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Acceptance and Mindfulness in Behavior Therapy: A Comparison of Dialectical Behavior Therapy and Acceptance and Commitment Therapy

Alexander L. Chapman

Abstract

Dialectical Behavior Therapy (DBT) and Acceptance and Commitment Therapy (ACT) are both innovative behavioral treatments that incorporate mindfulness practices and acceptance-based interventions into their treatment packages. Although there are many similarities between these treatments, including the fact that they are part of a newer “wave” in behavior therapy involving mindfulness and acceptance interventions, there also are some key differences in the ways in which ACT and DBT conceptualize and use acceptance and mindfulness interventions in treatment. This article discusses these similarities and differences.

Key Words: Dialectical Behavior Therapy (DBT), Acceptance and Commitment Therapy (ACT), Mindfulness

Over the past couple of decades, the field of behavior therapy has experienced a shift in focus, with treatment developers showing increased interest in acceptance and mindfulness interventions, as well as in the ways in which clients regulate or manage their emotions (i.e., *emotion regulation*; Gross, 1998). As noted by Hayes (2004), earlier iterations of behavior therapy focused primarily on applying findings from basic behavioral science to the development of interventions for clinical problems. This early research spawned many evidence-based practices, including exposure therapy for anxiety disorders, interventions that change contingencies of reinforcement, behavior modification, and skills training, among other such strategies (Goldfried & Davison, 1976). Subsequently, researchers and treatment developers shifted focus toward the role of cognitive processes and information processing in psychological difficulties. Ultimately, this marriage of cognitive and behavioral techniques resulted in a powerful set of treatments that fall under the rubric of cognitive-behavioral therapy (CBT), which currently dominates lists of evidence-based treatments (Chambless et al., 1996).

Over the past decade or so, newer forms of behavior therapy and CBT (coined the “third generation”; Hayes, 2004) have emphasized phenomena that received comparatively little emphasis in previous iterations of CBT. For instance, these approaches emphasize emotions, emotion regulation, acceptance, experiential avoidance, human language, values, and mindfulness and meditation practices. Two such approaches with notable empirical support and widespread dissemination are Dialectical Behavior Therapy (DBT; Linehan, 1993a), and Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999). ACT and DBT share many common features, but the most striking similarity is their emphasis on mindfulness and acceptance practices. However, there are substantial differences between ACT and DBT in terms of how they arrived at the focus on mindfulness and acceptance as well as in the ways in which these interventions are conceptualized and implemented in practice. The present paper highlights some key similarities and differences between ACT and DBT in terms of how they conceptualize and use acceptance and mindfulness-based methods.

Infusing Behavior Therapy with Acceptance: The Development of DBT and ACT

The developers of DBT and ACT took different routes to arrive at their focus on acceptance in behavior therapy. Marsha Linehan developed DBT in the process of piecing together an evidence-based treatment package for suicidal women, for whom the treatment outcome data were rather bleak at the time (early 1980s). Linehan used standard, evidence-based cognitive and behavioral strategies (Goldfried & Davison, 1976) as the building blocks of her new treatment and systematically applied these interventions to suicidal women, many of whom met criteria for borderline personality disorder (BPD). Although these interventions were helpful, clients often reacted negatively to the heavy emphasis on behavioral and cognitive change and frequently dropped out or had difficulty complying with the treatment regimen. Consequently, Linehan incorporated into the treatment her experience and training in mindfulness and Zen practice, as well as acceptance-based approaches from other treatments (e.g., client centered therapies and emotion-focused approaches) in order to convey acceptance of the client, and to help the client accept him or herself and the world in general (Chapman & Linehan, 2005; Robins & Chapman, 2004). Thus, DBT involved bringing together components of existing evidence-based interventions and modifying them based on research and clinical experience.

In contrast, Steve Hayes built ACT from the bottom up. Hayes developed a research program aimed at understanding the ways in which human language and cognition influences and maintains emotional suffering. Based on this research, he developed a general theoretical model of psychopathology that emphasized how language and cognition trap people into behaving in ways that increase or maintain their suffering. One key implication of this research was that *experiential avoidance*, or the avoidance of or escape from unwanted internal experiences (e.g., thoughts and emotions) or those situations related to them (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996) drives psychopathology. Hence, interventions aimed at facilitating clients' acceptance of themselves and their experiences constituted the antidote. Therefore, DBT started with evidence-based practice and evolved in response to the clinical needs of specific types of clients; in contrast, ACT began with basic research on mechanisms underlying human suffering and constructed a general model of psychopathology and a related set of interventions.

Acceptance and Change in ACT and DBT

Notwithstanding these differences, DBT and ACT share elements of *dialectical philosophy*. Hayes (2004) has mentioned dialectics and the tension between acceptance and change in his descriptions of ACT, although this has been a more recent development. As Linehan discovered that an exclusive focus on change in therapy was intolerable to some of her clients, she weaved acceptance and mindfulness into the treatment, both as stances taken by the therapist and as behavioral skills for the client.

Ultimately, DBT came to rest upon a *dialectical philosophy*, characterized primarily by balancing and synthesizing acceptance and change-based approaches. According to the dialectical world view, often linked with Marxism and the thinking of Hegel, reality consists of opposing, or polar forces (e.g., thesis and antithesis) that are incomplete on their own and repeatedly are synthesized into wholes that are more complete. For instance, in DBT, acceptance and change are opposing forces, with the tension between them often palpable during sessions. When the therapist pushes for behavior change, the client often feels invalidated and desires acceptance. When the therapist exclusively offers acceptance, the client may believe that the therapist is not taking his or her problems seriously enough to push for change. In DBT, the therapist is constantly balancing and synthesizing the opposing forces of acceptance and change. The goal in any given moment is to find the best synthesis, given the client's goals, characteristics and the current context.

In contrast, in ACT, the synthesis between acceptance and change rests largely on the notion that emotions and cognitions are not readily changeable (Hayes, 2004). Change-based interventions focus on overt action and valued directions in life, whereas acceptance targets private experiences, such as thoughts and feelings. Acceptance of these private experiences facilitates change, and change in behavior may facilitate acceptance of private experiences. Ultimately, in both DBT and ACT, the distinction between acceptance and change is somewhat arbitrary, as acceptance often involves a marked change from the client's previous way of relating to his or her life or experiences.

Another interesting difference in acceptance interventions between ACT and DBT falls within the arena of skill-building. Enhancing the client's capabilities (behavioral skills) is an essential function of DBT, based on the notion that clients with BPD lack key behavioral skills, particularly in the area of regulating emotions. Consequently, DBT involves a regular skills-training group that teaches skills in the areas of mindfulness, interpersonal effectiveness, distress tolerance, and emotion regulation. Acceptance-based skills occur in many of these different skill modules, but are most prominent in the mindfulness skills (discussed below) and in the distress tolerance skills. For instance, radical acceptance is one of the DBT skills designed to help clients tolerate distress and survive crises, and involves simply accepting what is happening in the present moment. Radical acceptance also can be applied to distressing events and experiences in the client's history (e.g., trauma, behavior of which the client feels ashamed, etc.).

In ACT, acceptance generally is not taught explicitly as a behavioral skill, although recent writings on ACT have suggested that both acceptance and mindfulness may be considered skills (Hayes, 2004). Whereas in DBT, there is a structured format for delivering defined acceptance-oriented skills, in ACT, the therapist uses acceptance interventions in a more idiographic manner. Essentially, ACT sessions often involve a variety of exercises that provide the client with an experience of the many factors that promote experiential avoidance and get in the way of acceptance. Some of these factors involve taking language literally, repeated attempts to control rather than accept unwanted experiences, and the experience of being "stuck" to thoughts and feelings as if they are a part of the person him or herself.

Mindfulness in ACT and DBT

One of the major points of similarity between ACT and DBT is the use of mindfulness in treatment. Mindfulness essentially involves "keeping one's consciousness alive to the present reality" (Hanh, 1976). In most applications of mindfulness, there is an emphasis on paying attention, being aware and awake to the experience of the present moment, and in some cases, stepping back and observing the experience of the here and now. Mindfulness has become a key component of both well-established and newer treatment approaches over the past two decades, and research on these treatments has indicated that the use of mindfulness in behavior therapy has merit (e.g., Hayes et al., Luoma, Bond, Masuda, & Lillis, 2005; Teasdale et al., 2000; Robins & Chapman, 2004). Mindfulness plays an important role in both ACT and DBT, but there are noteworthy differences between these two approaches in terms of how they conceptualize and use mindfulness in treatment.

