerns related to the implementation of experimental analyses which were originally developed within clinical settings. Recent examples have made definite contributions toward addressing the problems related to incorporation of experimental functional analyses in school settings. The advances made in these areas are reviewed and discussed in an effort to further the potential use of these procedures with school settings.

Keywords: functional analysis, applied behavior analysis, school settings, problem behavior

Consultation in school settings can be a very complex process that requires an extensive knowledge of school-related problems, understanding of how interpersonal relationships are developed and maintained, and competencies in training specific skills to other practitioners. While evidence for the effectiveness of school-based consultation exists (Gutkin, & Curtis, 1999; Kratochwill, Elliott, & Busse, 1995; Sheridan, Welch, & Orme, 1996), the incorporation of experimental functional analysis (EFA) within school-based consultation is still in need of further refinement. EFA involves observing, recording, and evaluating potential variables maintaining a specific target behavior during a process that involves systematically manipulating these potential maintaining variables (Iwata, Dorsey, Slifer, Bauman, & Richman, 1982/1994; Vollmer, & Northrup, 1996). One of the primary problems that exists with including experimental functional analysis procedures within school settings is the issue of portability from clinical to educational settings. These procedures were initially developed within clinical settings that allowed for a high degree of situational, methodological, and analytical control and rigor which may present difficulties when introducing these procedures into school settings. This paper provides a review of some of the current practices involving experimental functional analysis within school settings, a discussion of some of the related issues, and some recommendations for future research and practice.

OVERVIEW

While EFAs involve structured manipulations of environmental events (Cone, 1997), the term functional assessment or functional behavioral assessment is the frequently used umbrella term to describe all the procedures involved in assessing the function of a behavior including activities such as interviews, rating scales, and EFA. Ervin et al. (2001) reviewed the empirical literature on school-based functional assessment that appeared in published journals from 1980 to 1999. The review included 100 articles and revealed several limitations in the practice of school-based functional assessment. Among the limitations were a lack of consistent methodologies used, minimal examples of demonstrated use of the procedures across specific populations, behaviors, settings, etc., and few studies involving training of school personnel to conduct functional assessments. In addition, the review by Ervin et al. indicated that demonstrations of school-based experimental functional analyses appeared limited due to practical and ethical considerations. These concerns include the need for expert consultants to carry out the procedures, the need for highly controlled situations, the length of time needed to conduct analyses, and the potential risks associated with manipulating putative controlling variables.

Since the publication of review by Ervin et al. several examples of how to systematically conduct functional behavioral assessments have been developed and demonstrated to be effective (Ervin et al., 2000; Doggett, Edwards, Moore, Tingstrom, & Wiczynski, 2001; McComas, Goddard, Hoch, 2002;

Mueller, Edwards, & Trahant, 2003; Umbreit, Ferro, Liaupsin, & Lane, 2007). While these models provide a framework for determining when and how to implement various direct and indirect assessments, they do not provide a detailed systematic approach for conducting school-based EFAs in a manner that can easily be implemented with a variety of students displaying a wide range of problematic behaviors. These models primarily focus upon more indirect methods of interviews, rating scales, and anecdotal data. A model for developing specific variations and modifications to EFAs needed for conducting these procedures within school settings does not appear to be available within the literature. While this type of model may be difficult to develop due to the numerous variations and modifications which may be relevant, there does appear to be some clear elements which can be gleaned from the recent literature on school-based EFAs.

REVIEW OF LITERATURE

Definite progress has been made to increase the portability of experimental functional analysis procedures from clinical settings to school settings (Broussard, & Northrup, 1995; Northrup et al., 1995). The usefulness of these examples of conducting experimental functional analysis in school settings has been evident in the outcomes produced, although issues related to time intensiveness, deviations from clinical protocols, involvement of paraprofessionals, etc. still exist. In order to adapt EFA procedures to classroom settings, several modifications and variations of clinical protocols have been employed. Mueller, Sterling-Turner, & Moore (2005) stated that further refinements of EFA procedures were needed to promote increased utilization within school settings. They pointed out that the procedures were initially developed within clinical settings and variables relevant to clinical participants were incorporated into the EFAs and those relevant variables within school settings might be quite different than variables important in clinical settings. Northrup et al. conducted an EFA within a classroom setting that involved two variations of an attention condition. Comparisons were made between teacher-delivered and peer-delivered attention for three participants who displayed typical classroom problem behaviors such as inappropriate vocalizations and out-of-seat behavior. Their results indicated that an EFA could be used to determine distinct forms of positive reinforcement such as peer-delivered attention which maintained the problem behaviors of all three participants. This method of limiting the number of conditions examined when conducting EFA in school settings appears to be one means of increasing the portability of these procedures from clinic to classroom settings.

Other studies have similarly limited the number of different conditions that were included in EFA's conducted within classrooms (Doggett et al., 2001; Mueller, Sterling-Turner, & Scattone, 2001; Mueller et al., 2005). Mueller et al. (2005) described a classroom-based EFA condition to develop an intervention to decrease the tantrum behavior of a 6-year-old boy with autism. They used a hypothesis-driven approach based on prior descriptive data to evaluate attention and escape as maintaining variables within an EFA. The EFA conditions initially involved an attention condition which involved provision of attention upon the occurrence of tantrum behavior and an escape condition which involved removal of task demands upon occurrence of tantrum behavior. A follow-up condition was also developed which was described as escape-to-attention and involved removal of task demands upon occurrence of tantrum behavior and subsequent attention during the break period from the task. Their findings revealed that the escape-to-attention condition was necessary to appropriately determine the function of the behavior and develop an effective intervention. Their study demonstrated a potential limitation of EFAs conducted in school settings which do not typically incorporate specialized conditions. In addition, they also speculated that other specialized EFA conditions might also prove beneficial in school-based settings such as an escape-to-preferred activities condition.

While limiting the number of conditions incorporated into a school-based EFA could potentially restrain the findings, the addition of well designed follow-up conditions may be a viable means of addressing this issue. Mueller, Wilczynski, Moore, Fusilier, & Trahant (2001) conducted follow-up

analysis to a school-based EFA which involved antecedent manipulation of highly preferred and less preferred items. The follow-up analysis was beneficial toward developing an intervention to reduce the aggression of an 8-year-old boy with autism. They determined that the follow-up analysis was necessary in addition to the initial EFA to recommend an effective intervention. Similarly, Moore, Mueller, Dubard, Roberts, and Sterling-Turner (2002) conducted a follow-up analysis to clarify confounding data collected during the tangible condition of a school-based EFA involving a 6-year-old girl who engaged in self-injurious behavior. Their follow-up analysis involved comparing tangibles conditions that did and did not include verbal attention. They determined that verbal attention within a tangible condition introduced confound to the interpretation of the initial EFA and the follow-up was necessary to adequately interpret the data. Similarly, Carter, Devlin, Doggett, Harber, and Barr (2004) found a follow-up analysis was necessary to clarify the confound produced by the inclusion of tangible items within an alone condition of a school-based EFA. Based upon these studies, the usefulness of follow-up analysis may be an important component toward developing a comprehensive model for conducting school-based EFAs. While follow-up analysis may be valuable, they should be considered along with overall attempts to minimize the time intensiveness of conducting school-based EFAs.

Mueller, Sterling-Turner, et al. (2001) described using a brief EFA based upon prior descriptive assessment data to assess the hand flapping behavior of a 5-year-old boy in a general classroom setting. They recruited teacher assistance during the EFA which compared a low frequency task demand condition with a high frequency demand condition. Their hypothesis-driven approach demonstrated that descriptive data can inform the development of EFA conditions to test possible functions of target behavior while limiting the number of experimental conditions and making the EFA more efficient and practical for implementation within a classroom setting. Their study was an example of recommendations on the future of EFA's made by Carr (1994), who stated that comprehensive descriptive assessments should be a method used in order to individualize EFA conditions and increase the potential relevance of the analysis outcomes. This recommendation by Carr appears to be highly applicable to EFA's conducted within school settings due to the limited allowances from school administrators, lack of personnel adequately trained to complete EFA's, and environmental limitations such as the presence of other students and classroom layouts.

As noted by Repp (1994), the introduction of EFA into classroom settings was initially difficult due to reluctance on the part of administrators to allow these types of procedures to be conducted due to the potential for high rates of problem to occur during the conditions. Moore et al. (2002) reported omitting the alone condition of an EFA at the request of school personnel. Repp also explained that although these administrators were resistant to frequent problem behaviors during EFA conditions, they appeared to be accepting of high rates of problem behaviors in typical classroom settings, although they wanted these behaviors to decrease.

One possible means of addressing this concern in addition to limiting the number of sessions that are included in an EFA could be to train educational personnel to conduct EFAs with less reliance on outside consultants. Having competently trained educational personnel within the school system might promote the use of these procedures within schools. This might also increase the portability of these procedures from clinical practices by integrating techniques developed by educational personnel who are more directly involved with the students being assessed than would be typical of an outside consultant.

Scott, McIntyre, Liaupsin, Nelson, & Conroy (2004) evaluated differences in hypotheses derived from functional behavioral assessments by school-based teams and those hypotheses developed by experts. They found poor agreement between the hypotheses developed by the teams and those developed by the experts. The differences in the hypotheses that were generated were dependent upon the amount and type of information that was provided by the assessments with more information from the functional behavior assessments leading to more disagreement. They concluded that hypotheses derived by experts

were limited by their lack of contact with the students and the hypotheses developed by school-based teams were limited by their lack of expertise with the procedures. The Scott et al. study may offer some insight into how the portability of EFA procedures into school settings could be improved by incorporating information and techniques which may be exclusive only to school personnel. In other words, school personnel may be privy to certain information that an outside consultant may not readily procure within the limited amount of contact that they have with a student. This type of information could be useful toward the development of specific EFA conditions and reduce some of the limitations associated with assessments conducted within analog versus natural environments such as lack of incorporation of necessary variables from the natural environment and lack of generalization of findings. In addition, information from school personnel may readily inform the scheduling and arrangement of the environment within the school as well as determining the availability of other services such as the presence of a school nurse to assist in case of injury especially for EFA of dangerous behaviors such as self-injury.

It appears that many of the EFAs described in the recent literature have been conducted within vacant classrooms which highly resemble clinical settings (St. Peter et al., 2005; Moore et al., 2002; Mueller, Wiczynski, et al., 2001). While this may be a requirement in many cases, it is possible that school personnel could suggest other alternatives that would allow for EFAs to be conducted in more natural classroom settings with other students present while still maintaining an adequate level of experimental control over the conditions such as the examples provided by Mueller, Edwards, & Trahan (2003), Mueller, Sterling-Turner, et al. (2001), and Mueller, Sterling-Turner, et al. (2005). In order for these types of developments to take place, school personnel need to become more competent EFA procedures. There appears to be several EFA examples which incorporate school personnel (Erbas, Tekin-Iftar, & Yucesoy, 2006; Erbas, Yucesoy, Turan, Ostrosky, 2006; Kamps, Wendland, & Culpepper, 2006), but these examples indicate that school personnel continue to need a great deal of support from an expert consultant.

Another variation of the more commonly used EFA is a structural analysis. Stichter & Conroy (2005) described structural analyses as procedurally similar to EFA, but with a focus on discerning relationships between antecedent variables and target behaviors. While this methodology does not emphasize determination of variables maintaining target behaviors, it does allow for close examination of variables which set the occasion for target behaviors to occur. While the structural analysis methodology does not allow for the development of function-based interventions, it does have potential for offering a means for increasing the portability and utilization of systematic assessments of contextual variables within a classroom setting.

The rationale for increased portability with these procedures relies on involving techniques that are already frequently used by teachers to problem solve academic and behavioral problems in classrooms. Teachers may frequently modify their instructional practices in attempts to find a “best fit” approach for teaching a student. Teachers may informally try techniques that include presenting instructional materials in different formats and venues such as orally, written, individually, in small groups, in large groups, etc. In addition, teachers may consider instructional variations that include more or less frequent prompts, student choices in instructional presentation, and arrangement of more or less demanding activities. Since teachers frequently engage in this type of informal problem solving, the structural analysis methodology which involves formalizing some of the informal techniques currently used by teachers would seem to increase the portability of these procedures from clinical settings to classroom settings and from clinically trained personnel to educators.

Several studies have demonstrated the usefulness of structural analysis procedures toward development of effective interventions in classroom settings (Hagan-Burke, Nurke, & Sugai, 2007; Stichter, Lewis, Johnson, & Trussell, 2004; Stichter, Sasso, & Jolivet, 2004; Wheeler, Carter, Mayton, & Thomas, 2002). Conroy & Stichter (2003) compared a model for conducting a structural analysis

involving analog probes with a correlational analysis model which involved repeated naturalistic observations and indicated that the structural analysis model required less complex data collection procedures, was more time efficient, and may improve implementation of interventions due to teacher involvement in the assessment. Although more research is needed to examine the potential of using structural analyses in classroom settings, there appears to be potential for these procedures to be in place of an EFA in certain circumstances, to be used as complements to EFAs, and to enhance teacher implementation interventions.

SUMMARY AND CONCLUSIONS

In summary, the current trends for implementing EFAs in classroom settings appear to focus on developing methods that are structured, simplistic, time efficient, and easily incorporated by individuals who may lack previous training in conducting EFAs. The study by Mueller et al. (2005) incorporated the use of a paraprofessional to deliver contingencies within the EFA while a consultant collected data. In addition they relied upon prior descriptive data to minimize the number of conditions considered relevant and conducted the EFA conditions during times considered most problematic for the student. Each of these factors appears to be highly relevant toward the future development of school-based EFAs especially when appropriate follow-up strategies can be developed to ensure accuracy in interpretation of findings (Moore et al, 2002; Mueller et al., 2001; Carter et al., 2004). Strategies to simplify the procedures involved in conducting a school-based EFA appear to be highly appealing and important to the future utilization of these procedures in school setting. Hypothesis-driven approaches which may involve relying on prior descriptive data to include conditions considered highly relevant and exclude conditions that do not appear relevant have been demonstrated as an effective means of simplifying school-based EFAs (Mueller et al. 2001; Mueller et al., 2005; Northrup et al., 1995).

Strategies for making school-based EFAs more time efficient are also related to using a hypothesis-driven approach to limit the number of conditions included in the EFA as well as decreasing the number of sessions conducted and the length of session time. These recent developments address some of the limitations described by Ervin et al. but further progress is needed to promote more portability of these procedures from clinical to educational settings. In addition, the need to develop specialized conditions for school-based EFAs may also be an important future direction for research in order to further remove these procedures from a clinical model and make these procedures uniquely designed to function within a school setting. Taking procedures initially developed within a clinical setting and utilizing them in a school setting without modification would most likely result in several apparent difficulties. By modifying these clinically developed procedures into a formalized school-based model, while maintaining an appropriate level of scientific rigor would appear to be the most likely method for ensuring the continued inclusion and usefulness of these procedures in school settings.

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Patterns of coping preference among persons with schizophrenia: Associations with self-esteem, hope, symptoms and function

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Abstract

Maladaptive styles of coping are believed to be a barrier to recovery from schizophrenia. In this study we obtained measures of coping for 133 persons with schizophrenia or schizoaffective disorder. A cluster analysis was then performed based on those scores and produced five distinctive coping profiles. These five groups were then compared on concurrent assessments of hope, self-esteem, symptoms and social function. Multivariate and univariate ANOVA revealed that the group with a coping profile that involved a preference for both considering and acting had significantly greater levels of hope and self-esteem than groups with the other four coping profiles ($p < .05$). The group with a preference for resigning had lesser hope, self-esteem and more depressive symptoms than another other group ($p < .05$).

Keywords: coping, schizophrenia, hope, self-esteem,

Data from first person accounts (Frese, 1993) structured interviews (Mueser, et al., 1997) and formal assessments (Ritsner et al., 2006) suggest that many with schizophrenia spectrum disorders experience enduring difficulties coping effectually with daily and unexpected stress. They may struggle to solve problems (e.g. Corrigan and Toomey, 1995; Penn, et al, 1993), and tend, as a matter of style, to ignore stressors or abandon attempts to find alternative solutions to problems when their usual patterns of behavior fail (Farhall & Gehrke, 1997; Lysaker, Wilt, Plascek-Hallberg, Brenner, & Clements, 2003; Wilder-Willis, et al., 2002). In addition to having a tendency to employ specific forms of coping which may repeatedly fail, persons with schizophrenia appear to have a limited range of possible ways to respond when under stress. It is not simply, therefore, that persons with schizophrenia choose the “wrong” behavior when facing a challenge but that they may have a coping style which does not include enough possibilities beyond reacting and avoidance (Roe, Yanos & Lysaker, 2006).