In DBT, mindfulness plays an explicit and prominent role, both as a set of skills for the client and as a stance for the therapist. Linehan took components of Zen practice, contemplative prayer, and other mindfulness practices and distilled them into behavioral skills for the client and the therapist. Influenced by the focus in Zen on awakensness and openness to the present moment, several therapeutic strategies in DBT seek to help the client see and respond to reality as it is in the present (Chapman & Linehan, 2005). DBT therapists encourage one another to stay awake, focused, and present, both during therapist team meetings and in interactions with clients. Therapists often engage in regular mindfulness practice, both

alone and with other therapists on the team.

DBT also involves a specific set of skills that comprise the essential components of mindfulness practice. For instance, *observing* involves simply noticing the sensations of the present moment, whether these sensations involve cognitive activity (thoughts or images), physical experiences, or emotions. The skill of *describing* involves describing exactly what is observed, or the “facts” of the situation. *Participating* is another skill, and it involves having the client throw him or herself completely, with abandon, and without self-consciousness, into the activities of the present moment (Linehan, 1993b). In DBT, clients are encouraged to practice mindfulness in a non-judgmental manner (“non-judging”), while focusing on one thing at a time (“one-mindfully”), and with an emphasis on effective behavior (“effectiveness”). In addition, several of the skills used in DBT to help the client tolerate current distress (“distress tolerance skills”) involve mindfulness, such as radical acceptance and observing the experience of breathing.

Mindful practice also occurs in ACT, but it has different roots and plays a somewhat different role than it does in DBT. For instance, there has been no mention of Zen, contemplative prayer, or other spiritual traditions in the genesis of mindfulness in ACT (Hayes et al., 1999). In ACT, specific mindfulness strategies ultimately aim to increase clients’ psychological flexibility. The theory is that the dominance of language and verbal rules reduces clients’ contact with direct contingencies in the environment and creates narrow, inflexible behavioral repertoires (Hayes, 2004; Hayes et al., 1999). Certain mindfulness-based strategies in ACT directly tackle this phenomenon and seek to open the client up to the experience of direct contingencies in the environment. One such intervention (mentioned earlier) involves repeating a word (e.g., “milk”) over and over again until its derived stimulus functions (e.g., “white”, “creamy”, “smooth”) disappear and the direct experience of the sound of the word becomes salient.

Other strategies involve reducing the extent to which clients experience their thoughts and feelings as being equivalent to themselves as a whole. Such strategies involve helping clients establish and get in contact with an “observing self”. For instance, in ACT, the therapist uses the “chessboard metaphor” (Hayes et al., 1999) to demonstrate that the client is not his or her thoughts and feelings (i.e., the “pieces” on the chessboard), but rather, the context (i.e., the chessboard itself) in which these experiences occur. Another strategy involves having the client objectify and observe his or her thoughts (e.g., to see them as written on placards moving along in an imaginary “thought parade”).

Like ACT, DBT also includes exercises that involve observing thoughts, emotions, and physical sensations. In addition, DBT mindfulness skills encourage the client to experience a thought as a thought, and a feeling as a feeling; however, compared with ACT, there is less of an emphasis in DBT on having the client step back and *separate* him or herself from the current experience. On the contrary, one of the key goals of mindfulness in DBT is to help clients enter into, participate, and become “one” with their experiences (Chapman & Linehan, 2005). Nevertheless, in both ACT and DBT, mindfulness involves accepting and experiencing “what is” in the present moment.

Summary and Discussion

In summary, although both ACT and DBT fit firmly within a relatively new wave of behavior therapy that emphasizes mindfulness and acceptance, there are several important differences between these treatments. Marsha Linehan developed DBT specifically to treat suicidal women, and the treatment subsequently evolved and focused on borderline personality disorder (BPD). Limitations inherent in attempts to apply existing change-oriented treatments to multi-problem, suicidal clients spawned the

infusion of acceptance-oriented interventions into DBT. In contrast, Steve Hayes built ACT out of behavioral theory and research on human language and cognition, and the treatment as a new paradigm for a variety of clinical problems. ACT is less specifically focused on severe, multi-problem clients than is DBT.

Although both DBT and ACT utilize mindfulness and acceptance strategies, these strategies developed differently and, at times, have different purposes and roles in therapy. In DBT, acceptance and mindfulness are taught as behavioral skills, and as stances and behaviors used by the therapist and the client. In contrast, acceptance and mindfulness in ACT are not normally taught as behavioral skills and are generally employed to undermine the verbal factors that promote and maintain experiential avoidance. Both DBT and ACT are innovative treatments with empirical support (see Robins & Chapman, 2004 for a recent review of studies on DBT; see Hayes, 2005 for a recent review of research on ACT) and the potential to enhance our continued attempts to reduce the suffering of our clients.

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Self-Statement Modification Techniques for Distressed College Students with Low Self-Esteem and Depressive Symptoms

Jean Clore and Scott Gaynor

abstract

Thirty students (73% female, $M = 21$ years) reporting significant distress, low self-esteem, and depressive symptoms were randomly assigned to three sessions of either: (a) restructuring of negative self-thoughts (via training and daily practice using the Thought Record) or (b) enhancement of positive self-statements (via fluency training and daily flashcard rehearsal). Both methods were associated with clinically significant improvement that persisted at follow-up. Using existing studies as benchmarks, this improvement met or exceeded that of related treatment conditions and clearly exceeded that of control conditions. Results suggest both disputation of negative and enhancement of positive self-thoughts can be beneficial.

Key words: cognitive therapy; fluency; self-esteem; depression; self-statement

Negative self-evaluation (i.e., low self-esteem) is theoretically and empirically associated with a range of psychological difficulties (e.g., eating disorders, social anxiety), but has been especially linked to depressive symptoms. Central to Beck and colleagues' (1979) influential account of depression is the negative cognitive triad, which suggests that depressed individuals have a negative view of the self, world, and future. As Fennell (2004, p. 1058) summarizes: "Beck's cognitive model identifies... negative thoughts about the self as central to the development and maintenance of depression." Empirical findings support a significant link between negative self-statements, low self-esteem, and depression (Hollon & Kendall, 1980; Lewinsohn, Seeley, & Gotlib, 1997; Osman et al., 1997; Roberts, Gotlib, & Kassel, 1996; Smith & Betz, 2002) and the efficacy of cognitive-behavioral therapy as an intervention for depression has been established in large-scale clinical trials and meta-analysis (DeRubeis et al, 2005; Dobson, 1989; Gloaguen, Cottraux, Cucherat, & Blackburn, 1998). According to cognitive theory, negative self-statements result from maladaptive schemata that bias processing of the information taken in from the environment. Correction of these depressive schemata, via training in and practice of cognitive restructuring techniques, is hypothesized to be the critical ingredient of successful therapy (Beck et al., 1979). The presence and influence of, and changes in, these schemata are not directly observed but are inferred from observations of negative self-statements, which the client verbalizes in interaction with the therapist or endorses on self-report measures.

Behavior analysts reject explanations that require reference to hypothetical schemata that are in principle unobservable. However, clinical behavior analysts do not deny the high prevalence of negative self-statements among individuals described as depressed or having low self-esteem. Moreover, because an individual can serve both as a speaker and a listener with respect to his/her own verbal behavior (Skinner, 1957), they also do not deny that these statements can have effects, especially when they occur in a social-verbal context where their presence is considered indicative of psychological maladjustment (Dougher & Hackbert, 1994). Dougher and Hackbert (1994; 2000) describe how negative self-evaluations in response to insufficient reinforcement, punishment, or extinction likely serve to both elicit additional aversive stimulation and occasion depressive behavior. That is, the negative self-statements (e.g., "I'm a loser, Nobody likes me.") might exacerbate feelings of sadness and function as establishing operations, altering the evocative effects of environmental stimuli (e.g., the sight of a group of peers serves as a

discriminative stimulus for punishment), increasing the reinforcing value of depressive behavior (e.g., avoidance of peers) and abolishing the reinforcing value of non-depressive behavior (e.g., approaching peers), potentially also contributing to the development of self-rules that further maintain depressotypic behavior (“Why bother trying to meet people, nobody likes me, I’m unlikable”).

The preceding provides a behavioral rationale for potentially targeting self-statements therapeutically and for appreciating how cognitive therapy might have some beneficial effects from a behavioral perspective. There are currently several different views on how best to target self-statements therapeutically. Hayes, Strosahl, and Wilson (1999) promote altering the social-verbal context supporting a link between negative thoughts and depressive behavior. This is pursued through the use of cognitive defusion procedures, which target for change the function of thoughts without attempting to alter their content or frequency. Traditional cognitive-behavioral therapists on the other hand generally target the content of negative thoughts for change, which is pursued through the use of cognitive restructuring techniques designed to help the client to challenge and dispute negative self-statements so as to arrive at more rational, adaptive, and less extreme self-evaluations (Beck et al., 1979; Greenberger & Padesky, 1995; Persons, Davidson, & Tompkins, 2001). A final approach that has received some attention in clinical studies and in the precision teaching literature emphasizes increasing the frequency of positive self-thoughts through structured identification, elaboration, and rehearsal of positive self-statements (Calkin, 1992; Lange et al., 1998).

While it might be conceptually sensible to target negative self-statements in therapy, whether doing so is necessary or sufficient to produce change is an area that is currently being debated. In cognitive-behavior therapy for depression, modification of self-thoughts is considered part of the “cognitive” portion of the intervention. Beck and others (Beck et al., 1997; DeRubeis & Feeley, 1990; Hollon, 2000) have been clear in hypothesizing that the cognitive components aimed at modifying negative thoughts are primarily responsible for CBT’s efficacy. For example, Beck and colleagues (1979; p. 146) stated “The most critical stage of cognitive therapy involves training the patient to observe and record his thoughts.” However, time course analyses suggest that the majority of improvement occurs early in treatment, prior to the introduction of the explicitly cognitive techniques (Ilardi & Craighead, 1994). Dismantling studies further suggest that behavioral activation alone is as efficacious and enduring as comparison conditions that added cognitive techniques (Gortner, Gollam, Dobson & Jacobson, 1998; Jacobson et al., 1996). Thus, cognitive modification techniques may not be necessary to the change process. However, these data do not address whether they might be sufficient.

In the present study we focused on comparing one technique (i.e., the Thought Record) for challenging negative self-statements and a separate technique (i.e., Fluency Training) designed to increase positive self-statements. Isolating these techniques for evaluation allowed us to begin to test their sufficiency for producing change and also to compare their relative efficacy and potential unique effects.

The Thought Record is considered one of the essential components of CBT for depression and is a primary vehicle used in attempting to modify negative self-thoughts (Greenberger & Padesky, 1995; Persons et al., 2001). Thought Record training involves teaching the client to identify negative thoughts, examine evidence for and against the negative thoughts, explore possible alternative explanations, and substitute more accurate, realistic, or less extreme thoughts. As such, the Thought Record is one of the most elaborated self-statement modification techniques available.

While disputation of negative self-statements using the Thought Record involves generating less extreme or more adaptive self-statements, the focus is not typically on explicitly increasing positive self-statements (Lange et al., 1997). However, the possibility of increasing positive self-statements has been explored in several smaller scale studies. Philpot and Bamburg (1996) randomized college students reporting low self-esteem to either a control condition or a condition in which participants rehearsed a list

of 15 positive self-statements three times daily for two weeks. Significantly greater improvement in self-esteem and depression was reported in the rehearsal condition. Lange and colleagues (1998) randomized college students with low self-esteem to positive self-instruction training or a neutral task control condition. The intervention involved generating a list of positive personal characteristics, writing an essay incorporating them (session 1), and reducing the essay to a list of positive self-statements (session 2), which over the next three weeks was to be read twice daily. Compared to controls, the intervention group reported significant improvement in self-esteem.

A parallel approach has also been developing in the field of behavior analysis, where Calkin (1981, 1992, 2000, 2002) has advocated applying precision teaching strategies to self-thoughts. Precision teaching involves identifying and counting a target behavior and increasing the rate of that behavior until “fluency” is established through short (e.g., 1-min) repeated timed practices. A classic example is Lindsley’s SAFMEDS (say all fast a minute each day shuffled) method with flash cards. A performance is said to be fluent when the target behavior is not only accurate but also occurs at a high rate (i.e., is fast, automatic, or second-nature; see Binder, 1996; Lindsley, 1996). Calkin (1992) reported data from 35 people using fluency training to increase positive self-thoughts and improve self-esteem. After a baseline during which positive and negative self-thoughts were self-monitored, participants were asked to write as many positive self-thoughts as they could during 1-minute timings once per day. This intervention resulted in participants, on average, doubling their number of self-positives and reporting subjective increases in self-esteem.

In the present study college students reporting significant distress, low self-esteem, and depressive symptoms were randomly assigned to either (a) Thought Record (TR) training or (b) Fluency Training (FT). Commonly used clinical measures were employed to evaluate the clinical relevance of the effects and to identify possible treatment specific effects. In addition, fluency with positive and negative self-thoughts was directly measured (and evaluated in comparison to normative data collected by the authors) providing additional information on treatment specificity. Follow-up data were collected at least one month post-treatment.

Method

Participants

Undergraduate students from a large U.S. university who reported significant distress and low self-esteem were recruited via flyers and class announcements. Participants were screened using the Brief Symptom Inventory – Global Severity Index (BSI-GSI; Derogatis, 1993) and the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1989) and included if they scored one SD above the mean according to the adult non-patient norms on the BSI-GSI and one SD below the mean for a college population on the RSES (see Vispoel et al. 2001). Individuals endorsing strong suicidal ideation and those receiving other psychological treatment were excluded. Those receiving pharmacotherapy were enrolled if they had been on the medication for at least eight weeks. Thirty students met inclusion criteria, a total of nine people were excluded for failure to meet inclusion criteria, and no one met exclusion criteria.

There were no statistically significant demographic differences between the TR and FT groups suggesting comparable groups were attained (see Table 1). Consistent with recommendations in the literature, our use of the BSI emphasized the global severity index as a measure of psychological distress (Boulet & Boss, 1991, as cited from Bufka, Crawford, & Levitt, 2002). The sample BSI-GSI mean (SD) of 1.51 (0.30) exceeded normative means (Cochran & Hale, 1985) and means reported among a large sample of college students seeking services at a counseling center of a private university (Cornish et al., 2000) by more than one standard deviation. In addition, the sample RSES mean (SD) of 22.47 (3.32) was 1.9 standard deviations from a normative mean. Moreover, 46% had a history of mental health treatment,

often for mood problems (50%; see Table 1). One participant, a treatment completer diagnosed with bipolar disorder, was on Lexapro and Depakote for more than 2 months prior to and throughout participation. In sum, the inclusion criteria produced a relatively severe sample.

Table 1
Demographic and Past Treatment Characteristics

Variable	Intent to treat (N = 30)	Completers (n = 20)	
		TR (n = 10)	FT (n = 10)
Age	21.33 (5.13)	21.70 (7.20)	20.50 (1.60)
GPA	3.13 (0.53)	2.96 (0.61)	3.36 (0.47)
Sex (% female)	73%	80%	80%
Ethnicity (% Euro-American)	90%	90%	90%
Full-time student	97%	90%	100%
Yr in school:			
Freshman	27%	20%	20%
Sophomore	33%	40%	30%
Junior	20%	30%	20%
Senior	20%	10%	30%
Tobacco Use	20%	30%	30%
Hx of Mental Health Tx	46%	50%	50%
Tx focus:			
Depression	4	2	1
Bipolar	2	0	2
Depression + OCD	1	0	1
School refusal	1	1	0
Stress/Family Problems	4	2	1
Alcohol	1	0	0
Stress/Family + Alcohol	1	0	1
Hx of medication	17%	10%	30%

Design and Measures

Participants were stratified by gender and then randomized to either Thought Record (TR) training or Fluency Training (FT), both of which consisted of three weekly treatment sessions. Measures were taken at pretreatment, post-treatment, and follow-up and consisted of common clinical self-report measures and a self-thought fluency assessment (STFA) procedure developed by the authors. To reduce potential demand characteristics, participants were informed that during the treatment portion of the study the experimenter was kept blind to all measures except for those used in determining eligibility (i.e., the BSI and RSES) and implementing the initial portion of the intervention (i.e., STFA). The following measures were collected:

Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1989). The 10-item RSES asks participants to rate their level of agreement (range 0-40), with statements describing their general view of themselves. Higher scores indicate a more positive self-evaluation with a mean of 32.60 (SD = 5.25) established in a large nonpatient college sample (Vispoel et al., 2001).

Brief Symptom Inventory (BSI; Derogatis, 1993). This 53-item questionnaire is designed to reflect psychological symptom patterns. Items are endorsed on a scale of 0 (not at all) to 4 (extremely). Normative means on the BSI-GSI with college students of 0.84 ($SD = 0.55$) for males and 0.71 ($SD = 0.42$) for females were reported by Cochran & Hale (1985).

Beck Depression Inventory-II (BDI-II; Beck et al., 1996). This widely used 21-item self-report assesses the severity of depressive symptoms. The normative mean from a large collegiate sample is 9.11 ($SD = 7.57$) with recommended descriptors of 0-12 Nondepressed, 13-19 Dysphoric, 20-63 Dysphoric-Depressed (Dozois, Dobson, & Ahnberg, 1998).

Suicidal Ideation Index. A suicidal ideation index was derived by summing items 9 and 39 from the BSI ("Thoughts of ending your life" and "Thoughts of death or dying") and item 9 from the BDI ("Suicidal thoughts or wishes").