Overall, ineffective coping is a matter of broad clinical concern. The inability to manage and respond to stress is believed to be among the primary causes of relapse and reduced quality of life in schizophrenia (Ritsner, et al, 2003; Ventura, et al, 1989). Research has suggested that more impoverished and avoidant styles of coping styles are linked to greater affective distress, greater levels of positive and negative symptoms, lesser hope and more frequent hospitalizations (e.g. Bak et al., 2001; 2003; Lysaker et al., 2005; 2001; Macdonald et al., 1998; Meyer, 2001; Modestin, et al., 2004; Middleboe and Mortensen, 1997; Ritsner & Ratner, 2006; Wiedl, 1992). Simply put, as persons fail to cope they feel increasingly overwhelmed and demoralized, which may lead to exacerbations in symptoms, which may then reinforce maladaptive coping styles in the manner of a vicious cycle.

To date, one limitation of the research on coping in schizophrenia is that it has tended to focus on either individual pieces of the coping process or on general patterns of active vs. passive or emotional focused approaches to stressors, rather than profiles of coping preference. In other words, beyond a broad understanding of the differences between functional and dysfunctional coping it remains unclear whether there are particular combinations of coping behaviors which are particularly adaptive as opposed to maladaptive for persons with schizophrenia. For instance, are there coping profiles which involve a preference for taking action in the absence of actively considering alternatives that contribute to psychosocial impairment? Are there certain patterns or combinations of avoidant coping more closely linked to dysfunction than others? Is having no coping preference linked more closely with health or dysfunction? Understanding how coping profiles are related to health could be of clinical importance and

point to possible means of both assessment and intervention for persons seeking recovery from schizophrenia.

To examine this issue we have previously suggested that an adaptive coping preference may be assessed among persons with schizophrenia. We defined a coping preference for an action orientation, which we labeled acting; and a coping preference for thinking or talking with others, which we labeled considering (Lysaker, et al., 2004). We have further suggested that a preference alone for acting or a preference alone for considering might be linked with dysfunction. Evidence supporting this includes a study with a small sample in which those identified as having preference for both acting and considering, as opposed to a preference for one or neither, was linked to better work performance in rehabilitation over time (Lysaker, et al., 2004).

In the current study we have sought to expand this research by determining if groups of persons with schizophrenia could be detected who varied according to their coping profile and whether those groups differed in the expected direction on objective measures of wellness and function. In particular, we were interested in whether we could detect five different groups of persons based on preferences for four types of coping: i) persons who had a preference for both acting and considering, ii) persons who had a preference for acting alone, iii) persons who had a preference for considering and resigning; iv) persons with a preference for ignoring and persons with v) no clear preference for any coping style. As an illustration of what behavior might be expected from someone with each of these coping profiles we offer the following hypothetical stressor: Wayne feels insulted by a supervisor at work who has criticized how he managed an interaction with an angry customer who subsequently filed a complaint asserting that Wayne is insensitive to the needs of mothers. If Wayne had the first coping profile he might think about the issues involved in the complaint, talk with others and plan a course of action. If Wayne had the second or third profile though, he might immediately take action without consideration of possible alternatives or tend to ruminate about what had happened and take no action. With the fourth profile Wayne might ignore the fact his supervisor criticized him and continue on as if nothing had happened. With the last profile, Wayne's response would be unpredictable as he might use any of the identified coping strategies. Clearly we would expect that the persons with the first coping profile would function more successfully while having any of the other four would be linked with greater dysfunction.

To explore whether there are distinct coping profiles linked with outcome we used the statistical procedure called cluster analyses to divide a sample of 133 persons with a schizophrenia spectrum disorder into five groups based on coping preferences. We have then labeled those groups according to their actual preferences using as a classification rule that having a 20% greater preference for a coping strategy relative to the average score for all coping behavior reflected a significant preference (e.g. if a group had a 20% greater preference alone for acting they would be labeled acting, if they had a 20% greater preference for both acting and ignoring they would be labeled acting and ignoring). Finally we have compared these groups on measures of self-esteem, hope and anxiety, symptoms, and interpersonal function.

We predicted that a group detected through cluster analyses which met criteria for a preference for both acting and considering would have higher self esteem, higher levels of hope, less anxiety, lower positive, negative and depressive symptoms and better interpersonal function than all other groups. We additionally planned two exploratory analyses. We first sought to compare groups on these same measures to determine whether there was an especially maladaptive pattern of coping. Is there a coping profile more closely linked to dysfunction than the others? We secondly planned to explore whether the Acting and Considering group had different patterns of scores on other tests relative specifically to the groups which had preferences for Acting but not Considering and for Considering but not Acting.

Methods

Participants

One hundred and sixteen men and 17 women with SCID (Spitzer, Williams, Gibbon, & First, 1994) confirmed DSM-IV diagnoses of schizophrenia ($n = 76$) or schizoaffective disorder ($n = 57$) were recruited from a comprehensive day hospital at a VA Medical Center ($n = 101$) and local Community Mental Health Center (CMHC; $n = 32$) for one of two larger studies: the prevalence of anxiety symptoms in schizophrenia ($n = 70$) or the effects of vocational rehabilitation ($n = 63$). All participants were receiving ongoing outpatient treatment and were in a post-acute or stable phase of their disorder, defined as no hospitalizations or changes in medication or housing in the last month. Participants with a history of mental retardation documented in a chart review were excluded. Participants had a mean age of 46.69 ($sd = 9.61$), a mean educational level of 12.76 ($sd = 1.99$) and a mean of 11.47 ($sd = 14.17$) lifetime hospitalizations with the first occurring on average at the age of 26.55 ($sd = 10.64$). Sixty participants were Caucasian, 70 African American, two Latino, and one Asian.

Instruments

The Positive and Negative Syndrome Scale (PANSS; Kay, Fiszbein, & Opler, 1987) is a 30-item rating scale completed by clinically trained research staff at the conclusion of chart review and a semi-structured interview. For the purposes of this study, three of the five PANSS factor analytically derived components (Bell, Lysaker, Beam-Goulet, Milstein, & Lindenmayer, 1994) were utilized: Positive Symptoms which includes symptoms such as hallucinations and delusions, Negative Symptoms which includes symptoms such as lack of affect and Emotional Discomfort which includes symptoms such as depressed mood and active social avoidance. Assessment of inter-rater reliability for raters in this study was found to be high to excellent with intraclass correlations for blind raters observing the same interview ranging from .84 to .93.

The Quality of Life Scale (QOLS; Heinrichs, Hanlon, & Carpenter, 1984) is a 21-item scale completed by clinically trained research staff following a semi-structured interview and chart review. For the purposes of this study, we were interested in two of the four factor scores of the QOLS that are most intimately tied to social function. The first, "Interpersonal Relations," measures the frequency of recent social contacts and includes separate assessments, for example, of frequency of contacts with friends and acquaintances. The second, "Intrapsychic Foundations," measures qualitative aspects of interpersonal relationships and includes assessments, for example, of empathy for others. High to excellent inter-rater reliability was found for the two QOLS factor scores for this study, with intraclass correlations for blind raters observing the same interview ranging from .85 to .93. Although originally created to assess negative symptoms in schizophrenia the QOLS has been widely used to study social function among persons with schizophrenia (Lysaker, Bell, Bryson, & Kaplan, 1998).

The Multidimensional Self-Esteem Inventory (MSEI; O'Brien & Epstein, 1998) is a 116-item self report measure which assess individuals' self-perception of their overall social value. Respondents rate items on a 5-point scale according to the degree or frequency with which each item applies to them. The MSEI offers t scores based on a community sample. T scores are normalized scores with a mean of 50 and a standard deviation of 10. The mean t score for this sample was 43.95 with a standard deviation of 10.92. This suggests participants reported levels of self esteem approximately .5 standard deviations lower than those of persons in a broad community sample. Because the MSEI has been largely used in samples of persons without psychosis, internal consistency was examined in this sample. Examination of items comprising the total score revealed a highly significant degree of internal consistency (coefficient alpha = .90; $p < .001$). In this study we were primarily interested in the total score, however, there are, in addition to the total score, ten subscales. If we found an association between coping and the self esteem total score we also planned to examine three MSEI subscales that seemed likely to be intuitively linked to coping: Competence, Personal Power, and Self-Control. Competence assesses the degree to which a

person feels capable of learning and mastering tasks; Personal Power measures the extent to which a person feels influential and powerful in interactions with others; and Self-control is a measure of how self-disciplined and in control a person is in a variety of settings. We lastly employed a fourth subscale, Defensive Self Enhancement, to check for possible response bias. Defensive Self-Enhancement detects how defensive a person is and whether a person can acknowledge weaknesses or has an inflated view of self-worth.

The Beck Hopelessness Scale (BHS; Beck, Weissman, Lester, & Trexler, 1974) is a 20-item questionnaire that asks participants to endorse statements as true or false as applied to them. Individual items are then summed to provide an overall index of hope or its absence. Examples of items include: "Things just won't work out the way I want them to" and "I might as well give up because I can't make things better for myself." This scale has been used successfully with a wide range of psychiatric, medical and community populations (Haatainen et al., 2003). In this study we reverse scored items so that higher scores would indicate higher levels of hope.

Multidimensional Anxiety Questionnaire (MAQ; Reynolds, 1999) is a 40 item self report questionnaire designed to tap multiple domains of the experience of anxiety. It offers an overall index of anxiety and four subscales: "Physiological-Panic," which assesses physiological symptoms of anxiety and the anticipation of panic; "Social Phobia" which assesses worries about social embarrassment and social avoidance; "Worries Fear" which assesses general experiences of worry and fearfulness in daily life; and "Negative Affectivity" which assesses general affective states related to anxiety such as irritability and general distress. T scores are provided for each subscale allowing for a judgment to be made regarding the severity of symptom level relative to a community sample. Reynolds (1999) presented evidence of acceptable internal consistency and test-retest reliability from both a general psychiatric and community sample and factorial validity from a combined psychiatric and community sample.

The Ways of Coping Questionnaire (WCQ; Folkman and Lazarus, 1988) is a self-report instrument that asks participants to recall a recent stressor and then rate how often they used 66 different behaviors to cope with that particular stressor. While this instrument has been established as a measure of coping in a community-residing well population, the factor structure of the scale, as with other scales, may not accurately reflect coping behaviors used by individuals with chronic psychiatric illness (Wineman, Durand, & McCulloch, 1994). In this study, we therefore utilized a rational scoring system we developed to be sensitive to coping deficits particular to severe mental illness using two different samples (Lysaker, Johannessen, Lancaster, Davis, Zito, & Bell, 2004). This scoring scheme yields six modes of coping scores. The first two are: "Considering," and "Acting." "Considering" refers to thinking or talking with others about what to do. "Acting" involves taking direct action to problem solve. The third, "Ignoring," refers to putting the stressor out of one's mind, or choosing to "not think" about it. The fourth, "Resigning" refers to a choice to not act because it is perceived that there is nothing to be done. The fifth mode of coping, "Positively Reappraising," reflects a tendency to see the "silver lining" in a stressor, or to recast negative stressors in a positive light. The sixth mode, "Self-soothing," reflects a primary concern for regaining emotional equilibrium. In one study that compared results derived from the original scoring system with our revised scoring scheme across two previous samples, the rationally devised scales were observed to have greater internal consistency than the original scales. Several of the original scale scores but none of the new scale scores failed to achieve acceptable internal consistency. Additionally, the revised scale scores were found to predict psychosocial function prospectively, whereas the original scale scores were unrelated to future behavior (Lysaker, et al, 2004). For this study we examined in our cluster analyses only the first four coping strategies as we anticipated that these would be most clearly linked to function.

In our analyses we used, as we have elsewhere (Lysaker, et al, 2004), relative scores. These are obtained for each scale by dividing the mean score for that scale by the mean score for the total test. This has the advantage of pointing to participants' relative preference and corrects somewhat for response bias.

Procedures

All procedures were approved by the research review committees of Indiana University and the Roudebush VA Medical Center. Following informed consent, diagnoses were determined using the Structured Clinical Interview for DSM-IV conducted by a clinical psychologist. Following the SCID, participants in both studies were administered the PANSS and QOLS interviews, MSEI, MAQ and BHS. A research assistant was available to assist participants if there were difficulties reading or understanding the questionnaires. PANSS and QOLS ratings were performed blind to responses to the MSEI, MAQ and BHS. QOLS and PANSS interviews were conducted by trained research assistants with a minimum of a B.A. degree in a field related to psychology. No interventions were performed in either study prior to obtaining the baseline information analyzed here. Of note, due to logistical difficulties QOLS interviews were not possible for 5 participants and therefore the total number of participants available for the analyses of differences in QOL were 128.

Analyses

Analyses were conducted in four steps. First a K mean cluster analyses was performed to identify five homogenous participant groups based on coping scores. Cluster analysis is a method of classifying people into typologies by determining clusters of participants that display small within-cluster variation relative to the between-cluster variation (Carpenter, Bartko, Carpenter, & Strauss, 1976; Dillon & Goldstein, 1984; SPSS, 1999). In cluster analysis, each participant is assigned to a cluster, and participants are moved from one cluster to another until terminating conditions are met. In essence, a cluster analysis is similar in some respects to both factor analysis and discriminant function analysis. It differs primarily from factor analysis in that its end is the determination of orthogonal groups of participants rather than orthogonal groups of variables, and it differs from a discriminant function analysis in that determining group assignment is the goal and not known ahead of time.

K mean cluster analyses are non-hierarchical forms of cluster analyses appropriate when hypotheses exist regarding the number of clusters contained in a sample. A K mean cluster analysis produces the number of clusters initially called for minimizing variability within clusters and maximizing variability between clusters. We chose this procedure rather than rationally defining groups in order to determine in an exploratory and statistical manner whether we could detect participants who demonstrated the hypothesized patterns of these scores. We determined not to rationally categorize participants as to artificially define groups might also not optimally minimize variability within groups and maximize variability between groups. To give the groups contextual meaning, we assigned labels to each group based on their coping preference using the procedures noted above: persons with a relative scores of 1.2 or greater for a coping preference were labeled as preferring that coping style. A group with scores of 1.2 or greater for two coping styles were labeled as preferring both.

In the second phase of the analyses MANOVA and follow-up ANOVA were conducted comparing the PANSS total and the two QOLS scores. These were analyzed together as the PANSS and QOLS represent the measures obtained by objective raters. Follow-up ANOVA for the PANSS Positive, Negative and Emotional Discomfort components were planned with group comparisons using Fisher's LSD method if a significant group difference was found for the PANSS total. In the third phase of analyses, MANOVA and follow-up ANOVA were conducted comparing the BHS, MSEI and MAQ total scores. These were analyzed together as they represent the self-report measures obtained directly from participants.

Finally, if group differences were found for the MSEI and MAQ we planned in the fourth phase

of the analyses to conduct exploratory analyses of group differences in the four subscales of the MAQ, and four of the MSEI subscales. Of note, we did not assess all 10 subscales of MSEI in order not to avoid unduly raising the risk of spurious findings. We chose, as noted in the methods section, only subscales we intuitively reasoned might be most closely linked with coping and validity.

Results

Means and standard deviations of baseline scores are presented in Table 1 (See Appendix for tables). WCQ scores for Acting, Considering, Ignoring and Resigning were standardized into z-scores and K-Means cluster analysis was performed to identify five groups of homogenous participant groups based on the WCQ scores. The cluster analysis produced five groups which based upon WCQ relative scores were labeled: Acting only ($n = 27$), Considering only ($n = 24$), Acting and Considering ($n = 17$), No Preference ($n = 39$) and Resigning ($n = 26$). As revealed in Table 2, these groups did not differ significantly in age, education, or number of lifetime psychiatric hospitalization history. The No Preference group was significantly younger at age of first hospitalization than both the Acting and Considering group and the Resigning group. Chi square analyses additionally found the five groups did not differ in proportion of participants with schizoaffective disorder vs. schizophrenia, or in proportion of participants from the VA Medical Center as opposed to the CMHC. ANOVA also found no significant differences in coping scores for participants from the VA Medical Center as opposed to the CMHC.