Automatic Thoughts Questionnaire-Negative (ATQ-N; Hollon & Kendall, 1980). The 30-item ATQ measures the frequency of negative self-statements. Each item is scored on a 5-point scale, ranging from 1 (not at all) to 5 (all the time), with higher scores indicative more negativity. The mean among normative samples is 52.91 ($SD = 18.18$; Dozois et al., 2003).

Automatic Thoughts Questionnaire-Positive (ATQ-P; Ingram & Wisnicki, 1988). This 30-item instrument measures the frequency of positive self-statements and is scored on a scale from 1 (not at all) to 5 (all the time). The normative mean averaged across samples, and reported by Dozois et al. (2003), is 98.61 ($SD = 13.02$).

Dysfunctional Attitudes Scale (DAS; Weissman & Beck, 1978). The DAS is a 40-item instrument is scored on a 1-7 scale. Lower scores indicate more adaptive beliefs. The mean among normative samples, reported by Dozois et al. (2003), is 119.01 ($SD = 26.89$).

Acceptance & Action Questionnaire (AAQ; Hayes et al., 2004). The 9-item AAQ measures ability to take action despite uncomfortable thoughts/feelings. Each item is scored on a 1-7 scale, with higher scores indicating greater experiential avoidance and immobility. The mean for clinical populations is 38-40. For non-clinical populations it is 33.4 ($SD = 7.2$).

Self-thought Fluency Assessment (STFA). Developed and pilot tested by the authors, this measure involves two separate 3-minute periods in which the individual is first given two minutes to collect his/her self-thoughts, and then one minute to write as many positive or negative as s/he can. After both positive and negative thoughts are generated, each is rated on a 5-point scale for both personal importance (PI) and believability (B), with 1 being extremely important/believable and 5 being not at all important/believable. The following scores are derived from this procedure (data from a non-distressed college sample, $N = 58$, M age = 22 years, 57% female, are presented in parentheses): total number of positive thoughts ($M = 9.86$, $SD = 3.00$), total number of negative thoughts ($M = 6.50$, $SD = 2.52$), ratio of positive to negative thoughts ($M = 1.68$, $SD = 0.68$), average positive PI ($M = 1.94$, $SD = 0.47$) and B ($M = 1.88$, $SD = 0.47$), and average negative PI ($M = 2.80$, $SD = 0.70$) and B ($M = 2.61$, $SD = 0.77$).

Treatment evaluation. This 11-item questionnaire developed by the researchers asked participants to rate aspects of the treatment, the therapist, and their participation on a scale from 1 (not at all) to 5 (extremely).

Therapist

The first author, a doctoral student in clinical psychology, conducted all of the treatment. She had completed an MA (and was board certified) in applied behavior analysis, had experience using precision teaching, completed graduate coursework in CBT, and a 2-year practicum at an outpatient clinic providing CBT. Additional training involved watching Thought Record instructional videos (i.e., APA, 2000; New Harbinger Publications, 1996) and role-play practices. A Ph.D. level psychologist, trained in CBT and behavior analysis supervised.

Treatments

Participants in both conditions received three weekly therapy sessions. The first session lasted two hours: the first to cover the consent form, screening, rapport building, and pre-treatment assessment measures and the second to begin intervention. The second and third therapy sessions each lasted one hour and focused completely on the relevant intervention. The treatment conditions were brief due to their focus on specific therapeutic techniques.

Thought record training condition. TR training focused on challenging and changing the participants' negative self-thoughts using the 7-column Thought Record, as described and demonstrated by Padesky (Greenberger & Padesky, 1995; New Harbinger Publications, 1996) and consistent with the approach outlined by Persons et al. (2001). The Thought Record helps the user to identify negative automatic thoughts, the situations in which they occur and the associated emotions, the evidence for and against them, and, finally, to generate more balanced, adaptive thoughts.

The therapist used the Thought Record as a framework for introducing the cognitive model to the participant, incorporating examples from the participants list of self-negatives obtained during the STFA to demonstrate the relationship between thoughts, moods, and behaviors (as recommended by Persons et al., 2001). After providing the rationale, the therapist and participant collaboratively discussed situations in which the participant felt badly about him/herself, identified negative thoughts, and then evaluated them using the Thought Record. This collaborative work provided modeling, guided practice, and an opportunity for clarification of questions about the Thought Record. The importance of practice was explained and copies of the Thought Record provided and assigned for homework; participants were encouraged to challenge all negative thoughts, but to formally record three per day. The second and third therapy sessions were spent reviewing the participants' homework from the previous week, and challenging and practicing additional negative thoughts.

Fluency training condition. FT focused on improving the automaticity of the participants' positive self-thoughts by increasing both the number of positive thoughts s/he could readily identify and the rate at which s/he could identify them. During the FT psychoeducation piece, the therapist reviewed the participant's list of positive thoughts from the self-thought assessment and asked him/her how s/he became good at *x* (e.g., Have you always been good at writing poetry? How did you improve?). In addition to using the personal example, the therapist also described learning to drive a standard shift car to illustrate the importance of practicing a new skill in order for it to become automatic and considered mastered. Lastly, the therapist explained how thinking differently is a new skill to be learned, one which needs to be practiced.

During the FT practice, the participant first wrote his/her positive self-thoughts from the self-thought fluency assessment on index cards. Second, the therapist described how math flashcards have the problem on one side with the answer on the other. Similarly, the positive self-thoughts were considered to be the "answer" or correct response to be learned. On the opposite side of the card a "clue/trigger" that might occasion the correct response was identified by the participant in collaboration with the therapist.

These clues/triggers included a variety of situations/life domains (e.g., family relations, education, etc.), people, and activities. The participant then read the set of cards to him/herself, focusing on committing them to memory. Next, the therapist conducted flashcard drills with the participant until s/he could say her/his self-positives aloud without the cards. Fluency was assessed by three timed “mastery trials” in which the participant recited her/his set of positive thoughts aloud as quickly and accurately as s/he could. When the set could be articulated without omissions or hesitation during the timed in-session trials, the performance was deemed fluent.

The participant was then asked to identify more positive self-statements in order to expand her/his original list. If the participant’s original list consisted of five self-positives, once it was mastered s/he would add five after each new set was mastered. This strategy provided individualized fluency training goals. To the extent possible, participants created their new self-positive cards independently and in collaboration with the therapist; however, to facilitate item addition, a list of life domains and a list of positive self-characteristics (provided to us by Calkin) was offered to prompt recognition of relevant items. Participants were also encouraged to use positive qualities that others had identified about them. As self-thoughts were identified, care was taken to ensure that they were not Pollyanna-ish, but instead had some referent in the client’s life experience which s/he could articulate.

The participants were asked to carry their set of flashcards with them and to practice them as often as possible shuffling the cards between each practice, and to complete at least three formal flashcard drill practices per day. They were also asked to keep a journal of 1-minute daily drills in which they wrote as many positive self-thoughts as they could for one minute.

Results

Treatment Fidelity

Treatment adherence was measured using short questionnaires (available from the authors), one for each treatment session, which included three subscales: general therapy, TR-specific, and FT-specific. The general therapy subscale included items regarding issues such as provision of a clear rationale, establishment of a collaborative relationship, and bridging from the previous session. The other two subscales focused on use of the technique specific to one of the two treatments. All items were scored on a 6-point scale from 1 (not at all) to 6 (extensively). The treatment-specific subscales should differ whether the focus was TR or FT. Treatment adherence forms were completed immediately after each session by the therapist. In addition, a doctoral student in clinical psychology who was blind to condition observed 25% of the treatment session videotapes and completed the adherence forms.

Agreement. A Pearson’s product-moment correlation demonstrated strong inter-rater agreement between therapist and coder item ratings ($r = .88, p < .001$). Kappa was calculated by treating item adherence scores ranging from 1-3 (not at all – minimally) and 4-6 (considerably – extensively) as categorical, also resulting in very good rater agreement ($K = .86, p < .001$).

Adherence. Average treatment adherence scores were calculated for each subscale. Scores of 4 and above were considered to represent adherence. For TR sessions there was a significant difference between raters on the general therapy subscale, $F(1,14) = 5.65, p = .03$. While both the therapist ($M = 4.81, SD = 0.65$) and coder ($M = 5.42, SD = 0.32$) indicated adherence, the coder ratings were higher. There were no differences on the TR subscale (therapist $M = 4.84, SD = 0.89$; coder $M = 5.07, SD = 1.31$), or the FT subscale (therapist and coder $M = 1.00, SD = 0$). These data indicate strong and specific adherence to the TR protocol. For the FT sessions, there were no significant differences between the raters on the general therapy subscale (therapist $M = 5.24, SD = 0.55$; coder $M = 5.33, SD = 0.35$) or the FT subscale (therapist $M = 5.90, SD = 0.15$; coder $M = 5.94, SD = 0.11$). However, the TR subscale

differed (therapist $M = 1.10$; $SD = 0.14$; coder $M = 1.83$; $SD = 0.32$, $F(1,12) = 30.3$, $p < .001$. Importantly, neither mean was indicative of adherence to TR. Moreover, the difference was isolated to an item on the use of Socratic questioning, which was minimally used in FT during the generation of new self-positives. The therapist underrated the use of Socratic questioning, while the coder correctly identified this technique. These data indicate strong and specific adherence to the FT protocol.

Acute Treatment Outcome

Of the 30 qualifying participants, 20 completed the study (3 treatment sessions and post-treatment assessment), and 10 dropped out (a 33% attrition rate). Seven of these dropouts terminated after the first treatment session and three following the second treatment session. Attrition rates were comparable in both conditions: five dropped out from FT and five from the TR condition. When provided, reasons for dropping out of the study included family emergencies, other time commitments, and seeking therapy elsewhere. Dropouts did not differ significantly from completers on the RSES, $F(1, 30) = 0.60$, $p = .45$, or on the BSI-GSI, $F(1, 30) = 0.43$, $p = .52$.

Descriptive statistics for the clinical outcome measures and the STFA, as well as the results of the between-group and within-group comparisons conducted with completers are presented in Table 2 (results from the intent-to-treat sample are described in the text). Because of the large number of comparisons, alpha was set at .01 for these analyses. First, a series of ANCOVAs were conducted with post-treatment scores as the dependent variable and pre-treatment scores as a covariate. The ANCOVAs using the clinical self-report measures showed no significant differences between the two conditions on global distress, self-esteem, depressive symptoms, suicidal ideation, negative and positive thinking, and maladaptive beliefs. The same analyses were repeated based on an intent-to-treat approach (using a last data point carried forward method) and revealed similar non-significant differences. On the STFA, as expected due to the nature of the treatments, the FT group demonstrated a significantly greater number of positive self-thoughts. The intent-to-treat analyses also revealed highly significant treatment differences with respect to the total number of self-positives, $F(1, 30) = 16.77$, $p = .000$.

Paired samples t tests were used to analyze the differences between pre- and post-treatment scores within each condition (see Table 2). With respect to the clinical measures, statistically significant changes from pre- to post-treatment scores were seen across conditions, suggesting that individuals in both treatments improved. In the TR condition, statistically significant differences were found on global distress, self-esteem, depressive symptoms, suicidal ideation, negative automatic thoughts and experiential avoidance, while in the FT condition, statistically significant differences were observed on global distress, self-esteem, depressive symptoms, negative and positive automatic thoughts, maladaptive beliefs, and experiential avoidance. The STFA data hinted at the possibility of some treatment specific effects as both groups showed a significant improvement in the ratio of positive to negative self-thoughts on the STFA, but for different reasons. The FT group showed an increase in self-positives, while in TR group decreased in negative self-statements.

Table 2

Descriptive Statistics for Outcome Variables at Pre-treatment (Pre) and Post-treatment (Post) and Results of Between-Group and Within-Group Comparisons for Completors

Measures	TR		FT		g	TR vs. FT	TR Pre vs. Post	TR CSC	FT Pre vs. Post	FT CSC
	Pre	Post	Pre	Post						
	($n = 15$)	($n = 10$)	($n = 15$)	($n = 10$)						
	M (SD)	M (SD)	M (SD)	M (SD)		F	t^b	%	t^b	%

Clinical										
BDI-	22.26	12.00	26.22	13.70	-	0.10	5.22***	70	4.62***	60
II ^a	(6.08)	(6.07)	(10.18)	(7.45)	0.24					
BSI	1.43	0.99	1.59	0.90	0.19	0.84	3.81**	50	3.92**	60
	(0.38)	(0.34)	(0.60)	(0.54)						
RSES	23.33	29.15	21.60	27.60	0.45	0.04	-4.80***	80	-5.09***	60
	(3.39)	(2.29)	(3.11)	(4.09)						
SII	1.53	0.40	1.13	0.50	0.09	0.68	3.28**	--	2.09	--
	(1.55)	(0.97)	(1.30)	(1.08)						
ATQ-	78.60	55.30	88.26	52.30	0.20	1.44	4.63***	80	6.20***	90
N	(18.40)	(15.41)	(21.83)	(12.86)						
ATQ-	66.47	87.20	64.20	84.40	0.12	1.34	-2.60*	70	-4.84***	40
P	(15.45)	(26.62)	(9.16)	(18.08)						
DAS	160.73	142.00	178.60	146.20	-	0.42	3.12*	60	4.14**	40
	(29.27)	(19.90)	(19.87)	(28.25)	0.16					
AAQ	42.67	37.10	42.47	37.00	0.02	0.06	3.27**	70	2.73*	70
	(4.48)	(5.28)	(5.25)	(5.73)						
STFA										
Total	7.00	7.3	6.33	14.20	-	70.55***	-1.33	40	-	100
+	(2.39)	(1.70)	(2.09)	(2.90)	2.68				11.19***	
+ PI	2.22	2.29	2.51	2.05	0.33	1.93	-0.38	60	2.30*	50
	(0.62)	(0.82)	(0.48)	(0.48)						
+ B	2.35	2.09	2.43	2.27	-	0.82	1.64	70	1.34	40
	(0.61)	(0.52)	(0.64)	(0.55)	0.29					
Total	7.53	6.30	8.13	7.80	-	0.28	3.00*	80	0.76	50
-	(2.64)	(1.57)	(2.13)	(3.52)	0.51					
- PI	2.29	2.84	2.30	2.71	0.16	0.07	-2.34*	70	-1.69	40
	(0.72)	(0.69)	(0.71)	(0.83)						
- B	2.37	2.70	2.18	2.80	-	0.24	-0.86	60	-2.41*	80
	(0.78)	(0.81)	(0.69)	(0.62)	0.13					
Ratio	0.94	1.20	0.80	2.10	-	7.17*	-3.59**	70	-4.23**	100
+/-	(0.14)	(0.30)	(0.28)	(0.86)	1.29					
PI Diff	0.07	0.55	-0.21	0.65	-	0.92	-1.76	60	-2.76*	80
	(0.67)	(0.79)	(0.87)	(0.69)	0.12					
B Diff	0.03	0.61	-0.25	0.54	0.08	0.03	-1.55	70	-3.16*	80
	(0.86)	(0.85)	(0.97)	(0.69)						

Note. + = positive self-thoughts, - = negative self-thoughts, PI = personal importance, B = believability, Diff = difference between change in positive and change in negative

^aFor one participant who failed to complete the second side of the BDI at pre-treatment a prorated BDI total score was used. To the raw score from the first side (10) we added the sum of the item means for the questions on side two (7.26). The item means were taken from those reported by Beck et al. (1996).

^bIn addition to the paired *t* tests, Wilcoxon Signed Ranks Tests, which use medians, were also conducted. The conclusions drawn from both types of analysis were identical in all cases.

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

Effect Size and Clinical Significance. To supplement the ANCOVA and paired samples *t* test results, we calculated post-treatment between-groups effect sizes using Hedges' *g* (see Table 2). On the clinical self-report measures, effect sizes were small in size at post-treatment (*M* = 0.18) and inconsistent in which treatment they favored. On the self-thought fluency assessment (STFA), large effect sizes were observed on the total number of self-positives (*g* = 2.68) and the ratio of positive to negative self-thoughts

($g = 1.29$) favoring the FT condition. With respect to negative self-thoughts, effect sizes favored the TR condition ($g = 0.51$). The remaining STFA effects sizes were small ($M = 0.19$, range 0.08 – 0.33).

To supplement the comparison of the means, we calculated clinically significant change (CSC) according to criterion C from Jacobson & Truax (1991). Using the pre-treatment data from our sample and normative data on each measure (provided in the Design and Measures section) a cutoff score that placed the participant closer to the mean of the normative population than the dysfunctional population was established. The percentages of participants meeting the CSC criterion on the clinical self-report measures ranged from 50-85%, with a mean of 64%, indicating that the majority of participants showed clinically significant improvement. Averaging across measures, the percentages of participants meeting criteria were similar across the TR and FT conditions ($M_s = 69\%$ and 60% , respectively). On the STFA at post-treatment, the percentage of participants in TR and FT reaching CSC was 40% and 100% in total number of self-positives and 80% and 50%, respectively, in total number of self-negatives.