Next, a MANOVA comparing groups on total symptoms and two QOLS subscales revealed a significant overall group effect (Wilks Lambda $F(3,12) = 1.94$, $p < .05$). As revealed in Table 3, follow-up ANOVA and multiple comparisons using Fisher's LSD revealed the Resigning group had higher PANSS total scores than every group except the Acting only group while the Acting and Considering group had lower PANSS total scores than every group except the Considering only group. Comparisons of the individual PANSS components revealed groups differed only on symptoms of Emotional Discomfort with the Acting and Considering group having fewer Emotional Discomfort symptoms than all other groups and the Resigning group having higher levels of Emotional Discomfort scores than any other group except for the Considering only group. On the QOLS, the Acting and Considering group had higher levels of Intrapsychic Foundations than the Resigning and No Preference group, while the Resigning also had lower levels of Intrapsychic foundations than the Acting only group. No differences were found on the Positive or Negative Component of the PANSS or on QOLS Interpersonal Relations scale.

A MANOVA examining group differences on the MSEI, MAQ and BHS total scores revealed a significant overall group effect (Wilks Lambda $F(3,12) = 4.43$, $p < .001$). As revealed in Table 4, follow-up ANOVA and multiple comparisons using Fisher's LSD revealed the Resigning group had lower self esteem and hope than any of the other five groups, while the Acting and Considering group had higher scores on these variables than any other group. With reference to anxiety, the Resigning group had higher scores on the MAQ than the Acting and Considering and Considering only groups, although their scores were higher than the remaining two groups at the trend level ($p < .07$).

Finally, a MANOVA examining group differences in the four subscales of the MAQ and four of the subscales of MSEI. As presented in table 5, there were no group differences in Defensive Self Enhancement. The Resigning group reported lower levels of Competence than any of the other four groups while the Acting and Considering group also had higher ratings of Competence than the Acting only and No Preference groups. The Resigning group had lower levels of Personal Power than the other groups except for the Considering only group while the Acting and Considering group also had higher scores on Personal Power than the Considering only group. The Resigning group reported lower levels of Self Control than any other group while the Acting and Considering group also had higher ratings than the No Preference group.

Concerning anxiety, the Resigning group had significantly higher levels of Social Phobia than all other groups and significantly higher levels of Negative Affectivity on the MAQ than all other groups except for the No Preference group. The Acting and Considering group also had lower levels of Negative Affectivity than the Acting only and No Preference group. No group differences were found between groups for the MAQ Worries and Fears and Physiological Arousal subscale scores.

Discussion

In the current study we explored the possibility that different coping profiles might be uniquely related to symptoms, social function, hope, self-esteem and anxiety. As predicted, a cluster analysis of persons with schizophrenia by coping preference revealed a group of persons with a preference for both Acting and Considering, for Acting alone and with no marked preferences for any coping style. A group with a preference for Considering alone was found, but they did not have a concurrent preference as expected for resignation. Unexpectedly we also found a group with a marked preference for Resignation and no group with a preference for Ignoring.

As predicted, the Acting and Considering group when compared to the other groups tended to have greater levels of function on both self report instruments and objective ratings. They had higher levels of hope, self-esteem and less emotional discomfort than all other groups. They had significantly more of the foundations necessary for interpersonal relationships than the No Preference or Resigning group. There was no evidence that the Acting and Considering group had lesser levels of positive symptoms, negative or general symptoms of anxiety. Importantly, there was no evidence that this or other groups tended to distort their responses in a manner to defensively enhance their self image.

While the cross sectional nature of this study precludes drawing conclusions regarding causality these results may suggest hypotheses for future research. For one, as a matter of intuition it seems possible that having a preference for both acting and considering leads to greater success at problem solving which in turn protects persons with schizophrenia from demoralization, depression, hopelessness and low self-esteem. Perhaps merely taking action or talking and thinking about problems alone are not sufficient for persons to navigate their way through the challenges which come with this illness. It is further possible that a mutual relationship also exists between these variables. In other words, as people cope adaptively they may feel better, and as they feel better, they may cope adaptively. Again given the cross sectional nature of this study, rival hypotheses cannot be ruled out, including the potential that variables not assessed here may account for the relationships observed in this study (i.e. deficits in neurocognition).

There were also two exploratory questions posed earlier. First we wondered if one coping style would appear to be less adaptive than others. Clearly one interpretation of the data is that the Resigning profile was far and above linked to the poorest levels of function. This group had significantly more symptoms of emotional discomfort, less hope and lower self esteem than all others groups. Analyses of the subscales of the self esteem and anxiety measures suggested that when compared to other groups the Resigning group had significantly higher levels of social phobia, negative affectivity, and lesser feelings of competence and self control. One possible speculation about these findings is that as persons begin to believe that they cannot actively respond to challenges in their lives, they feel increasingly poorly about themselves and feel unable to manage their emotions or social interactions. Perhaps again a feedback loop is created in which failure, poor self esteem, depression and anxiety reinforce one another. This is consistent with the suggestions of many that at the core of psychosocial dysfunction is an elaborate network of interrelated beliefs about the self as trapped with dysfunction (Bradshaw & Brekke, 1999; Hoffman, Kupper, & Kunz, 2000; Roe, 2001).

Regarding the differences between having a joint preference for Acting and Considering as opposed to preference for only one or the other, our analyses may pose some interesting questions for future research. Specifically the analyses of the subscales of the self esteem and anxiety measures suggested that when compared to a preference for both Acting and Considering, a preference for Considering alone was linked to a lesser sense of personal power while a preference for Acting alone was linked to a lesser sense of competence and more negative affectivity. One possible speculation about these findings is that persons who feel they are not able to influence others tend to think and talk about what they need to do but may be less inclined to act. Perhaps on the other hand, others act impulsively, without considering the possible results of those actions because while they hold hope of success they find talking with others about things unpleasant as they expect to be viewed as incompetent.

Of note, there were unexpected findings. The Considering only group did not have a preference for Resigning, and another group instead had a singular preference for Resigning while none had a preference for Ignoring. This may suggest that a preference for Considering alone is not linked with the expectation that there is nothing to be done. Resignation itself may also be more of an essential aspect of maladaptive coping in schizophrenia rather than ignoring or putting stressors out of one's mind. In other words, it may not be as much that persons with schizophrenia purposefully avoid acting or thinking about problems as they give up on the possibility that there is a solution. Additionally it was unexpected that there were no links between coping profile and frequency of interpersonal relationships or positive or negative symptoms. This may suggest that coping is more closely linked to a general style of how persons think about and react to daily events rather than being associated to manifestations of core symptoms of illness or the relative absence or presence of social networks. As with all observations regarding unanticipated results, these should be regarded as speculations and fodder for future study.

With replication, our findings may have several clinical implications. First, it may be useful to further develop interventions that increase person's awareness of their coping preference and enhance self efficacy (e.g. Lecomte et al., 1999). This may need to involve cognitive interventions which help persons become more aware of their habitual thoughts and behaviors and possibly challenge beliefs that might be linked to social phobia (Davis & Lysaker, 2005). Important to consider here is Warner's (1994) assertion that it is just as important for interventions to assist in developing a sense of mastery as it is to help enhance insight. It may be equally essential that persons must come to be both aware of their habitual thoughts and behaviors as well as learn to challenge the portrayal of self as helpless or destined to be rejected by others. This is consistent with a recent intensive case study which suggested that recovery may involve persons first evolving a greater sense of personal agency (Lysaker, et al., 2005) and a larger study that found hope was more closely tied to a sense of personal agency than an awareness of one's illness (Lysaker, Buck, Hammoud, Taylor, & Roe, 2006). Perhaps if dysfunctional beliefs about the future and personal value impact life in such an enduring manner, tailored interventions could be devised to help persons combat these self-stigmatizing beliefs. Future interventions and research could be directed to help persons with schizophrenia overcome their negative beliefs and find newer and more adaptive ways to think of themselves and their futures, thus allowing for adaptive responses to challenges which break a cycle of dysfunction.

Importantly, there are several limitations to the study. Generalization of findings is limited by sample composition. Participants were mostly men in their 40's, all of whom were involved in treatment. It may well be that a different relationship exists between insight stigma hope and self-esteem among younger persons with schizophrenia, in a predominantly female sample, or in particularly persons who decline treatment. Thus, more research is necessary which involves the collection of data at multiple time points with broader samples. We also did not assess the nature of stressful experiences with which persons were coping. More "fine-grained" assessments of coping including appraisals of the nature of stressors, are necessary to replicate and confirm the importance of the findings noted here.

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APPENDIX TO TABLES, NEXT PAGE!

Appendix to Tables

Table 1: Mean and standard deviations

Instrument	Score	Mean	Standard deviation
WCQ	Acting	1.00	0.30
WCQ	Considering	1.14	0.35
WCQ	Ignoring	0.87	0.30
WCQ	Resigning	1.02	0.36
PANSS	Total	72.13	15.10
PANSS	Positive component	15.76	5.05
PANSS	Negative component	18.48	5.42
PANSS	Emotional Discomfort component	12.85	4.42
QOLS	Interpersonal relations	19.50	7.51
QOLS	Intrapsychic foundations	22.41	4.94
BHS	Total	14.00	5.44
MSEI	Total	43.95	10.93
MSEI	Competence	32.16	6.31
MSEI	Personal Power	31.42	6.05
MSEI	Self Control	32.77	7.07
MSIE	Defensive Self Enhancement	49.79	8.50
MAQ	Total	81.26	22.01
MAQ	Physiological arousal	72.95	23.33
MAQ	Social Phobia	67.33	16.05
MAQ	Worries and Fears	77.44	21.21
MAQ	Negative Affectivity	60.74	11.60

Table 2: Background and Coping Scores among groups

	Group 1 Acting only (n=27)	Group 2 Considering only (n= 24)	Group 3 Acting and Considering (n= 17)	Group 4 No Preference (n= 39)	Group 5 Resigning only (n= 26)	ANOVA F=	Group Comparisons p<0.05
Age	46.48 (8.84)	45.29 (9.64)	48.18 (8.49)	46.44 (11.68)	47.62 (7.95)	0.29	n/a
Education	12.67 (2.29)	13.50 (2.55)	12.88 (1.62)	12.82 (1.45)	12.00 (1.83)	1.88	n/a
Lifetime Hospitalization	9.04 (7.00)	11.67 (12.85)	10.41 (20.34)	11.49 (12.82)	14.50 (18.04)	0.51	n/a
First Hospitalization	25.92 (8.18)	24.68 (11.77)	30.27 (6.70)	23.44 (8.45)	30.88 (14.37)	2.62*	4< 3,5
PANSS Total	72.15 (13.55)	71.50 (15.22)	62.94 (14.28)	71.38 (14.86)	79.81 (14.61)	3.54*	3<1,4,5 5>2,3,4
WCQ Acting	1.21 (0.16)	0.85 (0.20)	1.33 (0.45)	1.01 (0.18)	0.69 (0.24)	31.91**	1,3> 2,4,5 5< 1,2,3,4
WCQ Considering	0.95 (0.26)	1.45 (0.38)	1.46 (0.29)	1.04 (0.21)	0.96 (0.28)	19.38**	4>3 2,3> 1,4,5
WCQ Ignoring	0.68 (0.15)	0.66 (0.19)	0.65 (0.19)	1.05 (0.19)	1.13 (0.31)	33.52**	4,5>1,2,3
WCQ Resigning	1.12 (0.30)	1.00 (0.21)	0.57 (0.25)	0.88 (0.16)	1.45 (0.30)	39.20**	5>1,2,4,3 3<1,2,4,5 4<1

* p< .01; ** p< .001

Table 3: Ratings of Symptoms and Social Function among groups

	Group 1 Acting only (n=27)	Group 2 Considering only (n= 24)	Group 3 Acting and Considering (n= 17)	Group 4 No Preference (n= 39)	Group 5 Resigning only (n= 26)	ANOVA F=	Group Comparisons p<0.05
PANSS Total	72.15 (13.55)	71.50 (15.22)	62.94 (14.28)	71.38 (14.86)	79.81 (14.61)	3.54*	3<1,4,5 5>2,3,4
PANNS: Positive	16.81 (4.92)	14.96 (5.03)	13.65 (5.40)	15.28 (4.58)	17.50 (5.25)	2.12	n/a
PANNS: Negative	18.26 (4.93)	18.13 (5.38)	17.18 (5.18)	17.90 (5.89)	20.77 (5.12)	1.58	n/a
PANNS: Emotional Discomfort	12.67 (3.22)	13.75 (5.18)	9.53 (4.06)	12.31 (3.83)	15.19 (4.52)	5.22**	5>1,3,4 3<1,2,4,5
QOLS ¹ Interpersonal Relatedness	19.85 (6.78)	21.52 (7.39)	21.29 (8.80)	18.14 (7.42)	18.08 (7.43)	1.21	n/a
QOLS Intrapsychic Foundations	23.23 (5.29)	23.48 (4.71)	24.88 (5.46)	21.38 (3.94)	20.40 (4.92)	3.16*	3>4,5 5<1,2,3

* p< .05, ** p< .01

¹ For Quality of Life scales, there were less participants for the following: n=26 for group 1, n=23 for group 2, n= 17 for group 3, n=37 for group 4, and n=25 for group 5.

Table 4: Self-report of Hope, Anxiety and Self-esteem among groups

	Group 1 Acting only (n=27)	Group 2 Consideri ng only (n= 24)	Group 3 Acting and Considering (n= 17)	Group 4 No Preference (n= 39)	Group 5 Resigning only (n= 26)	ANOVA F=	Group Comparisons p< .05
Beck Hopelessness Scale Total	15.44 (3.77)	14.87 (4.27)	18.47 (1.81)	13.62 (5.15)	9.35 (6.57)	10.75***	3> 1,2, 4,5 5< 1,2,3,4
MAQ Anxiety Total	81.81 (19.55)	78.67 (24.51)	70.94 (21.29)	79.85 (19.97)	92.68 (22.94)	2.95*	5> 2,3
MSEI Self- esteem Total T-score	45.89 (8.79)	42.46 (7.68)	52.47 (9.57)	45.82 (12.30)	34.92 (7.83)	9.63***	3> 1,2,4,5 5< 1,2,3,4

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

Table 5: Self-esteem and Anxiety subscale scores among groups

	Group 1 Act Only (n=27)	Group 2 Consider Only (n= 24)	Group 3 Acting and Considering (n= 17)	Group 4 No Preference (n= 39)	Group 5 Resigning only (n= 26)	ANOVA F=	Group Comparisons p< .05
MSEI Competence	43.19 (10.13)	44.08 (9.44)	50.99 (8.55)	42.31 (11.46)	36.08 (8.52)	5.30*	5< 1,2,3,4 3> 1,4,5
MSEI Personal Power	46.33 (9.07)	44.21 (8.92)	50.65 (11.30)	46.67 (10.33)	39.46 (9.26)	3.94*	5< 1,3,4 3> 2,5
MSEI Self- Control	51.89 (11.99)	48.21 (11.53)	54.59 (9.28)	47.21 (13.04)	36.77 (11.92)	7.70**	5< 1,2,3,4 3> 4,5
MSEI Defensive Enhancement	59.70 (9.89)	57.42 (8.74)	60.65 (10.62)	58.62 (11.99)	53.35 (11.47)	1.68	n/a
MAQ Physiological Arousal	72.37 (25.14)	71.08 (20.04)	64.35 (25.99)	73.13 (20.27)	80.62 (25.97)	1.34	n/a
MAQ Social Phobia	66.74 (14.59)	66.79 (13.18)	58.59 (10.49)	65.64 (16.81)	76.69 (18.20)	3.91*	5> 1,2,3,4
MAQ Worries and Fears	76.78 (19.29)	76.67 (21.40)	68.53 (22.49)	77.54 (19.91)	84.54 (23.12)	1.52	n/a
MAQ Negative Affectivity	60.07 (8.88)	58.53 (10.45)	53.18 (13.50)	61.92 (11.21)	66.38 (11.90)	3.96*	5> 1,3,4 3< 1,4,5

* p< .01, ** p< .001

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KEEPING THE FOCUS ON CLINICALLY RELEVANT BEHAVIOR: SUPERVISION FOR FUNCTIONAL ANALYTIC PSYCHOTHERAPY

Luc Vandenberghe

ABSTRACT

The challenges in supervising an experiential-interpersonal treatment like FAP are complex. The present paper addresses this complexity by describing three different supervision contexts. Each of these is defined in relation to specific supervisee needs: skills development; therapist difficulties and skills integration. Each context supports different strategies to keep the therapist adequately focused in-session. Vignettes are used to illustrate the usefulness of separating the three contexts. Specific instructional strategies are suggested for the context of skills development. In the context of therapist difficulties, supervisors may identify and challenge dysfunctional patterns in the therapist's behavior that compete with an adequate focus. In the context of skills integration, experiential work may be done to enhance therapists' sensitivity to client behavior and to the impact their style has on the client.

Key words: Functional Analytic Psychotherapy; Supervision; Clinically Relevant Behavior

Introduction

Functional Analytic Psychotherapy (FAP) is an experiential interpersonal treatment belonging to the third wave in behavior therapy. It is compatible with state-of-the-art cognitive behavioral approaches. It is different, however, in that cognition is understood in terms of verbal behavior. In addition, the influence of beliefs on other behavior is analyzed in terms of rule-following and as depending on the effect of real-life contingencies (Kohlenberg & Tsai, 1994). The translation of cognitive therapy strategies into a behavioral framework is not typical of FAP. It has, been a theme in a broader section of the third wave movement from its beginnings (e.g. Zettle & Hayes, 1982).

The hallmark of FAP, however, is its emphasis on clients' direct learning *through* experiencing their problems in-session, as opposed to learning *about* their problems. In order to appreciate this point, we may remember that cognitive behavior therapy concentrates on discussing actions, feelings and thoughts that arise in the client's daily-life settings. The main target for change is what the client believes and thinks while he or she is experiencing problems outside the therapy session. In contrast, the FAP therapist works directly on client behavior while it is affecting the therapist-client relationship. And only when therapeutic change is noticeable within the boundaries of the relationship will the therapist monitor and (when necessary) promote generalization of in-session improvement to daily-life settings.

The whole process rests upon the idea that the therapist-client relationship offers the therapist an opportunity to observe the client's clinically relevant patterns firsthand and to respond to them in ways that promote change. For instance, a client whose romantic life has been on hold for years because she only feels attracted to inaccessible men may develop a crush on her therapist. In order to be able to work on this, the therapist must quickly become aware that what is happening in the relationship is a sample of the client's daily life problem. The therapist will also need to identify exactly what the client does that contributes to the problem pattern, both in her daily life environment and in-session. In this way, those client behaviors through which the client unwittingly brings her problem directly into the relationship with the therapist are identified. It is also possible to determine what clinical improvement would look like if it were to happen in-session. The therapist needs to have a clear view on what such improvement may look like, because he or she will need to respond to that improvement when it happens. For instance, if the client were to label her positive feelings towards the therapist in a better way and relate to the

therapist in ways that helped the therapist help her professionally, such in-session improvements would need to be reinforced.

Once therapist and client have agreed on what the target behaviors will be, the therapist will allow his or her reactions, which are the natural consequences of the client's actions, to affect the target behavior in-session. Sometimes the problem pattern will need to be evoked intentionally in order to give the client the opportunity to deal with it. The therapist may, for instance, appropriately express his or her positive non-romantic feelings toward the client so that she can react to them emotionally. The central process in FAP is to gradually shape improvement by patiently reinforcing progressive changes in the right direction. Therefore, the biggest challenge for the therapist is to identify initial shifts toward improvement in client behavior. By missing slight *in-vivo* improvements or mislabeling them as problem behavior, the therapist may be responsible for stalling therapeutic change. In our example, a distracted therapist may react aloofly to an appropriate approach behavior by the client. The therapist may thus miss the opportunity to reinforce the client's first move toward relating in more productive ways to him or her. A complementary error may be committed. The therapist who does not identify the client's languishing approach behavior as related to her daily life problem may unwittingly reinforce it.

For thorough explanations of how to identify and classify in-session client behavior as being clinically relevant, the reader should consult Kohlenberg and Tsai (1991) and Kanter et al. (2008). For the purposes of the present article, however, it is sufficient to distinguish two kinds of Clinically Relevant Behavior (CRB): *in-vivo* occurrences of client behavior that is part of the client's problem and *in-vivo* improvements. As the examples of possible therapist errors given above make clear, it is crucial to immediately identify both types of CRB in order to make contingent responding possible. And the task of improving the therapist's focus on CRBs makes supervision of FAP therapists different in some fundamental ways. We could say that Rose's (1977) definition of supervision as assisting professionals in improving their therapeutic skills and helping them resolve problems they may be experiencing with their clients still applies. But the concepts of *problems with clients* and *therapeutic skills* take on new meanings.

In traditional cognitive behavior therapy, *problems with clients* are most often seen as a hindrance to treatment progress. They are to be avoided or otherwise dealt with quickly so they do not take away time from work on daily life issues. For this purpose, the therapist needs to learn to get problems out of the way as smoothly as possible. On special occasions, problems with clients are focused on differently, namely as special therapeutic opportunities. This is more likely to happen when working with personality disorders (e.g. Beck, Freeman, Davis & Associates 1990) or when a rupture of the alliance occurs (e.g. Safran & Muran, 2000). In FAP, however, work on problems between client and therapist is at all times the very fabric of the treatment process. It is therefore a fundamental rule of FAP to seek out, and when useful, intentionally evoke problems in the relationship that may be worked through for the client's benefit. In our example above, the therapist did not maintain a safe emotional distance from the client in order to keep her difficulties in dealing with romantically inaccessible persons from threatening the collaborative relationship. Instead, the therapist made the relationship closer, expressing positive feelings towards the client and thus evoking the client's difficulties.

The concept of *therapeutic skill* is also approached differently in FAP. Like the mainstream behavior therapist, the FAP therapist still needs conceptual skills to define classes of responses involved in the client's problems and to specify target behaviors and related contingencies. But when it comes to the treatment process, other skills are involved. As may be surmised from the example above, the therapist needs to respond continuously to the effects client problems and target behaviors have on him or her as a person. These skills include being watchful for, expressing and evoking emotions (V. Follette & Batten, 2000), dealing with emotions, interpersonal closeness and conflict, bi-directional communication (giving and receiving feedback), and discriminating and expressing what the therapist needs from the

client in the relationship (Callaghan, 2006,a). Although intended for in-session CRB work, all of these skills are also related to core interpersonal abilities. Improving those skills may change the therapist's interpersonal style in fundamental ways.

All this brings out a parallel between personal growth and professional progress as a therapist. Consider a remark that may sound familiar to many supervisors: "When I compare myself today to that shallow, quiet girl I was only one year ago, I seem to be a completely different person now. And I attribute the change to this supervision experience." Another supervisee confessed: "I only understood what made me hide from my clients, or exactly why I did that, when I was able to share what I felt in this supervision group. It hurt, it hurt badly, but I became a better therapist because of it." Now compare these two statements to what clients often say at the end of therapy and you may find a clear resemblance.

School-based approaches to supervision serve as illustrations of how close supervision can come to treatment. Back when behavior therapy was still young, Rose (1977) described the use of behavioral group therapy as a supervision method. Supervision was also been described as a kind of treatment for the therapist in *Rational Emotive Behavior Therapy* (Woods & Ellis, 1996) and *Dialectical Behavior Therapy* (Fruzzetti, Waltz & Linehan, 1997). This is of course only metaphorically true, as the treatment does not concern the therapist's personal problems per se, but only his or her functioning as a professional. However, our point is that different schools of therapy use their treatment principles in supervision. This is not surprising at all, since these principles embody each school's understanding of the mechanisms of personal improvement.

When a treatment model specifies contingent reinforcement as the critical process for behavioral change, this is also reflected in the supervision strategies developed from this model. W. Follette and Callaghan (1995) described a procedure in which the behavior of the FAP therapist is shaped *in-vivo* during sessions with the client through direct contingent feedback provided by the observing supervisor. However, the parallel between FAP and this strategy of supervision is only partial. The FAP therapist does not shape the client's behavior in daily life settings, but rather responds to it when it occurs within the boundaries of the session. Still, a supervisor can use contingent reinforcement to influence the supervisee's behavior during supervision sessions in ways that will improve the latter's performance as a therapist. This insight has allowed a school-based conception of FAP supervision to evolve (Callaghan, 2006a; Tsai et al., 2008). The relevant literature will be discussed below under the heading *Comparing the model to the state of the art*.

The present article attempts to expand on existing school-based supervision practice within FAP. Criteria will be proposed for deciding when FAP-style contingent responding is a desirable supervision strategy and when other principles of change may be preferable. The proposed model distinguishes three different functions of supervision (Vandenberghe, 1997). Each of these functions should prompt a different choice of supervision strategies. The model evolved during an effort to introduce FAP in an undergraduate training program. Admittedly, it may be more advisable to teach FAP to seasoned therapists who have had extensive exposure to the therapist-client relationship and its vicissitudes. In the latter case, one can take advantage of sophisticated interpersonal repertoires and clinical wisdom shaped by years of in-session experience. These can provide skills and sensibilities that may need to be rearranged but can still serve as building blocks for learning FAP. As a result, training seasoned therapists may not give a clear picture of how much is involved in learning to identify, evoke and respond to in-session client behavior. In contrast, working with fledgling therapists made it clear how complex a task this can be. It is not the intention of the present paper to report on the training program or its outcome, but only to describe the model for supervising FAP that was developed in the course of it.

The first context: introducing skills.

Supervisors of inexperienced therapists need to make sure that the therapists know what to do. At this stage, strong instructional control over therapeutic activity is needed. As long as the student does not know what to do, the instructor retains therapeutic responsibility and does much of the thinking. He or she explains or shows how to proceed in developing and using the client case conceptualization and in making interventions. This protects the client from the obvious risks involved in a beginner's lack of experience. At the same time, it allows the novice to practice real life therapy without having the needed experience. By applying the conceptual and technical skills as instructed, he or she will have the opportunity to learn from experience. This condition mimics mediation therapy, in which the behavior analyst technically prepares a parent or other caretaker who will implement treatment. This is an approach with a long tradition in applied behavior analysis (e.g. Moreland, Schwebel, Beck & Wells, 1982).

Often the needed instructional control is provided through discussion of session recordings and reports. Scrutinizing these recordings and reports, the supervisor can monitor how well supervisees followed through with previous instructions and then lay out what to do in the next sessions. In reviewing what happened in-session, the supervisor may detect, for instance, that the therapist failed to attend to an opportunity to reinforce an *in-vivo* improvement of the client. When this failure is due to a lack of conceptual or technical skills, the first context is invoked: the therapist does not know what to do. In this case, the supervisor needs to give clear instructions, and after the following session, needs to check to see if they were followed. As an example, he or she may need to explain to the therapist how to trace parallels between what happens in-session and the client's daily life issues or how to respond therapeutically to the client's difficulties and improvements.

One potential risk at this level is that the mediator may do literally what he or she is instructed to and does not learn from practice. An extreme case would be when the therapist follows instructions regardless of unforeseen developments during the session. Excessive dependence on rules is particularly deleterious for therapist development. In the first place, it hinders learning from practice. Rigid instructional control can overrule the effects of experience that should change and enrich skills. In the second place, excessive rule-following makes interpersonally directed psychotherapies like FAP virtually impossible. It entails decreased responsiveness to changes in the interpersonal contingencies during the session and thus to CRBs. When this happens, the skill the supervisee learned is following instructions. This skill will certainly not turn him or her into a skillful therapist.

The supervisor-supervisee relationship may inadvertently provide contingencies that promote rigid rule-following and thus keep the therapist from acquiring conceptual and technical skills. As an example, therapist rule-following may easily come under the control of how deviating from instructions might influence the evaluation their supervisor may give them. As will be discussed further on, the supervisor can help avoid this by selecting instructions that promote contact with the in-session contingencies and weaken excessive control through approval and disapproval during the supervision encounter.

The second context: overcoming therapist difficulties.

Even therapists who reached intermediate and advanced skill levels may show dysfunctional avoidance patterns or repeatedly misunderstand a certain type of event in-session. Myths and taboos about therapy which therapists bring from their academic training (Pope, Sonne & Greene, 2006) or overly generalized assumptions and rigid viewpoints stemming from their personal background (Ellis, 1984) may put therapists on the wrong track. They may then fail to apply the skills they have already mastered, or apply them inadequately.

Therapists may report rules such as “I must hide that I’m upset about what my client said, or I will lose credibility” or “I am younger than my client. I have no right to challenge her” to justify not tackling a CRB. Supervision must address the therapist’s fears and misconceptions lest they obstruct his or her development. Sometimes dysfunctional rules may be discussed and clarified in a single meeting and the effect of the discussion on the therapist’s in-session performance can be monitored subsequently. But many difficulties will require more time and effort to analyze and remediate. In doing so, supervision may mimic traditional cognitive behavior therapy.

Again, this comparison is only partially valid. Although cognitive therapy techniques of challenging automatic thoughts, labeling distorted interpretations of reality and restructuring irrational beliefs are particularly recommended in this context, they need to be used specifically to improve the therapist’s work in-session and not to heal his or her emotional problems. The goal of supervision on this level is to eliminate dysfunctional verbal control and avoidance patterns that compete with an adequate focus in-session. This entails progress which needs to be visible in therapy reports and recordings. Factual in-session improvement in noticing, evoking and responding to CRBs will signal that the work in supervision was effective.

A danger at this level is that by targeting supervisees’ fears and unreasonable assumptions, supervision may slide into unsolicited cognitive therapy for the supervisee. The supervisor can avoid this danger by proposing clear targets for change. Besides this, a restriction of the goals of supervision to the professional realm must be made explicit in the supervision contract.

The third context: the shaping of a therapist.

Finally, a skill may not blend in well with the therapist’s interpersonal repertoire. This may be the case when a therapist can use the skill while following a rule, but aspects of his or her style hinder spontaneously putting these skills to work. The therapist may know how to focus on CRBs that occur in interpersonal situations like conflict or intense emotional closeness. However, when actual therapist-client conflict occurs in session, behaviors other than focusing on CRBs may come much more naturally to the therapist. In these cases, the therapist has learned the skills on an intellectual level, meaning he or she can execute them under verbal control, but has not really made them his or her own. An example would be the therapist whose failure to work on an alliance rupture is related to his or her detached interpersonal style.

The novice starts out following rules. But in building up clinical experience, his or her behavior undergoes contingency shaping. Thus, clinical skills initially used under instructional control gradually come under the control of the contingencies. Extensive exposure to in-session contingencies gradually provides the needed integration of skills in the therapist’s repertoire. However, this process may be long and unreliable. Aversive initial experiences with clients may, for instance, adventitiously shape patterns of avoidance behavior in therapists. Therefore additional experiential learning may be desirable.

The supervisor-supervisee relationship itself offers opportunities for such experiential learning. It provides interactions that will be functionally similar to what happens when the supervisee is with his or her client. These can contribute to shaping the subtle repertoires that make a skillful therapist. Dealing with conflict, closeness and disclosure, for example, are as important in supervision as they are in therapy. To provide experiential learning opportunities, the supervisor starts out by identifying therapist problems and targeting behaviors in recordings and reports of therapy sessions. Skills that can be targeted in this context are diverse. They include such subtle abilities as seeing positive aspects in the other’s behavior or being responsive to changes in the relationship. The supervisor then watches for functionally similar behavior in supervision encounters. After identifying such parallels, the supervisor can respond *in-vivo* to supervisee behavior to promote interpersonal repertoires that will be more effective for therapy. As will be discussed more extensively further on, supervision in this context mimics FAP itself.