Comparison to a no or minimal treatment control group. Given the lack of group differences between the TR and FT conditions, it is reasonable to ask if the pre to post changes observed were the result of the treatments being similarly efficacious or due to extraneous variables. The current design did not include a concurrent no or minimal treatment control condition to directly address this question, in part because two related studies did and found superior effects for the treatment condition. As in the current study, both Philpot and Bamburg (1996) and Lange et al. (1998) used undergraduate samples, included based on low self-esteem scores, with pre to post data collected at an approximately 1 month interval. As such, these findings can be used as a yardstick for evaluating the current results. Within-groups effects sizes on comparable measures are presented in Table 3 and suggest that for both the completer and intent-to-treat TR and FT samples, changes in self-esteem, depression, and negative thinking were large ($g = .79 - 1.9$) and clearly exceeded the effects typically found in control conditions ($g = .02 - .23$).

Table 3

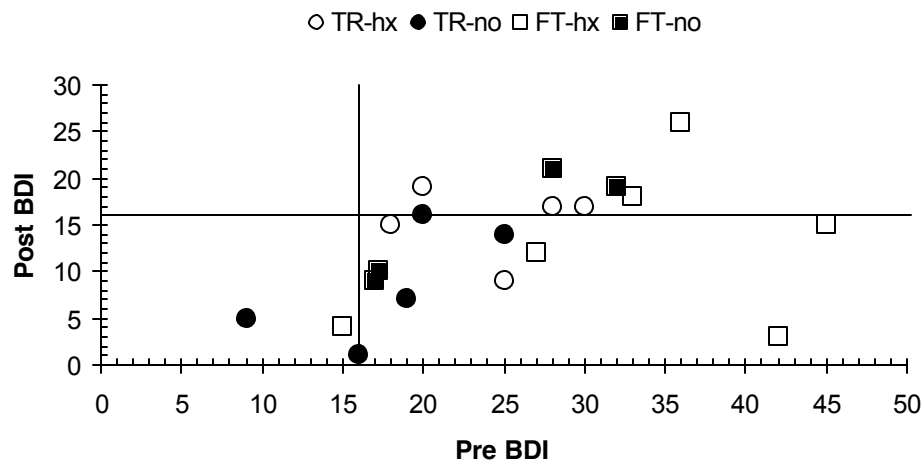
Within-group effect sizes, Hedges' g , on compatible measures for completer (and intent-to-treat) samples from the current treatment conditions and relevant treatment and control groups from the literature.

	BDI ^a	ATQ-N	Self-esteem ^b
TR	1.63 (.79)	1.30 (.80)	1.87 (.87)
FT	1.31 (1.11)	1.85 (1.25)	1.65 (1.18)
Rehearsal	0.99	1.11	1.38
Positive Self-Instruction			1.00
No Treatment Control	0.19	0.23	0.02
Neutral Task Control			0.21

^a Philpot & Bamburg (1996) used the BDI, while the BDI-II was used in the present study.

^b Philpot & Bamburg (1996) used the Coopersmith Self-esteem Inventory, Lange et al (1998) measured self-esteem using self-evaluation subscales from the Dutch Personality Questionnaire, and the present study utilized the Rosenberg Self-Esteem Scale.

Subsample with a treatment seeking history. Despite the relative severity of our sample, college student samples are commonly described as analog, distinguishing them from clinical samples. Fifty-five percent of our completer sample ($n = 11$, 5 in TR and 6 in FT) reported a history of mental health treatment, which was for mood problems in 55% of the cases. This subgroup might more closely approximate a clinical sample and address concerns about how the interventions described here would fare with this population. When the pretreatment scores on the clinical self-report measures between those with and without a history of mental health treatment were compared, the means for the former were higher in 6/7 cases; however, only the BDI ($M = 29.0$, $SD = 9.54$ vs. $M = 20.36$, $SD = 6.95$) reached statistical significance, $F(1,18) = 5.13$, $p = .04$. While those with a history of mental health treatment appeared more severe at pretreatment, both groups improved. The average change on the BDI was 15 points for those with a treatment history and 9 for those without. Thus, at post-treatment the BDI means were not significantly different, $F(1,18) = 0.84$, $p = .37$; $M = 14.09$, $SD = 6.74$ vs. $M = 11.33$, $SD = 6.65$). A scatterplot of the individual pre and post BDI data is presented in the upper panel of Figure 1. The lower panel presents only the data from the 6 with a history of treatment for mood problems.



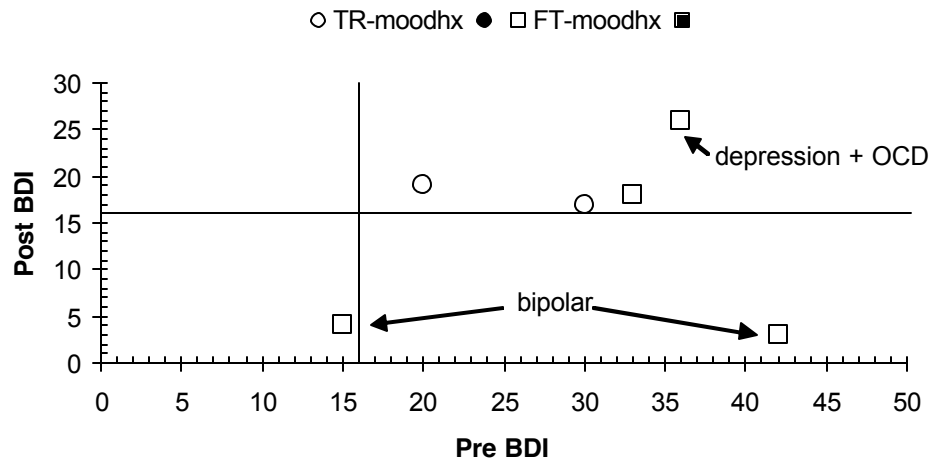


Figure 1. Scatterplot of individual pre (y axis) and post (x axis) BDI scores across conditions (TR = Thought Record training; FT = Fluency Training) for those with any mental health treatment history (hx = positive history, no = no history) in the upper panel and those with mental health treatment for a mood problem (mood) in the lower panel. The bisecting lines in the graphs represent the CSC criterion score.

Follow-Up

Follow-up data were obtained for all but one completer, who had moved to another state. Follow-up assessments occurred on average at about 5 weeks, but ranged due to scheduling conflicts ($M = 5.42$, $SD = 4.21$). The groups did not differ in time to follow-up, $F(1, 18) = .92$, $p = .35$. Again, because of the relatively large number of between and within-group analyses alpha was set at .01. ANCOVAs with the follow-up scores as dependant variables and post-treatment scores as covariates revealed no significant differences between the TR and FT conditions (p range = .10-.85). On the clinical self-report measures, effect sizes were also small at follow-up ($M = 0.23$, range 0.06 – 0.41). On the STFA, a large effect size was observed on the total number of self-positives favoring the FT condition ($g = 1.30$). With respect to negative self-thoughts, a large effect size favored the TR condition ($g = 0.81$). The remaining STFA effect sizes were small ($M = 0.21$, range 0.03 – 0.46). In terms of CSC, the percentage meeting criteria on the clinical self-report measures at follow-up (53-84%) did not change from post-treatment, and were similar across TR and FT ($M = 69\%$ and 63% , respectively).

Paired sample t tests were used to compare post-treatment scores to follow-up scores within each treatment condition, revealing only 1 significant difference. In the TR group, scores continued to improve on the ATQ-P, $t = -3.89$, $p = .005$. There were no other statistically significant changes indicating that improvements were maintained.

Treatment Evaluation

There were no group differences on any of the treatment evaluation items. Participants in both conditions rated the rationale for the treatment technique as “very” sensible ($M = 4.05$, $SD = .51$) and the techniques as “moderately to very” effective ($M = 3.85$, $SD = .67$). The therapist was rated as “very to extremely” effective in communicating and teaching the techniques ($M = 4.70$, $SD = .57$) and motivated ($M = 4.30$, $SD = .80$). Participants believed more contact with the therapist would have been only “somewhat to moderately” helpful ($M = 2.85$, $SD = .93$), rated themselves as “moderately to very”

compliant with the homework ($M = 3.40$, $SD = .88$), and to have mastered the techniques ($M = 4.0$, $SD = .46$).

Discussion

Both brief treatment conditions were associated with significant improvements in general distress, self-esteem, depression, depressotypic self-statements, and experiential avoidance. The changes observed during treatment were both statistically and clinically meaningful as post-treatment scores approached normative ranges for a majority of participants. Moreover, these improvements were not transient but were maintained at a follow-up assessment of at least one month. Thus, both TR and FT proved equally efficacious and, using the existing literature as a yardstick, equaled other related treatment conditions and surpassed outcomes in control conditions.

Recent data from dismantling studies of CBT for depression call into question the necessity of cognitive techniques for producing change. The TR condition in the current study opens up the option that while not necessary, use of the Thought Record may be sufficient for producing change. However, in the absence of a comparison group that controls for common factors (i.e., a sensible rationale with associated techniques) caution is warranted in wholeheartedly adopting this interpretation. That said, there is an impressive amount of data supporting CBT for depression, cognitive restructuring is a core component of the treatment, and the Thought Record is a primary vehicle used in pursuing cognitive restructuring (Persons et al., 2001).