This context is not, however, risk-free. It is the context in which the boundaries of supervision are hardest to maintain. A clear supervisee case conceptualization that makes sense of the therapist's problems and learning goals (Callaghan, 2006,a) is essential. Also, the supervisee's responsibility to give feedback to the supervisor when he or she feels boundaries are being crossed must be openly discussed and set out in the supervision contract. The supervisee must be aware of his or her right to set things straight when the supervisor unwittingly invades his or her private life or targets issues beyond the scope of supervision. Asserting limits in a close relationship is an example of a skill that is also essential in managing the intimacy of the therapist-client relationship. At the same time, it is a skill the supervisee can work on *in-vivo* in his or her interaction with the supervisor.

Applying the model to supervising FAP.

Comparing the model to the state of the art.

Are the three contexts specified above relevant to state-of-the-art FAP supervision? A quick overview will allow us to answer this question. Callaghan (2006,a) emphasizes what he calls fappervision. This term refers to *in-vivo* strategies, as in the third context of our model. But his discussion of supervision also includes training in conceptual and treatment principles, comparable to our second level and "instruction in attempting strategies that may be more effective in the next session" (Callaghan, 2006,a, p. 422), which corresponds to our first context. More recently, Tsai, Callaghan, Kohlenberg, Follette and Darrow (2008) distinguish between "knowing that" (intellectual knowing) and "knowing how" (emotional knowing). The former is accomplished via instructions, reading assignments and feedback on performance, among other strategies. The best fit in our model is with the first context. But if we assume that "knowing that" also involves changing mistaken assumptions, part of the work may also shift to our second context.

The emotional knowledge discussed by Tai and cols. is acquired through shaping and modeling in the context of the supervisory relationship. Knowing how to respond to a CRB is related to subtle issues. These include being in touch with one's feelings and sensitive to one's impact on the client. Instead of learning about such issues, one can experience them directly in the supervisory relationship. The authors describe two strategies. One is contextual modeling by the supervisor, with the supervisee as a participant in the interaction. This form of modeling is called contextual "because it is based on what is happening in the moment in the relationship" (Tsai et al., 2008, p. 173). The other is described as evoking and reinforcing *in-vivo* improvements in the supervisee's target behavior in the relationship with the supervisor. The latter strategy best matches Callaghan's fappervision and our third context.

The same distinction between the experiential and intellectual ingredients of supervision is made by V. Follette and Batten (2000), who also illustrate the dynamic shifting between the two. They suggest, for instance, that after exploring an issue experientially, the supervisor may shift to a didactic stance. This shifting can also be translated into our model. As an example, an issue that was worked on experientially *in-vivo* in the third context would be brought down to the first context, where the supervisor would teach how to take advantage of the new learning in future sessions. Alternatively, work could be carried on in the second context if the supervisee demonstrated erroneous conceptions regarding the application in-session of what was learned in third-context supervision.

This dynamic shifting is compatible with the needs criterion our model is built on. According to this principle, the three contexts are not developmental stages the supervisee grows through. Rather, they occur in response to the demands of a particular situation and may intertwine in any single supervision session. Admittedly, the first context is more applicable to fledgling therapists, but more seasoned practitioners can also benefit from learning what to do in new situations. Similar comments can be made concerning the other two contexts.

Summing up, the present model would appear to be compatible with the FAP literature on supervision. It also promises to make a useful contribution of its own, as will be discussed in the sections below. The explicit separation of the three contexts makes selecting the best supervision strategy easier. Being aware of the most relevant context at any given moment will also help the supervisor prepare for the specific challenges that are to be expected on that level. It will make it easier for the supervisor to decide how best to meet the needs of the therapist.

Keeping the focus on CRBs: First context.

As discussed before, following instructions is an excellent way to lose sight of CRBs. W. Follette and Callaghan (1995) have pointed out that general rules for therapists do not cover unique circumstances, and they do not work for all therapists. As we have seen, the authors resolve the issue by using direct shaping in-session, so the reliance on verbal control is greatly reduced. However, instructions are also useful as they may aid the therapist in knowing what to do (Tsai et al., 2008). Rules help the therapist remember to watch for, evoke and respond to CRBs. Our concern in this context is how to avoid rigid rule-following in supervisees who depend on instructions. Vandenberghe (1997) approached this question in terms of the distinction between *plyance*, which is maintained by approval in the supervision session, and *tracking*, in which natural consequences of following these instructions shape the therapist's behavior.

Zettle and Hayes (1982) defined *plyance* as rule-following maintained by social reinforcement, and *tracking* as rule-following reinforced by contact with the natural consequences of following the instruction. The natural consequences of the therapist's behavior will be changes in the case conceptualization or the client's behavior. For instance, a natural reinforcer contacted by watching for CRBs would be the actual identification of a CRB. As another example, evoking CRBs should be reinforced by the swift occurrence of a workable CRB. To promote *tracking*, instructions should be given that prompt more sensitivity to such natural consequences.

The supervisor can give instructions that must be completed with in-session information before the therapist can decide how to proceed. An example of an instruction that promotes tracking could be: "Disclose to your client an effect she had on you and watch her react. Then compare that reaction to the information in the case conceptualization before deciding what to do next." As an alternative technique, the supervisor can ask the questions a more experienced therapist would ask herself: "Would this behavior contribute to solving this particular daily-life problem? And how would you respond to it?"

As another strategy, the supervisor can instruct the therapist to observe and label the effects clients have on him or her. An example could be: "Label all feelings you become aware of and ask yourself what the client just did when you felt them." This instruction will help the therapist focus on functional classes of client behavior. A functional understanding of client behavior will be easier because the effect of the behavior defines its function. In-session, this effect will necessarily be on the therapist. Hence instructing the therapist to explore his or her feelings in the exchanges with the client increases his or her chances of coming across CRBs and grasping the contingencies they are related to.

Keeping the focus on CRBs: Second context.

Imagine a client who bends over backward to please others to avoid being abandoned. In therapy, she agrees with all the therapist's statements and suggestions and unquestioningly accepts all assignments and all proposed activities. Now imagine that the therapist is following a rule like this: "For therapy to go ahead, I must at all times support collaborative behavior." Under the influence of such a rule, the therapist may not perceive the client's submissive behavior as a CRB. The rule specifies a desired process and the

client's pleasing behavior will fit the process too well for the therapist to perceive it as an *in-vivo* problem behavior.

Rules that hinder attunement to CRBs do not need to be irrational or outlandish. Often, rigid rule following even looks like prudent practice. This makes it harder for the supervisor to identify it as related to the therapist's difficulties. An example could be a belief like "Feeling sexually attracted to a client would be horrible. I would be a piece of filth if that happened." Even theoretically and empirically well supported rules become counter-productive in specific situations when taken literally and absolutely. This point deserves special attention, because the supervisor must be aware that quite reasonable principles may become a hindrance when they are used unbendingly.

Examples from other theoretical approaches in the literature show that experienced therapists do intentionally depart from well established rules. Goldfried (2000) recalls a demonstration for students in which sticking to an assertiveness protocol became a hindrance. It kept him from what he felt he should be doing, namely addressing the lack of assertiveness with which his client was treating him. Zurr (2007) reports the case of a male therapist who was asked by a female client to hold her hands while she was processing her molestation experience. Theoretical assumptions did not help him figure out what to do until supervision alerted him that he could discuss the question with his client. By opening up with the client, he not only got his answer, but also directly addressed her control over emotional, physical and sexual boundaries in relation to himself. From a FAP perspective, we would contend that the therapists in these two anecdotes broke rules so they could focus on what was happening in the relationship.

The examples above illustrate that assumptions on how to conduct therapy should be flexible (Ellis, 1984). This also goes for the basic assumptions of FAP. Paradoxical as this may seem, even these assumptions can take the focus away from CRBs. Rigidly and literally following a FAP rule like "I must share my interpretations with the client" may keep the therapist from detecting a CRB. That may be the case when a client's daily life is excessively controlled by cues given by others. When this client is overly receptive to and eager for interpretations by the therapist, that may be an *in-vivo* problem behavior our therapist may not detect.

The following vignette illustrates how a therapist's difficulty in focusing on CRBs was tackled by helping the therapist identify his bias and correct it. Pedro, a 24-year-old undergraduate therapist, was treating Maria, an older child-abuse survivor who had difficulties in trusting people and felt excluded in most social situations. When she confessed she had lied to him about being single, and that she was in a relationship with another woman, he told her that her homosexual option was avoidance behavior related to her sexual abuse history. Maria had hidden personal information for which she might be judged. Taking the risk of trusting a person she had been close to for some months (Pedro) with such information looked to the supervisor like an *in-vivo* improvement because such opening up could promote social inclusion.

The supervisor disputed the psychopathological assumption before Pedro was willing to consider that he had missed the opportunity to reinforce an *in-vivo* improvement. A balance sheet with arguments in favor and against labeling Maria's disclosure as a CRB and the downward arrow technique were used to address the theoretical justifications Pedro used. During this work, it became clear that Pedro used pathologizing interpretations of client disclosures to reestablish the distance between himself and the client after a client had shared personal information with him. Subsequent occurrences of this escape strategy were easily tackled. They gave way to experiential work in which Pedro learned to deal with intimacy in relationships.

Keeping the focus on CRBs: Third context.

As discussed above, FAP supervision comes into its own when the supervisor uses the relationship with the client as a space for *in-vivo* learning. Third context remediation work is illustrated in the following paragraphs. As part of her graduate work, Mandy, 31, was supervising the first attempts at therapy by Ana, a 20-year-old undergraduate, at a free community clinic.

Mandy observed that Ana did not identify CRBs that involved her clients' expressing needs or dealing with conflict. Ana punished what Mandy thought were reasonable attempts by clients to give her feedback about her cold, uncaring attitudes. Case conceptualizations in hand, Mandy argued that giving feedback to the therapist was an obvious *in-vivo* improvement for several of these clients.

Ana, however, was able to defend her attitudes and Mandy, as a first-time supervisor, was careful to give the therapist as much credit as possible and not to impose her own perception. However, during later supervision encounters, the pattern was repeated. When Mandy discussed Ana's intolerance of poorly educated clients' non-standard language, Ana once again rejected the criticism out of hand. And the same happened when Mandy addressed her intolerance of no-shows by clients who could barely afford the often hours-long bus rides from the slum to the clinic. When Mandy finally shared the feeling of helplessness this caused her, Ana became surprisingly upset and considered giving up training altogether. While discussing what was happening, they found out that Ana reacted excessively to negative evaluations in all areas of her life. To function well in interpersonal settings, she depended on signs of deference from others, such as coming on time (which was difficult for clients who depended on long irregular bus trips) and addressing her respectfully (including the use of polished language), which signaled that no evaluation was coming up.

In this case-example, longstanding avoidance strategies which had been successful in previous situations were a threat to the therapist's efficiency. As the supervisor spoke in an educated manner and was punctual, the required safety signals had always been in place in the supervision relationship. Mandy had also reinforced Ana's escape behavior by endorsing the reasons Ana gave for her rigid attitudes and allowed her immunity from evaluation in supervision. But finally, Mandy's sharing the impact Ana's behavior had on her provided an *in-vivo* learning opportunity in which Ana needed to deal with negative feedback. This observation finally made it possible to include this learning goal in Ana's supervisee case conceptualization.

Direct shaping of the relevant therapist repertoires was chosen as the way to remediate the problem. It was agreed that Mandy would respond contingently to improvements in Ana's receiving of feedback and in her way of dealing with a lack of deference during future supervision encounters. With contextual modeling chosen as the strategy of change, Mandy would need to respond firmly and compassionately when Ana criticized her or at moments when Ana lacked deference to her supervisor. These responses from Mandy would then serve as a model for Ana's behavior toward her clients.

The third context is not only relevant for remediating pre-existing problems with the therapist's style. It can also serve to shape new behavior in interpersonal situations the therapist has never been exposed to before. Behavioral deficits may occur for the first time when the therapist starts the practical part of his or her training or shifts to a new client population. Another special situation is when work with a specific client group shapes dysfunctional therapist behavior. The latter risk has perhaps been best described in the literature on treating borderline personality disorder (Masterson, 1976; Linehan, 1993; Fruzzetti, Waltz & Linehan, 1997).

In a series of case studies, Sousa and Vandenberghe (2007) identified two categories of inadequate behaviors in inexperienced therapists who treated borderline clients. These therapist behaviors

were (1) avoiding unpleasant interpersonal experiences and giving elaborate reasons for doing so and (2) making dramatic demands for progress while exaggerating difficulties and rejecting reasonable options. These two categories of behaviors hindered both therapy and supervision. Paradoxically, but in line with FAP principles, this provided *in-vivo* learning opportunities for the supervisee during supervision sessions. The supervisor was able to identify supervisee behaviors toward her that belonged to the same classes as the therapists' undesirable behaviors towards their clients. As an example, some therapists would demand unreasonably rapid progress from the client and miss small but important *in-vivo* client improvements. As supervisees, these therapists would call the supervisor at inappropriate times for immediate solutions. Contingently responding to this behavior *in-vivo* in the supervisor-supervisee relationship would than be the strategy of choice. Generalization of the changes in the therapist's behavior to the client can than be monitored by the supervisor.

The Sousa and Vandenberghe (2007) study favored the perspective that therapists acted the same way toward the supervisor and toward their borderline client. They showed similar counter-productive behavior (namely experiential avoidance accompanied by dysfunctional reason-giving and unreasonable demandingness) with both their client and their supervisor. This comparison allows the supervisor to shape better ways of responding *in-vivo* in the supervisory relationship. The supervisee can then put these better ways of responding to work in his or her relationship with the client.

However, a different comparison is also possible. We could observe that the supervisee's behavior toward the supervisor is similar to the borderline client's behavior toward the therapist. In the latter case, the process in therapy (dysfunctional avoidance and unreasonable demands by the client towards the therapist) parallels the process in supervision (avoidance and demands by the supervisee toward the supervisor). In this case, contextual modeling can be used (Tsai et al., 2008). Both options allow for an experiential approach in which resolving the problem with the supervisee may lead to a resolution in the therapist-client relationship.

Conclusion

We can now abstract a set of suggestions from this model. The aim is to make it easier for the supervisor to decide, at any particular juncture with any particular supervisee, what he or she should do to keep therapists focused on CRBs.

One suggestion for the first context is the use of specific types of instructions. Instructions that select actions leading to natural reinforcement for the therapist in-session are to be preferred. When a therapist obtains sufficiently reinforcing effects in-session while following through with supervisor instructions, this will lead to increased control by in-session contingencies over the therapist's behavior. In other words, he or she will continue using the instructed skills, not because of the supervisor's control over his or her rule-following, but because these skills work for him or her in-session. How can the supervisor predict if selected instructions will help the therapist to contact natural reinforcement? Information about both the supervisee and the client is needed for such a decision. For instance, the supervisor can provide the therapist with instructions for actions that are well within his or her technical reach, and which will yield immediate results with the client, given what the supervisor knows about the client. An example might be asking an affectionate therapist to increase closeness in response to *in-vivo* improvements of a client who finds closeness desirable.

Another specific class of instructions the supervisor may use in the first context is a category we call incomplete instructions. The supervisor does not state the entire action to be undertaken by the therapist. The latter will need to complete the instructions with information to be identified in-session. As an example, the supervisor can instruct the therapist to give the client feedback about behaviors that may help solve the problem for which she sought treatment. To make this instruction workable, the therapist

will need to think the client case conceptualization over and engage in keen observation of what is happening in the relationship.

Alternatively, the supervisor can avoid using instructions and instead ask direct questions that prompt the therapist to stay closely attuned to the client's behavior. An example would be to ask the therapist what in-session behaviors he or she imagines the client may also emit in the relationships where the client's daily life problems are most salient. Therapists then learn to make their interventions on the basis of the answers they find to these questions.

A related technique that can be used in this context is having the therapist label the effects the client has on him or her. The supervisor may, for instance, ask frequent questions about what the therapist is feeling in-session with the client. Such questions will make the therapist focus on those client behaviors that have interpersonal impact. And these are most frequently the client problem or target behaviors. In answering such questions, the therapist learns to monitor his or her feelings towards the client. As a result, the therapist's sensitivity to promising *in-vivo* learning opportunities as well as his or her awareness of subtle client improvements will increase.