Given the importance placed on the Thought Record in CBT for depression and its years of use and development, it is interesting that the FT intervention produced equivalent results. The positive FT data is consistent with the literature on the beneficial effects of increasing positive self-verbalizations (Calkin, 1992; Lange et al., 1998; Philpot & Bamburg, 1996) and extends it by using a sample that appeared more severe than those in previous investigations, comparing FT to another active treatment, and demonstrating the maintenance of gains over time. While these data provide some empirical support for targeting self-statements in therapy, they do not suggest a focus on self-statements to the exclusion of other treatment strategies, namely attempts to change overt behavior via behavioral activation, which has been shown to equal or exceed the results of comparisons conditions in which cognitive techniques were included (Jacobson et al., 1996).

It is interesting to compare and contrast the self-statement measures. On the STFA, significant group differences were observed with respect to the total number of self-positives, as expected due to the nature of the FT condition. The effect sizes at post-treatment also indicate large group mean differences on the total number of self-positives and ratio of positives to negatives. Participants in the FT condition doubled, and in many instances nearly tripled, their total positive thoughts and the total number of negative thoughts stayed the same, thus improving the FT ratio of positives to negatives to 2.1:1.0. In the TR condition, there were no changes in the total positive thoughts, but there was a decrease in negative thoughts, which improved the TR ratio of positive to negative self-thoughts to 1.2:1.0. At follow-up, both groups had a ratio of 1.7:1.0, due to a slight decrement in positive self-statements in the FT group and a greater decrement in negative self-statements in the TR group. Interestingly, the ratio of 1.7:1.0 is nearly identical to the data from our local, non-distressed sample and corresponds to the ratio of 1.6:1.0 that others have suggested represents a psychologically healthy balance (Kendall et al., 1989; Schwartz & Garamoni, 1989). Unlike on the STFA, the groups did not differ on the ATQ-N or ATQ-P. Instead both showed post-treatment ratios of 1.6:1.0. Thus, the most consistent finding across the self-statement measures was the change in the ratio of positive to negative self-statements.

For both groups, the average personal importance and believability ratings tended to increase for positives to decrease for negatives. The general direction of these changes, even though not reaching

formal statistical significance according to our corrected alpha level ($p = .01$), speak to a potential criticism of the treatments as being artificial, too structured, or in the case of FT, a rote memorization task. If the treatments were artificial, or if FT was simply memorization of generic positive thoughts, believability and personal importance would be expected to show no change, or maybe even decrease. Clinical behavior analysts have suggested that self-thoughts may have a number of overlapping functions: 1) as a conditioned elicitor, based on either direct or indirect/verbal pairings with actual aversive events, 2) as an establishing operation, altering the momentary reinforcing effectiveness and evocative functions of other stimuli, and 3) as a verbal self-rule or as the basis for establishing self-rules (Dougher & Hackbert, 1994, 2000). Believability and personal importance ratings may be a crude proxy measure for these functions (Wilson, Hayes, Gregg, & Zettle, 2001; p. 229). For instance, a self-thought that is low in believability and personal importance may be one that is a weak conditioned elicitor, functions as only a mild establishing operation, and fails to be a basis for generating self-rules. Conversely, a self-thought that is high in believability and personal importance may be a stronger conditioned elicitor that also functions as a more significant establishing operation, and serves as a basis for generating self-rules. This analysis, while plausible, is entirely speculative at the moment.

Given the short duration of the TR and FT conditions, it is worth noting that brief therapy is commonplace. Benton et al. (2003) reported that the mean number of sessions received at their university counseling center was six, while a national survey found 73% of campus counseling centers averaged 3-6 sessions per client (Stone, Vespia, & Kanz, 2000). Moreover, in a large national sample of clients seeking psychological services, the median number of sessions attended was less than five (Hansen et al., 2002). These data suggest that the development and evaluation of focused, brief intervention strategies appears important. That said, it is important to note that while the treatment gains achieved were impressive, on most of the clinical measures there was room for additional improvement and there were individual differences in treatment response.

There were a number of limitations in the present study. One is the generally small sample size, which reduced statistical power for finding between group differences. That said, the between group effect sizes in the present study were not large or consistent on the clinical measures indicating that extremely large samples would be needed to find group differences that, if found, would not reliably favor one condition. A second consideration is the attrition rate. The 33% attrition rate is not atypical in clinical trials, but is worth noting given the brevity of the interventions offered. Attrition was not associated with increased severity of distress, lower self-esteem, or group assignment. It is possible that attrition was due to the brevity of the treatments offered rather than in spite of it. That is, when only one technique is being offered, if the rationale for that technique does not readily resonate with the participant, there is less incentive to stay in treatment than there would be when offered a multi-component treatment package. Another limitation is the absence of data on overt behavior changes and reliance on self-report inventories, which may be influenced by demand characteristics, a Hawthorne effect, or repeated testing. To provide some protection, we employed commonly used clinical measures that have sound psychometric properties and kept the therapist blind to as many of the measures as possible during treatment. In addition, we added the STFA, which sampled actual behavior under standardized conditions, providing at the very least a manipulation check documenting that the treatments had some unique effects. Lastly, this study lacks a concurrent waitlist or supportive therapy control group. Given the comparisons between the present results and the extant literature, it seems reasonable to conclude that TR and FT are better than no treatment. An important next step is comparison to a supportive therapy group, which would control for the effects of non-specific factors. In addition, because of the specific targets of TR (challenging negative thoughts) and FT (increasing positive thoughts) another interesting future comparison would be with cognitive defusion procedures from Acceptance and Commitment Therapy (Hayes, Strosahl, & Wilson, 1999). Cognitive defusion procedures emphasize changing the function of thoughts rather than their content or frequency and recent data with non-distressed college students

suggested a defusion technique could reduce the discomfort and believability of negative self-thoughts (Masuda, Hayes, Sackett, & Twohig, 2004).

In a relatively severely distressed college sample, three sessions of TR or FT were associated with significant and sustained improvements according to commonly used clinical indices. These data support the feasibility, acceptability, and potential utility of implementing both strategies clinically and warrant consideration in future research, especially research exploring treatment specific effects and attempting to identify relationships between specific techniques and mechanisms of change.

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Self-directed Behavioural Family Intervention

Alina Morawska & Matthew R Sanders

Abstract

Behavioural family intervention is effective for the prevention and treatment of a wide range of emotional and behavioural problems in children. There is a growing need to address the accessibility of these services. This paper reviews the literature on self-directed interventions designed to help parents manage difficult child behaviours. Evidence regarding the efficacy of interventions is reviewed, and some of the difficulties associated with self-directed programs are discussed. The Self-directed Triple P Program is highlighted as an example of an efficacious and effective behavioural family intervention fitting into a larger multi-level model of family intervention. The discussion of the efficacy and effectiveness of self-directed interventions has implications for service delivery of parenting programs.

Keywords: self-directed, behavioural family intervention, parenting, children.

Parenting interventions attempt to enhance a parent's understanding of child behaviour management and the quality of the parent-child interactions, with the ultimate goal of optimising the child's developmental course (Cowan, Powell, & Cowan, 1998). When parents are taught to use consistent, moderate, and firm discipline, their children exhibit fewer behaviour problems (Arnold & O'Leary, 1997; Forehand, Wells, & Griest, 1980; Webster-Stratton, Kolpacoff, & Hollinsworth, 1988). Behavioural family interventions (BFI) aim to effect change in children's behaviour and adjustment by modifying aspects of the family environment that maintain and reinforce a child's problem behaviours (Sanders, 1992).

There is substantial evidence that BFI, particularly therapist-directed BFI, produces significant changes in both parents and children immediately following treatment (Forehand, Griest, & Wells, 1979) and there is good maintenance of treatment gains and generalisation of these skills (Dadds, Sanders, & James, 1983; Forehand & Long, 1988). There is also evidence for the generalisation of intervention effects beyond the specific behaviours and settings addressed during treatment (Sanders & Glynn, 1981; Serkettich & Dumas, 1996). Furthermore, BFI has effects ranging beyond improvements in child behaviour. Effects have been shown for decreases in parental depression (Connell, Sanders, & Markie-Dadds, 1997; Forehand et al., 1980), anxiety, and stress (Connell et al., 1997). Finally, in general, parents report high levels of satisfaction with behavioural family interventions and find the programs socially acceptable (Forehand et al., 1980; McMahon & Forehand, 1983; Webster-Stratton, 1989).