When the supervisor faces problems in the second context, the use of traditional cognitive behavioral techniques is recommended. To challenge therapist assumptions and prejudices that compete with CRBs for control over the therapist's behavior, the downward arrow technique, Socratic questioning and behavioral experiments may be used. Dysfunctional rule-following should be discussed explicitly and replaced with more appropriate practices and more flexible rules.

In the third context, one typical technique is *in-vivo* shaping of supervisee behavior. Supervisee target behavior is evoked and shaped in the relationship with the supervisor. Typical examples of target skills include responding contingently to supervisor behavior and attending to the supervisor's needs in the interaction.

Contextual modeling was discussed as a second technique for the third context. As an example, the supervisor can respond compassionately when the supervisee admits a failure committed in-session. In this way, the therapist can learn to react compassionately to his or her client when the latter opens up and admits a shameful mistake in another relationship.

In all cases, supervisee improvement may be gauged from tapes of therapy sessions and supervisee reports that contain increasing evidence of interventions that target in-session therapist-client interactions identified as clinically relevant according to the client case conceptualization. No improvement signals that the markers of supervisee needs and difficulties may have been missed or misunderstood. The problems presented by the therapist must then be reviewed and his or her learning aims reconsidered so that work can be shifted to a more relevant context.

When the context evoked in supervision does not fit supervisee needs, little progress may be obtained. For instance, a male supervisor may work in vain on his or her relationship with a male supervisee if the problem at hand concerns specific prejudices the supervisee holds about the gender-appropriate behavior of a female client. The appropriate context would have been the second instead of the third. As another example, interventions that target a supervisee's irrational assumptions may have little effect on the performance of a therapist who misses in-session opportunities because he or she has never acquired the needed skills. The supervisor should consider the first context.

As the choice of supervision techniques depends on the context, the key to the model lies in identifying the context. To do this, both the supervisee's level of mastery and the specific difficulties at hand must be evaluated. Both will provide the markers for selecting the most appropriate context at any

given moment. When the relevant variable is a lack of repertoire, the supervisor will need to seek to provide the kind of instructions and questions that best prompt the skills the therapist needs to learn (first context). If dysfunctional verbal control hinders focusing on CRBs, cognitive restructuring and other ways of weakening rigid rule-following will be needed (second context). And finally, when broader problems involving the therapist's functioning are the issue, direct shaping of the relevant repertoires will be the strategy of choice (third context). The integrity of supervision, in this model, thus depends on accurately identifying the needs of the therapist.

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A Behavioral Perspective of Childhood Trauma and Attachment Issues: Toward Alternative Treatment Approaches for Children with a History of Abuse

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Abstract

Attachment theory provides a useful conceptual framework for understanding trauma and the treatment of children who have been abused. This article examines childhood trauma and attachment issues from the perspective of behavior analysis, and provides a theoretical basis for two alternative treatment models for previously abused children and their foster or adoptive parents: rational cognitive emotive behavioral therapy and trauma-based psychotherapy. These new treatment approaches are based on the integration of attachment theory and basic concepts and principles of rational thought and behavior analysis. These therapeutic models provide dyadic, cognitive, and emotive interventions that encourage behavior change with foster or adopted children who have been abused or neglected as part of their early experiences. The role of emotion in behavioral causation and the teaching and learning of different behavior are central to the treatment process, just as they are central features in healthy parent child relationships. Conclusions are reached that “familial and therapeutic environments” in which perception and previous learning guide parent child interaction are more important than diagnostic orientation, and implications for specific cognitive and behavioral interventions are suggested. Keywords: Cognitive behavior therapy, childhood trauma, attachment theory, foster care, adoption

INTRODUCTION

Authors of recent studies on abuse have proposed that trauma and related traumatic experiences within the family of origin have important implications for parent-child relationships, and may disrupt normal attachment behavior in children. These studies have primarily examined previous trauma and long-term sequela of severe childhood and adolescent psychopathology from the perspective of attachment theory (Bowlby, 1969, 1973, 1980). The central premise of attachment theory is that the security of the early child-parent bond is reflected in the child’s interpersonal relationships across the life span (Schneider, Tardif, & Atkinson, 2001). This article examines childhood trauma and attachment issues from the perspective of behavior analysis, and provides a forum in which the authors provide rationales for new cognitive focused or trauma-focused behavioral treatment approaches for abused children and their foster or adoptive parents. These new therapeutic models provide dyadic, cognitive, and emotive behavioral interventions that encourage positive behavior change with abused children placed in foster and adoptive families.

Research studies focusing on mediating the long-term sequela of repetitive, intrafamilial abuse and neglect have repeatedly argued that a history of pathogenic care can interfere with secure attachment and disrupt healthy development in children (Howe, Brandon, Hinnings, & Schofield, 1999; Schneider, Tardif, & Atkinson, 2001). This is especially true in foster and adoptive families in which children have been abused or neglected as part of their early experiences. Research on foster children and problematic attachment has consistently found that long-term sequela of abuse leads to a complex array of emotional deficiencies and behavioral symptoms that reflect the traumatic effects of maltreatment on children, and create strain on attachment with their adoptive parents (Berry & Barth,

1989; Dyer, 2004; O'Connor & Zeanah, 2003). This strain in the children's lives, often across multiple placements and multiple caregivers, increases the likelihood of difficulties across a range of development. Research investigating abuse and insecure attachment behavior in foster and adoptive children has linked these factors to emotional and behavioral difficulties in these children.

STATEMENT OF PROBLEM

Researchers investigating maltreated children have repeatedly found that neglected or abused children in foster and adoptive populations manifest different emotional and behavioral reactions to regain lost or secure relationships (Ainsworth, 1989; Hazan & Shaver, 1994), and are frequently reported to have disorganized attachments (Hughes, 2004) and a need to control their environment (Loyn-Ruth & Jacobvitz, 1999). Such children are not likely to view caregivers as being a source of safety, and instead typically show an increase in aggressive and hyperactive behaviors, which Berry and Barth (1989) suggest disrupt healthy or secure attachment with their adopted parents. These children have apparently learned to adapt to an abusive and inconsistent caregiver by becoming cautiously self-reliant, and are often described as glib, manipulative and disingenuous in their interactions with others as they move through childhood (Schofield & Beek, 2005).

The major challenges reported in parenting maltreated children include their profound lack of trust (Schofield & Beek, 2005) and a distorted sense of security, often reflected in the child's poor interpersonal relationships across the life span. Researchers investigating children adopted at older ages report many of the same symptoms found in foster children with backgrounds of pathogenic care, including a failure to develop secure attachments. Behavioral and emotional descriptions of these older children suggest that they lack impulse control and normal conscience and moral development (Termini & Golden, 2007), and often present as superficially engaging or connected to others, emotionally aloof, and unwilling to participate in treatment, all possibly connected to impaired attachment (Dyer, 2004; O'Connor & Zeanah, 2003).

In adulthood, these children often are described as shallow or emotionally aloof and have difficulty forming close relationships, demonstrate a lack of resilience, and frequently display severe antisocial behavior (Howe, 1998). In recent research regarding long-term family foster care, older children were often described by foster and adoptive parents as suspicious and highly adaptable, all in an effort to control or manipulate people viewed as sources of fear rather than sources of love or security (Schofield & Beek, 2005). Research studies focusing on different methods of attachment related treatment indicate that these children generally present as a diagnostic challenge and were likely to view caregivers as someone who must be controlled through threats and intimidation (Hughes, 2004; O'Connor & Zeanah, 2003). This finding is especially important to the psychological treatment of children, given recent retrospective evidence that most attachment and post-attachment related problems inevitably impact other family members and eventually influence adjustment outside the family. As such, these problems represent a major challenge for therapists and other mental health professionals who are often confronted with the difficult emotional and behavioral reactions in these children, as well as the fear and desperation of their caregivers and adoptive parents. While family therapists have embraced many elements of attachment theory as a critical treatment area for working to repair attachment related problems with adoptive and foster children (Weir, 2006), there is still a significant lack of research into the treatment of either maltreated or previously institutionalized children who continue to show attachment disorder behavior following adoption (O'Connor &

Zeanah, 2003).

O'Connor and Zeanah (2003) summarized the difficulties in using attachment theory to make diagnoses and to identify treatment interventions in regard to attachment related disorders. They report, "...there is still no consensual definition or assessment strategy; nor are there established guidelines for treatment or management" (p. 241.) This finding is especially important for clinicians who have embraced elements of attachment theory to help foster and adopted children and their caregivers. While attachment theory is identified as the conceptual foundation underlying attachment-based family therapy, no positive process or outcome studies of attachment based family therapies are found in the scientific literature, and recent research suggests that the criteria for more severe attachment disorders associated with abused children is vague and not well researched, and that other diagnostic criteria may be more reliable (Ziberstein, 2006; O'Connor & Zeanah, 2003).

This lack of prospective research into the psychological treatment of multi-problem, maltreated adopted children, is not unique to the study of trauma, but presents a major challenge for standard cognitive based therapy (CBT) protocols that tend to be less effective with the pervasive emotional and behavioral difficulties in these children (Hughes, 2004; Cloitre, Koenen, Cohen, & Han 2002; Saywitz, Mannarino, Berliner, & Cohen 2000). This is particularly true for foster and adopted children with a history of abuse who manifest impaired social judgment and behavior secondary to severe anxiety associated with previous trauma at the hands of someone who was supposed to keep them safe. These complex behavioral symptoms, along with emotional deficiencies, all interfere with the effectiveness of standard cognitive behavioral interventions with these children.

This article looks at the emotional and behavioral symptoms associated with these children and presents a new rational cognitive emotive focused behavioral model based on the integration of attachment theory and basic concepts and principles of behavior analysis. Although this new model provides the context to examine the many important roles of family members and other reinforcing agents, the rationale underlying this treatment approach is consistent with the principles of brevity and rational cognitive perspectives, and is based on the assumption that both learning and thinking connect the causal sequences of a child's experiences and perceptions and guide behavior (Prather, 2007), and that altering the fixed statements or language of abused children and their parents can lead to dramatic changes in the quality of relationships inside and outside of the family (de Shazer, S. & Berg, K., 1988). While individual differences in abused and neglected children are determined by previous learning, the reciprocal role of emotion and thought in behavioral causation and the encouragement of rational thinking and behavior change are central to the treatment process. Conclusions are reached that "familial and therapeutic environments", in which perception and previous learning (reinforcement history) guide parent-child interaction, are more important than nondirective based treatments, and implications for specific cognitive and behavioral interventions are suggested. Given the implicit role of learning or reinforcement history in behavioral causation, the following two sections describe many of the interlocking and concurrent behavioral and other environmental contingencies that operate in families in which children have been abused or neglected as part of their early experiences, and provides the theoretical rationale underlying the acquisition of faulty or inappropriate behavior in children growing up in long-term family foster care or adoptive homes.

Reinforcement History and Faulty Learning

From a behavioral analytic perspective, reinforcement history and faulty learning may account for differences between “secure” and “insecure” attachment. These concepts may explain why children with so-called “insecure attachment” appear to lack “trust” and appropriate “moral development”. Lack of attachment behavior, trust behavior and moral behavior can be explained by principles of reinforcement and punishment, rather than some vague, underlying, unobservable concepts called “attachment”, “trust” or “morality” that merely describe behavior. What appears to be a lack of “emotional development” may be instead the failure to exhibit appropriate emotional behaviors due to Sds, MOs and the principles of reinforcement and punishment.

Given that feeling safe is our most primary social need (Howe, Branson, Hinnings, & Schofield, 1999; Schneider, Tardif & Atkinson, 2001), physiological changes throughout the lifespan creates a predisposition or readiness for human beings to learn certain tasks (behaviors). During the first five years of life, children are physiologically dependent primarily on adult caregivers to provide for their basic survival, safety and emotional needs. Through their experiences with healthy adult caregivers, children learn that they can relax, stay close to, respond to, and basically “trust” those adults to take care of them. Such children also exhibit noticeably preferential treatment toward the specific set of adults who primarily respond to their needs (discriminative stimuli for reinforcement) by showing visible signs of being upset when they leave and pleased when they return. This cluster of learned behaviors is sometimes referred to as “secure attachment”. While previous learning determines individual differences in children, it is not expected that this set of behaviors would automatically transfer to a new adult, except with repeated positive experiences with this new adult, and especially not with every stranger.

When children are not adequately cared for during their early years of dependency and vulnerability and their safety and survival needs are compromised, children may experience a series of painful or horrific events (referred to as “traumatic experiences”), either directly at the hands of their adult caregivers or indirectly due to their negligence. As a result, these children fail to learn the cluster of behaviors referred to as “attachment”, and learn an entirely different set of behaviors in their interactions with adults. Such children often learn to avoid their adult caregivers (familiar adults) and fend for themselves and/or approach strangers (unfamiliar adults) to obtain what they need. These same abused or uncared for children often may have observed behavior patterns in the abusive and neglectful homes in which lying, stealing, cheating, sneaking and coercion were modeled and reinforced.

For example, children who have been abused and neglected and/or had multiple placements often across multiple caregivers spent the first few years of life engaging in survival behaviors and manipulating and coercing strangers into giving them what they want. Because of these and other existing problem behaviors, rules established by ‘secondary parents’ (foster or adopted) regarding behavior are less likely to be paired with supporting natural environmental contingencies (e.g. tell their children never to lie and that people don’t like it when others lie). People in the natural environment respond more readily to sneaky and manipulating behaviors they learned (through observation) in the presence of their ‘primary parents’ (abusive or neglectful) (i.e. when they do lie, they frequently get what they lied for from naïve adults). Thus, these children frequently fail to generalize moral behavior (and appear as if they lack “conscience” or “internalization” of parental values). However, their history is that of a lack of prior parental punishment for deviant talk and mock enactment (often met with indifference) coupled with positive reinforcement for deviant talk and being taught antisocial rules (i.e.

hitting as a generalized response).

When children are moved to foster or adoptive homes, they bring these same negative interaction patterns into their new homes and may exhibit them in the presence of their new adult caregivers. At first, the new adults may inadvertently reinforce undesirable behaviors, particularly coercion, because it is much easier to give in and it is so punishing to the adult to not give in. However, once the parents realize the faulty interaction patterns, they may be able to change. They learn to reinforce alternative appropriate replacement behaviors (telling the truth, asking for things they want, etc.) and extinguishing (not giving in to) or punishing the undesirable behaviors. However, even when new caregivers are vigilant about reinforcing the replacement behaviors and not reinforcing (extinguishing) the undesirable behaviors, the undesirable behaviors get intermittently reinforced, since lying, stealing, cheating and sneaking can be difficult behaviors to detect. Furthermore, for many of these behaviors the important reinforcer is not adult attention. Instead, for example, stealing may be reinforced by avoiding detection and obtaining the desired item, while lying and sneaking may be reinforced by escaping punishment or by getting to do what is not permitted. These children are often well trained in manipulation and surveillance, whereas their adult caregivers (well meaning adoptive and foster parents) are motivated to earn trust and believe their children.

Even when adult caregivers are successful at detecting undesirable behaviors, other adults these children come in contact with (strangers, teachers, etc.) reinforce these undesirable behaviors because they don't realize the children are exhibiting them (i.e. don't recognize a lie, don't know the item they have is stolen, don't know that they're not permitted to do an activity). There are three major ramifications with the aforementioned:

1. No matter how diligently the caregivers monitor healthy behavior and not reinforce inappropriate behaviors, children are being intermittently reinforced in the "outside world";
2. No matter how often healthy adult caregivers model appropriate behavior and tell children what's wrong with their behaviors (i.e. people won't like you, you'll get in trouble, you'll lose friends), the child won't believe it because the caregiver's claims don't come true. In fact some children are so adept at lying and manipulating that caregivers are sometimes the ones who are not believed by others; and, finally,
3. Sometimes the caregivers are avoided and shunned by children, and naïve strangers are preferred because they are more reinforcing; they reinforce the undesirable behaviors which are more comfortable and familiar and a lot easier to exhibit than the new set of behaviors that the caregivers are trying to get the children to exhibit. This is similar to the way an adult may feel about someone trying to coerce them to quit smoking or start exercising.

Loved and well-cared for children, on the other hand, learn to trust, believe and rely on their adult caregivers. They want to be in the presence of their adult caregivers and they want to please them. They have learned through modeling, reinforcement, extinction and punishment that lying, stealing, cheating and sneaking are undesirable. It's not that they never exhibit these behaviors; it's just that when they do, they have an anticipatory behavior (withdrawal) and emotional response (i.e. "guilt") that makes them dread the negative responses of the caregiver. Even if they don't get caught, or if the caregiver provides no punishment other than to express disapproval, that is aversive enough

for “attached” children to learn, i.e. make the association between their behavior and the punishment and “generalize” to similar situations in which they may want to exhibit the behavior (internalize the moral lesson) in the future. Given the implicit role of learning or reinforcement history in behavioral causation, it is the behavioral theoretical view of the second author that for “unattached” children, the association between appropriate punishment (caregiver exhibiting anger, telling the children that the caregiver is disappointed, taking away a privilege) and painful and horrific events in their past (deprived of basic needs, being yelled at or hit in anger) can trigger (become an Sd for) anger (the current punishment becomes associated with their early trauma).

In the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*. (DSM-IV-TR) (American Psychiatric Association (APA), 2000) symptoms of PTSD include “intense psychological distress” or “physiological reactivity “when exposed “to internal or external cues that symbolize or resemble an aspect of the traumatic event.” Consistent with this view, the second author’s behavioral perspective is that these children may shut down and try not to feel, think or believe anything the caregiver is saying. This “shutting down” is negatively reinforced because it is so aversive to feel the negative feelings associated with their early experiences. Thus, their behavior of “shutting down” becomes an inherent pattern of negative interaction or behavior that is entrenched in these children’s behavioral and emotional repertoire. In an article entitled *Posttraumatic stress disorder: A state-of-the-science review*, Nemeroff, Bremner, Foa, Mayberg, North and Stein (2006) make the argument that whereas individuals who have suffered a trauma and allow everyday experiences to gradually correct their distorted thinking regain feelings of competence and safety, “those who make extensive use of avoidance and numbing will also avoid the very experiences that could have corrected their cognitive distortions” and that those “individuals may be at higher risk for the development of PTSD” (p.18). From a behavioral perspective, “unattached” children often react to many emotional situations in which others would appear to be “sad”, “ashamed”, “guilty”, or “embarrassed”, in such a way that they appear “neutral” or “happy”. In situations where children do things that they know the caregiver would disapprove of, they may fail to experience negative feelings (punishment). Therefore, these children fail to learn the association between their behavior and punishment. This, combined with the possibility that they might not care that much for their caregiver, means that they will not experience any type of anticipatory response (i.e. “guilt”) when they engage in “forbidden” behavior.

The Role of Perception and Social Agents in Behavioral Causation

The major challenge in treatment and parenting these children is the requisite that the way an abused child reacts to foster or adopted parents varies according to how the child perceives them (Taylor, 1962; Wolpe, 1978). To the extent that perception and previous learning governs a child’s reactions, then thinking or thoughts and associated emotional responses are a major determinant in the behavior of the abused child. Implicit in this view of human (cognitive and emotional) behavior, though somewhat subtle, is a focus on perception (causal antecedents to overt behavior), and the interlocking behavioral contingencies inherent in the experiences or controlling conditions (discriminative stimuli, differential associations), linked with dysfunctional emotional and behavioral patterns in abused and neglected children. Because research indicates that contingencies of reinforcement maintain most problem behaviors, the unlearning and relearning of healthy cognitive and emotional reactions in these children requires relearning verbal and motor behavior associated with how abused children perceive and interact with their adoptive parents and other social agents. Since learning history and the reciprocal role of emotion and thought in behavioral causation is critical to the treatment process,

rational cognitive emotive behavior therapy (RCEBT), “favors a conception of interaction based on triadic reciprocity, and suggests that behavior, cognitive and other emotional (personal) factors, and environmental influences all operate as interlocking determinants that affect each other bidirectionally” (Bandura, 2004, pg. 27; Bandura, 1977a, 1982b).

While specific antecedents to and reinforcers for problem behavior vary widely, this conceptual framework is consistent with the idea that abusive and neglectful experiences differ qualitatively from other types of early childhood experiences, and that something peculiar about certain kinds of abusive caregivers promotes emotional and behavioral symptoms in children. This is especially important when working with previously abused children, and suggests that the primary force that shapes abused children depends solely on how caregivers model and affectively respond to the child’s healthy or unhealthy behavior over time. This theoretical link between a child’s experiences and problem behavior is the keystone to effective treatment strategies, and suggests that the principle behavioral and emotional effects of abuse and neglect are learned through reciprocal interaction with various socializing and reinforcing agents, and, through these interactions, rewarded behaviors are adopted, reinforced behaviors are maintained, and punished behaviors are extinguished.

Therein lies the major problem regarding traditional attachment based family therapy methods of treatment. Whereas for children from nurturing homes, the essential social agents are the parents and continue to be the parents throughout the developing years through puberty, for children from abusive and neglectful homes, strangers, casual acquaintances and peers are the major social agents. There are three major ramifications of the aforementioned:

1. No matter how much you alter the behavior of the adoptive parents, their effect as a social agent on the children’s covert behavior is minimal at best;
2. Strangers and casual acquaintances (who can’t possibly be privy to all that needs to be altered in a child’s behavior) will act as strong social agents who will inadvertently reinforce many undesirable behaviors (covert, charming and manipulative); and
3. Troublesome peers (the type of peers these children are drawn to) will teach children (through modeling and differential reinforcement) additional covert, undesirable behaviors.

Thus, after traditional behavior management interventions, these children will continue to exhibit moral behavior in the presence of the Sd for reinforcement of moral behavior and punishment for immoral behavior. However, since immoral behavior (lying, stealing, cheating) is intermittently reinforced in the presence of the Sd for reinforcement of immoral behavior (peers, naïve adults), these children will continue to exhibit immoral behavior in their presence.

Another troublesome symptom of “insecure attachment” is the seeming lack of typical emotions. Many children with “insecure attachment” exhibit no observable indicators of experiencing shame, guilt, anxiety or fear (i.e., they seem to lack all negative emotions other than anger). Behaviorally, these children exhibit behaviors indicative of feeling happy most of the time even when it is “inappropriate” to the occasion to exhibit happiness (i.e., they hurt someone, stole something, failed at a task because they put forth no effort, lost something of value). Naïve observers might believe the child is happy most of the time because the child shows “happy behavior”. Observers of

these children might also believe the children are “cold” and “callous” and “lack emotion” because of their observable behaviors.

Traditional psychologists have researched and dealt with this phenomena clinically when dealing with symptoms of Post Traumatic Stress Disorder (PTSD), i.e. numbing of general responsiveness; avoidance of stimuli that trigger the re-experience of trauma; restricted range of affect; etc. (APA, 2000). Their explanation is that these individuals have been “traumatized” by a tragic experience (such as a sudden major loss or extremely painful experience) or by repeated experiences of trauma (such as child abuse) and have “numbed” their emotions as a defense against the physical and psychological pain. They then remain chronically “numb” and unable to experience “normal” emotions or become that way when some event or person “triggers” their “memory” of the traumatizing event or circumstances. According to the second author, the behavioral explanation for these same phenomena might be that when another individual exhibits a negative emotional behavior (i.e., an angry face or voice tone) that becomes an Sd for an aversive situation (i.e. abuse) and the individual is thus negatively reinforced for numbing/blocking emotional behavior associated with that aversive situation (see Sheaffer et al. in this same issue for more information about the role that facial expressions play in affecting social and emotional behaviors).

TOWARD A RATIONAL COGNITIVE EMOTIVE BEHAVIORAL MODEL

According to Albert Bandura (1969), the father of modern cognitive social learning theory, “the process of behavior change involves substituting new controlling conditions or stimulus patterns for those that have regulated a person’s behavior.” This view of human behavior is especially true in families in which children have been abused or neglected as part of their early experiences, and is grounded in the notion that the physical and emotional topography of an abused child’s behavior is controlled, and that overcoming abuse and changing behavior is subject to the same lawful inevitability as other behavior (Wolpe, 1978). Thus, the theoretical rationale underlying a new rational cognitive focused behavioral model assumes that attachment related problems (behavioral and emotional) develop from the conditioning of motor and verbal responses to complex integrations of stimuli (Taylor, 1962; Wolpe, 1978) that evolve into learned habits that are then reinforced or maintained in multiple interpersonal environments. While this model differs substantially in concept and method from traditional cognitive behavior therapy for anxiety and depression, rational cognitive emotive behavior therapy (RCEBT) shares the belief that therapy should be brief, maltreated children who reside apart from their family of origin are not pathological, and children can change rapidly. Since much learning is reinforced through external consequences, these beliefs are central to the clinical aspects of this approach, just as teaching and learning of different behaviors are central features in healthy parent-child relationships.

Developmental History

Because the clinical aspects of this model deemphasize history and pathology, there is no assumption that attachment impairment or change in the quality of parent-child relationships are static moments in time and activated during traumatic experiences. This view is especially important when working with previously abused children, and is consistent with the belief that the origin of emotional and behavioral symptoms associated with abused children embodies a long-term developmental process occurring within an abusive family environment. The critical role of abusive caregivers and how they

model and affectively respond to the child's behavior is seen as the primary force that shapes abused children over time. This is especially true in families in which children have been abused and exposed to multiple adults who model inappropriate behaviors, often in multiple placements. Researchers studying foster children and problematic attachment have consistently found that most problem behaviors are learned as a result of an individual's experiences with his or her environment and are maintained by contingencies of reinforcement (positive and negative). This emphasis on the environment and the value of reinforcement is critical to this new rational treatment approach, given that social interaction is necessary for behavior to be reinforced, and that many of the reinforcers associated with problem behavior are mediated by others in a person's environment (Derby, Wacker, Sasso, Steege, Northup, Cigrand, & Asmus, 1992; Iwata, Pace, Dorsey, Zarcone, Vollmer, Smith, Rodger, Lerman, Shore, Mazaleski, Goh, Cowdery, Kalsher, McCosh, Willis, 1994). Recent research investigating children growing up in long-term foster family care and exposed to inappropriate models indicates that many of these children have developmental or learning (reinforcement) histories characterized by familiar adults who ignored appropriate behavior and attended to inappropriate behavior, while at the same time, inflicted pain (punishment), neglect, or, in a reverse sense, "gave in" to stop inappropriate behavior (positive reinforcement) (Golden, 2007). The problem for children who grow up having experienced multiple placements and exposed to multiple inappropriate models is that many of them fail to learn accountability (Golden, 2007), and have no concern for parent approval or disapproval.

Theoretical Formulations

While the origin of these learned dysfunctional patterns is appreciated, rational cognitive emotive behavior therapy (RCEBT) is based in part on the theoretical underpinnings of behaviorism and solution focused therapy (de Shazer & Berg, 1993), and provides an opportunity to examine how the child's perception and previous learning experiences influence (regulate) current behavior. The underlying mechanism of RCEBT involves the development of cognitive emotive behavioral strategies to recognize and evaluate the language and behavior of previously abused children. Because RCEBT maintains that language is merely behavior that reflects thinking, it follows that learning and thinking connect the causal sequences of a child's experiences and perceptions and guide behavior. Thus, the clinical aspects of this approach (RCEBT) are extended to a consideration of the role that trauma plays in current thinking, and maintains that an abused child's behavior and emotional difficulties are most often productively addressed by considering the reciprocal role of thought and emotion in behavioral causation. Negative interactional patterns in families in which children have been abused or neglected are maintained because the individuals involved are responding to the abused child's language and associated behavioral symptoms and emotional deficiencies. From an attachment perspective, an insecure emotional connection with an adoptive parent disrupts "parent-child relationships", and avoiding or escaping those negative emotions (aversive events) appears to maintain unattachment behavior. Such an approach emphasizes that an insecure emotional connection does not explain abused children's "unattachment behavior," but rather disrupts healthy attachment behavior with adoptive parents. From a Skinnerian perspective, emotions are described as "explanatory fictions" that psychologists have claimed to be causes for behavior. Skinner is referring to what the authors call "emotional deficiencies" or behavior that reflects language and thinking, and develops from the conditioning of motor and verbal responses that evolve into learned habits. Skinner, in an implicit sense, is referring to the same set of behaviors that the authors call "emotional deficiencies," and are used to describe people's motor and verbal

behaviors when they report feeling in particular ways. Consistent with Skinner and RCEBT, “emotional behaviors” do not explain people’s behavior they merely describe people’s behavior, though the authors have expanded on this idea and suggest that internal feelings or emotional connections that people report when they say they are feeling “negative emotions” (i.e., angry, sad, scared) could be described as aversive stimulus events.

Drawing on Skinner’s seminal work regarding therapy, the first author agrees with the importance of “introducing variables which compensate for or correct a history which has produced objectionable behavior (Skinner, 1953, pg. 379),” and suggests that encouraging abused children to shift attention or thinking away from negative thoughts and associated aversive emotional feelings is central to a child’s social attachment behavior. Such an approach argues that thinking and behaving differently does not increase attachment behavior or change the negative effects of trauma, but rather competes with unattachment behavior and the role of the cognitive emotive therapist is to amplify and reinforce these differences in emotional connectedness to abused children and their adoptive parents. Beyond the importance of teaching previously abused children how to recognize and compete with objectionable emotional behavior, the primary goal of this approach is to amplify positive behavioral differences in the family, whether describing real or imagined relationship patterns, and identify or highlight behavioral exceptions to unattachment behavior associated with different controlling conditions (antecedents) in and outside of the family.

Implicit in this new cognitive emotive behavioral approach to treatment is the view that language is relative and there is no absolute truth, and the role of the therapist is to de-emphasize the causes of unattachment behavior and normalize the child’s thinking and behavior for both the child and the adoptive or foster parents. Because RCEBT focuses strongly on how attachment problems are solved and the cognitive emotive connections in attachment behavior, therapy with previously abused children involves teaching and rewarding them in a controlled safe environment how to compete with negative thoughts (controlling conditions or discriminative stimuli) associated with early childhood experiences. The underlying clinical mechanism involves helping children learn the importance of thinking and behaving differently, and that avoiding aversive childhood experiences appears to be negatively reinforcing for abused children.

This process of focusing on language and the associated emotional interplay with behavior is critical, especially with younger children, and depends on the skill of the therapist and the interchange between the child and adoptive parents. The goals for treatment, beyond encouraging and rewarding positive behavior change (with themselves and in relationships), involves shifting attention away from problem talk, and focusing on those times when the parent-child relationship works (positive behavioral differences) and how abused children and their adoptive parents have successfully solved problematic attachment behavior in the past.

Because what and how abused children think affects the way they behave, implicit in therapeutic process, is the importance of establishing a logical framework or structure, which begins with normalizing the language of abused children and their parents to encouraging the child to think or behave differently and compete with negative thoughts. This theoretical structure is consistent with the belief that helping children shift thinking from talk about relationship problems to behaving differently leads the individuals involved to positive behavior change and greater control over themselves and their relationships. While often difficult to maintain due to learning history and associated environmental cues (controlling conditions), such a focus on changes in feelings and

improved relationships sets the stage for a therapist to focus on the identification of antecedent conditions (learning and thinking) linked or associated with negative emotional reactions in abused children. Because research indicates that contingencies of reinforcement maintain most problem behaviors, helping abused children and their parents appreciate this cognitive emotive connection in unattachment behavior provides the foundation for the use of establishing and motivational operations. Unlike cognitive behavior therapy for anxiety or depression, the use of establishing and motivational operations is designed to increase the effectiveness of healthy affective parental accessibility as a form of reinforcement, as well as compete with specific antecedents (controlling conditions) that regulate problem behaviors and leads to dysfunctional relationship patterns outside of the family.

PROPOSED TREATMENT: RATIONAL COGNITIVE EMOTIVE BEHAVIORAL THERAPY

The process of RCEBT consists of ten distinct but interdependent steps. These steps fall into one of three theoretical orientations (i.e., rational or solution focused, cognitive emotive, and behavioral) and are intended to provide abused children and their adoptive parents with positive behavior change, corrective interpersonal skills, and greater control over themselves and their relationships. They are: 1) determining and normalizing thinking and behaving, 2) evaluating language, 3) shifting attention away from problem talk 4) describing times when the attachment problem isn't happening, 5) focusing on how family members "successfully" solve problematic attachment behavior; 6) acknowledging "unpleasant emotions" (i.e., angry, sad, scared) underlying negative interactional patterns, 7) identifying antecedents (controlling conditions) and associated negative cognitive emotive connections in behavior (reciprocal role of thought and emotion in behavioral causation), 8) encouraging previously abused children to experience or "own" negative thoughts and associated aversive emotional feelings, 9) modeling and rewarding positive behavior change (with themselves and in relationships), and 10) encouraging and rewarding thinking and behaving differently. Unlike traditional attachment based family therapies, which often interpret verbal information in terms of underlying emotional dynamics, the rational cognitive emotive view of human behavior focuses solely on the causal sequences of a child's experiences and perceptions, and the impact that the child's negative thoughts regarding trauma have on the role of emotion in behavioral causation.

While many attachment based family therapy models focus on how individual emotional problems are maintained in the family, RCEBT focuses on how individuals solve unattachment behavior, and argues for interventions or tasks that compete with negative interactional patterns in and outside the family. This is a significant difference from traditional attachment therapies, and is based on the assumption that altering cognitive emotive sequences through specific tasks that either compete or compensate for a history that has produced unattachment behavior can lead to dramatic changes in the quality of parent-child relationships in the family. Although this model is consistent with the principle of brevity, the heart of this new therapeutic model falls somewhere between the therapist's focus on language - the way abused children and their parents talk about problems, and the behavioral contingencies that shape and maintain a child's negative perception of early childhood experiences.

Since learning is reinforced through external consequences, this focus on the importance of changing the quality of parent-child relationships is based on the belief that thinking and behaving

differently does not increase attachment behavior or change the negative effects of trauma, but rather competes with the many external reinforcers for problem behavior mediated by other social agents and leads to corrective interpersonal skills and greater control over themselves. Through this process, children are taught the importance or power of behavior change, and that they can choose to think or behave differently. Since behavior reflects thinking, rational cognitive emotive behavior therapy is based on the assumption that abused children and their adoptive parents will feel good about themselves when they are provided with the cognitive and behavioral tools necessary for experiencing greater control over themselves and the quality of their relationships. Because families can usually describe times when the attachment problem isn't happening, it follows that the success of this method depends on teaching abused children and their adoptive parents to focus on differences in thinking and the corresponding different pattern of behavior that already works well in the family. This concept may be difficult, especially for young children, and involves helping the family learn to respond not to the child's language and associated behavioral symptoms and emotional deficiencies, but rather to connect the link between each individual's own thoughts and behavior, and the role that positive emotion has in realizing and maintaining different positive patterns of interaction over time. Thus, changing current behavior and emotional problems begins with helping the entire family embrace the idea that relationship patterns change, and that moving beyond hurt feelings and angry words requires thinking and behaving different, similar to the interaction pattern or behavior described in the following brief therapist statements:

Therapist to adopted child: ...you mentioned that sometimes you hate your parents. I'm curious...help me understand. Can you tell me about other times, times when you and your parents are together, and you feel different toward them, when you get along and like them?

Therapist to adopted child (while looking at parents): ...when you were younger and you and Mom would spend time together, can you talk more about this...maybe help me understand how the relationship has changed? Do you think maybe spending time with her, or your Dad, was different than not having someone care for you?

Therapist to adopted parents: While listening to both of you talk about your relationship with (*adopted child*), I was struck by how each of you began by pointing out how much she means to each of you, and how much you each love her. Can you talk more about this...maybe help me understand other situations when the relationship is positive and good?

Therapist (end of the session and addressing the entire family): Over the next week, I would like each of you to take a moment to think about the kind of relationship you want to have with each other. How would the relationship look and feel? What would you be doing...how would you act...what words would you be saying...what words would you like to hear? When we meet again, I would like each of you to talk about your role in having the kind of relationship that you want with each other.

Establishing and Motivational Operations

Because this model values emotion not as the primary change mechanism but rather as central in behavioral causation, the interchange between therapist and family also focuses on the use of establishing (EO) and motivational operations (MO) to alter the abused child's emotional or affective

dysregulation. Michael (2004) defined EOs as environmental events, operations or stimulus conditions that affect behavior by altering the reinforcing or punishing effectiveness of other events, as well as altering the momentary frequency of any behavior that had been consequted by those other events (Laraway, Snycerski, Michael, & Poling, 2003; Michael, 2004). For example, children deprived of positive affective experiences (love and security) might be expected to establish positive affective experiences as a reinforcer, thereby increasing the momentary likelihood of responses that have previously produced positive affective experiences. In the case of foster and adopted children, affective responsiveness is the primary mode of nonverbal affective interaction between parent and child, and an establishing operation that momentarily increases the effectiveness of positive affective parental accessibility as a form of reinforcement during attachment-focused interactions. As such, emotional responsiveness not only establishes positive affective experiences as an effective form of reinforcement, if the child encounters loving or nurturing (secure) caregivers; it also serves to help children to feel safe and to regulate or alter the occurrence of any affective behavior that has been followed or consequted by emotional responsiveness and other positive affective experiences. The child's affective response to the experience is being reinforced by the parent's affective response, and the child's attention is being held by the parent's affective accessibility. As parents respond positively to their child's emotional responsiveness, nonverbally and verbally, they reinforce the affect with mutual attachment behavior, which creates within the child the aspect of a secure attachment that competes with a history that previously produced unattachment behavior. This complex behavioral approach to treatment is critical, especially when working with children exposed to multiple abusive caregivers across multiple placements, and provides the social context for a child to learn (appropriate discriminations) and compete with the critical links in the interlocking behavioral contingencies that shape and maintain emotional deficiencies and other attachment related problems that impact abused children. The goal of this approach is to model and teach parents and children new learning patterns (stimulus-response) that reinforce or establish healthy emotional regulation and responsiveness, and compete with the reinforcers for problem behavior mediated by other social agents.

Since behavior affects how we think and feel, the use of establishing and motivational operations is designed to increase the effectiveness of healthy affective parental accessibility as a form of reinforcement, which can produce positive alternative feelings (establishing operations) designed to reinforce previously abused children's tendency to express positive emotions (i.e., kindness, attached) that competes with emotional inaccessibility (i.e., hurtfulness, detached). Such an approach argues that teaching abused children how to disrupt or unlearn dysfunctional stimulus-response habits in the presence of emotional responsiveness does not increase attachment behavior, but rather competes with many of the reinforcers for problem behavior mediated by other social agents outside of the family. This approach to treatment, which translates into parents setting up expectations, emphasizes teaching parents how to prompt, as well as model honest emotional accessibility, while systematically reinforcing positive interaction patterns designed to increase positive relationship patterns in and outside of the family. This use of an established operation procedure to produce change in a child's emotional behavior demonstrates the operant aspects of emotion as a predisposition designed to control and or regulate dysfunctional parent-child relationship patterns in the family. This kind of approach is particularly important in families in which children have been abused and neglected, since the social learning process links the development of dysfunctional behavior from involvement with others (strangers, troublesome peers), and the mediating influence of rewards, reinforcements and punishments (Iwata & Worsdell, 2005). While a range of individuals may engage in unattachment behavior, research indicates the formation

or continuation of attachment behavior will be affected in part by the individuals' involved own cognitive processes or thinking and prior or anticipated parental reinforcement (Akers, 1998; Warr, 2002). Although the literature supports the use of EOs and MOs as environmental events to affect behavior, an empirical question remains regarding the effectiveness of this training procedure to produce appropriate or discriminated preferential treatment toward a specific set of adults. While this view is beyond the scope of this paper, the specific causal logic is consistent with the indications of behavior analysis, since research in social learning theory predicts that learning occurs through reciprocal, affective, social and environmental interaction, and that unattachment behavior of abused or neglected children is learned through observing and modeling the parents' behavior. *For an earlier discussion and overview of the behavioral constructs underlying this treatment approach and applied to abused children placed in foster and adoptive families, see Prather, 2007.*

PROPOSED TREATMENT: TRAUMA-FOCUSED COGNITIVE EMOTIVE BEHAVIOR THERAPY

The second author takes issue with two of the previous points regarding the treatment of children who have been abused/neglected, are exhibiting problematic moral and emotional behaviors, and appear "cold", "callous" or "neutral" in situations where others are more likely to appear "sad", "anxious", "fearful", "ashamed" or "guilty". Indeed, "avoiding aversive childhood experiences appears to be negatively reinforcing for (these) children" and they are already experts at knowing "how to compete with negative thoughts" to the point that if they begin to feel shame for having stolen something, hit another child or cheated on a test, they can effectively avoid the thoughts and feelings of shame and be completely happy when exhibiting the immoral behavior. They can feel happy, think happy thoughts and exhibit happy behaviors in the presence of the most adverse circumstances to the point where it is baffling and frightening to the adults who live with them. To then use therapy to focus only on happy events, happy thoughts and times when their behavior was appropriate would not seem to be effective for these children and their families. "Encouraging the child to think or behave differently and compete with negative thoughts" is, in my clinical experience with these children, an insufficient approach to therapy. The problem with attempting to "shift thinking from talk about relationship problems to behaving differently" is that these individuals welcome opportunities to avoid discussion of their problematic behavior and are great at talking about all the ways they are going to change and act differently. Unfortunately, positive talk does not "lead the individuals involved to positive behavior change and greater control over themselves and their relationships". Ironically, they often have great control over their own emotional behaviors as well as the individuals that they are in relationships with (through coercive, charming and manipulative behavior).

Cognitive behavioral therapy has been recognized as an efficacious treatment of posttraumatic stress disorder (PTSD) with rape victims (Foa & Kozak, 1986; Foa, Rothman, Riggs, & Murdock, 1991; Resick, Jordan, Girelli, Hutter, & Marhoefer-Dvorak, 1988; Resick & Schnicke, 1993), veterans (Brom, Kleber, & Defares, 1989; Kene, Fairbank, Caddell, Zimering, & Bender, 1995) and more recently with survivors of major disasters (North, Nixon, Shariat, Mallonee, McMillen, Spitznagel, & Smith, 1999). Major components of this therapy involve gaining access to emotions that were experienced during the traumatic event and then "processing" those emotions. "Exposure" is typically employed in order to aid in processing and can include "in vivo" (i.e., actual location of event, time of day, sensory stimuli associated with the event) and/or "imaginal" (telling or listening to the story, picturing the event in the mind). Processing consists of talking about the event, experiencing the emotions that

were associated with the event, and then gaining “mastery” over the event and the associated feelings. Mastery would mean that emotions could be felt and tolerated and that this experience would be “survived” by the individual so that the individual was no longer “afraid of” or unwilling to tolerate these emotions. This would be therapeutic in that the individual would no longer escape the thoughts and feelings associated with the traumatic event because they would no longer be too aversive to tolerate.

For individual who are otherwise emotionally and psychologically healthy and who experienced normal interfamilial and interpersonal relationships prior to experiencing rape, combat, prisoner of war status, or a major disaster, the major goal of trauma-based therapy is to return them to their original state of being prior to their trauma. The purpose of dealing with the thoughts and feelings associated with the trauma is to deal with nightmares, flashbacks and other intrusive experiences that might be spontaneously brought on by any number of discriminative stimuli in the environment or in the individual’s brain. This would aid the individual in becoming less fearful of specific stimuli that would arouse debilitating fear, anger, sadness or other negative emotion. In other words, the individual would have some control or mastery over those emotions.

Children with attachment difficulties may share some similarities with individuals with PTSD (hypervigilance, for example), but they typically do not have nightmares and flashbacks and do not have fear of particular stimuli in the environment. The individual would no longer be negatively reinforced for escaping aversive thoughts and feelings. With the aid of the therapist and family members, the individual could instead be reinforced for “holding on to” and tolerating those unpleasant negative thoughts and feelings. Once the individual was more willing and able to tolerate negative thoughts and feelings associated with the traumatic event, the individual would then also be more willing and able to tolerate other appropriate negative thoughts and feelings. Because their trauma was chronic and pervasive, and occurred during early childhood development, the major goal of therapy is quite different. The goal would be to have children experience negative thoughts and feelings that are appropriate to the situation. If they have hurt someone, they would feel sad and remorseful and that would be a motivating operation for them to repair that relationship with that person. In her clinical practice, the second author has actually worked with children with attachment issues who claim that they take negative thoughts and feelings and “lock them up in the back of their head”. Then, after trauma-focused therapy, they are often dismayed because they are no longer able to do so.

In trauma-focused therapy, some of the difficult but necessary components include: helping children revisit the circumstances, feelings, thoughts and behaviors of early childhood; talking to the children about how the circumstances outside of their control led to the feelings, thoughts and behaviors; empathizing with the children about their painful experiences and assisting them in tolerating uncomfortable feelings; and encouraging them to hold on to situation-appropriate negative feelings so that they can help them in modulating their behaviors.

Behaviorists often voice objections to psychotherapy as follows:

1. “Exposure” to the traumatic event will retraumatize these children who have already experienced enough trauma in their lives. There is evidence that supports the use of exposure for the identification of discriminative stimuli (facial expressions, voice intonation, smells) that trigger

thoughts and feelings associated with traumatic events in order for individuals to “process” their feelings and “master” their trauma.

2. Talking about traumatic and other aversive experiences will encourage these children to use their trauma and the ensuing negative outcomes (crying, for example) as a means of escaping punishment or task demands. Talking about traumatic and other aversive experiences teaches children the appropriate occasion for crying and other emotional behaviors.

3. The assumption is made that if children experience catharsis (the free expression of negative feelings) that they will somehow feel and act better.

Thoughts and feelings associated with traumatic events are elicited (through verbal behavior) in order to teach these children better coping skills. Research indicates that adult victims of trauma experience reduced symptoms when they have been emotionally engaged in talking about their trauma.

The positive behavioral goals of trauma-focused cognitive behavior therapy are:

1. Children are able to feel and tolerate negative emotions (because they are positively reinforced for feeling emotions instead of negatively reinforced for escaping or avoiding them through denial/detachment.)

2. Children learn to express emotions appropriately (through modeling, prompting, shaping, and reinforcement.)

3. Children learn skills for coping with emotions (through modeling, prompting, shaping, and reinforcement.)

4. Children learn to modulate their behaviors because their feelings serve as establishing operations (the reinforcement or punishment for certain behaviors becomes more salient due to their feelings.)

SUMMARY

The key to the success of these new cognitive emotive behavioral approaches lies in the understanding that perception and learning history guides behavior, and changes in behavior associated with trauma are subject to the same lawful inevitabilities as other behavior. While attachment problems may predispose a child toward future behavior problems, early experience does not cause pathology in a linear way (Sroufe, Carlson, Levy, & Egeland, 1999), and these problems must be evaluated and treated using the principles of behavior analysis and rational cognitive perspectives. Since research indicates that previously abused and neglected children are often viewed by their caregivers as aggressive, emotionally dishonest, and present a major challenge for diagnosis and treatment (O'Connor & Zeanah, 2003), this paper has endeavored to present a new cognitive emotive behavioral approach for helping these children and their adoptive parents feel good about themselves and the quality of their relationships.

While there is a lack of research into the treatment of multi-problem, maltreated children who

reside apart from their family of origin, the brief analysis elaborated here provides guidance for achieving positive changes in families, and suggests critical directions for further study. Research is obviously needed to test the two alternative hypotheses presented in this paper. The first author proposes that changes in behavior are associated with different controlling conditions, and that teaching abused children to behave differently and shift attention or thinking away from negative thoughts is central to a child's learning of "emotional responsiveness". Such a hypothesis may also prove useful in predicting the causal sequences between learning and thinking and the negative effects of trauma, given the assumption that thinking and behaving differently does not increase attachment behavior or change the negative effects of trauma, but rather competes with unattachment behavior. The second author also believes that changes in behavior are associated with different controlling conditions and that focusing on negative thoughts and feelings are essential in order to "correct a history which has produced objectionable behavior (Skinner, 1953, pg. 379)." To the extent that either of these predictions is demonstrated empirically, a new rational cognitive emotive attachment perspective should prove useful in the development of a comprehensive and theory-based program of intervention for children with attachment issues and their parents.

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