While there is significant evidence to support the efficacy of BFI, there are a number of factors that limit its dissemination at a community level. Firstly, very low numbers of parents participate in any form of parent education (Sanders et al., 1999) and there is generally low participation by parents of children who have significant behaviour problems (Zubrick et al., 1995) or whose children are believed to be at greatest risk of developing serious behaviour or emotional problems (Harachi, Catalano, & Hawkins, 1997). In Australia, while approximately 18% of children experience an identifiable mental health problem, only 2% of children receive any form of treatment from specialist mental health practitioners (Zubrick & Silburn, 1994) and only 10% of parents participate in parenting education (Sanders et al., 1999). Secondly, there is a range of psychological and cultural implications to seeking help, with great stigma attached to perceived difficulties with coping (Cunningham, 1996). The logistics of attending sessions, either individual or group, such as work schedules, extracurricular activities, difficulties arranging childcare, travel time, and transport costs may prevent many parents from participating in interventions (Cunningham, 1996; Pavuluri, Luk, & McGee, 1996; Spoth, Redmond,

Hockaday, & Shin, 1996). Finally, families may simply live in areas where there are no services, such as rural and remote regions. For these families, accessing services is very difficult, if not impossible. Indeed, research indicates that children from low-income families or rural/remote areas are less likely to receive psychological interventions (Hunsley, Aubry, & Lee, 1997).

Self-directed Interventions

Self-directed interventions have been proposed as one effective way for addressing some of the limitations and access problems identified for traditional BFI and for increasing the reach of services (Sanders, 2000). Such interventions overcome many of the barriers associated with accessing face-to-face services, as there is lowered stigma and significantly reduced or eliminated cost, transport requirements, and timing difficulties. Families can complete self-directed programs in their own homes, in their own time, and at their own pace. Furthermore, self-administered interventions are often very cost-effective and their use can ease the financial burden of mental health on the community.

Self-administered interventions have also been proposed as forming part of a stepped-care approach, where they are used as the most basic and least intrusive level possible. It may be efficient to screen individuals and on the basis of a number of factors, assign them to either more or less intensive intervention. Clients could be offered a self-directed intervention, followed by more intensive intervention if required, allowing the clinician to build on skills and knowledge which have been acquired through the self-directed intervention (Sanders, Montgomery, & Brechman-Touissant, 2000; Webster-Stratton, 1992).

There is limited research in the family intervention field focusing on self-directed interventions. Self-directed interventions have been used to target both specific problem behaviours, as well as broader behavioural difficulties. For example, self-directed interventions have been successful in improving child compliance (Gmeinder & Kratochwill, 1998; Sloane, Endo, Hawkes, & Jenson, 1990), in reducing child tantrums (Endo, Sloane, Hawkes, McLoughlin, & Jenson, 1991), in reducing child sleep problems (Seymour, Brock, During, & Poole, 1989), providing better outcomes in the treatment of ADHD (Long, Rickert, & Ashcraft, 1993), treating nocturnal enuresis (van Londen, van Londen-Barensten, van Son, & Mulder, 1993), and delaying adolescent smoking onset (Bauman et al., 2001).

The broader self-directed interventions focus on parents developing skills to monitor and remediate ineffective parenting techniques, determine their own goals and performance standards, and identify actions they can take to produce change in their child's behaviour. The work of Webster-Stratton and colleagues demonstrates an approach to examining self-directed programs with parents of young children. For example, Webster-Stratton, Kolpacoff, and Hollinsworth (1988) found that a self-administered video modelling intervention was comparable to a group discussion video modelling intervention. The self-administered approach was found more effective when families accessed two brief consultations with a therapist during the course of the program (Webster-Stratton, 1990), suggesting that therapist involvement is an important element of therapeutic effectiveness.

Self-directed programs have also been found to have comparable effects to therapist directed programs. For example, Nicholson and Sanders (1999) compared therapist directed BFI to a self-directed BFI intervention for parents of 7 to 12-year-old children with significant oppositional or conduct problems. Both intervention conditions led to equivalent improvements, compared to a wait-list control; however, there was more satisfaction with therapy in the therapist directed condition. Similarly, Sanders, Markie-Dadds, Tully, and Bor (2000) conducted a large scale clinical trial of 305 families with a 3-year-old child comparing two therapist-assisted versions of BFI and a self-directed BFI condition. Families completing any version of the program showed significant improvements on a variety of self-report and observational measures compared to a wait-list control group, however, there was more improvement in the therapist directed versions of the program, compared to the self-directed version. At 1-year follow-up

families in the self-directed group continued to show improvements and were more comparable to the other two groups.

The empirical support for brief, self-directed interventions is hampered by methodological limitations. Most include some kind of practitioner support (e.g., Endo, Sloane, Hawkes, & Jenson, 1991; Hansen, Tisdelle, & O'Dell, 1984), small sample sizes (e.g., Connell et al., 1997; Gmeinder & Kratochwill, 1998; Hansen et al., 1984), an absence of control groups (e.g., Hunt & Adams, 1989), an absence of child behaviour outcome measures (Flanagan, Adams, & Forehand, 1979; Hansen et al., 1984), and an absence of independent observations of child and parent behaviours (Connell et al., 1997).

Overall, Elgar and McGrath (2003) in a review of self-administered treatments for children and families concluded that there is some evidence to support the use of self-administered interventions. However, more randomised controlled trials addressing various problem areas, long term effects, populations, and media need to be conducted. The authors emphasised the need to conduct effectiveness trials in naturalistic settings, in order to promote integration of programs into health care settings. Furthermore, they recommended that the role of therapist assistance in self-administered treatments needs to be clarified.

Triple P – Positive Parenting Program

Triple P is an example of an empirically supported BFI (e.g., Sanders, Markie-Dadds et al., 2000), which was developed at the University of Queensland and has a considerable history of research and clinical application. It is a program that emphasises parental self-regulation as a means of achieving long-term change in child behaviour.

Triple P is a multi-level, preventively oriented parenting and family support strategy. It aims to prevent behavioural, emotional and developmental problems in children by enhancing the knowledge, skills, and confidence of parents. Triple P incorporates five levels of intervention on a tiered continuum of strength. Triple P is a behavioural family intervention based on social learning principles aiming to: (a) enhance the knowledge, skills, confidence, self-sufficiency and resourcefulness of parents; (b) promote more nurturing, safe, engaging, non-violent and low conflict environments for children, and; (c) promote children's social, emotional, language, intellectual and behavioural competencies through positive parenting practices (Sanders, 1999). The distinguishing features of Triple P are program sufficiency, flexible tailoring to identified risk and protective factors, varied delivery modalities, wide potential reach, and a multidisciplinary approach.

Self-directed Triple P

There is considerable research evidence for variants of Triple P, and the technological aspects of self-directed intervention have been examined. Specifically, the research has examined the role of therapist involvement in enhancing the efficacy of self-directed behavioural family interventions. Self-directed Triple P with no practitioner support has been found to have comparable effects to therapist directed programs (Nicholson & Sanders, 1999; Sanders, Markie-Dadds et al., 2000), however, in general parents were more satisfied with the intervention when they received practitioner support.

Connell et al. (1997) provided a self-directed BFI intervention to 24 parents of preschoolers in regional areas, which included a parent book and workbook, as well as weekly telephone consultations with a therapist. In addition to providing specific advice and support, the telephone consultations also served to promote responsibility for changing parents' own and their child's behaviour. The self-directed

program was effective in reducing levels of disruptive child behaviour, based on self-report measures and changes were maintained at 4 months follow-up. There were also improvements in mothers' parenting practices at post-intervention and follow-up and there was greater satisfaction and competence in parenting skills and lower levels of dysfunctional parenting practices, compared to a wait-list control. Finally, mothers in the self-directed group also reported lower levels of depression, anxiety and stress following the intervention compared to the control group. This study demonstrated the efficacy of a therapist-assisted self-directed approach, however, it did not provide information about the minimally sufficient level of intervention required for change. It also did not provide information about the importance or otherwise of the telephone consultations with parents.

Markie-Dadds and Sanders (2006b) randomly assigned 63 families to a self-directed BFI or a wait list group. Compared to the wait list group mothers in the self-directed BFI condition reported lower levels of child disruptive behaviour, lower levels of harsh authoritarian discipline and higher levels of satisfaction and parenting efficacy, and these gains were maintained at 6-month follow-up. Similarly, Markie-Dadds and Sanders (2006a) showed a tiered intervention effect in comparing a self-directed intervention to an enhanced version with weekly telephone consultations with a practitioner. At post intervention, children in the enhanced version showed lower levels of problem behaviours compared to the standard program, which in turn showed lower levels of problem behaviour than the wait list group. Similarly, mothers showed higher levels of parenting efficacy, while there were no changes in parental adjustment or relationship conflict. However, the differences between the two intervention groups were not maintained at 6-month follow-up, with the standard group catching up to the enhanced group.

In order to address these limitations, Morawska and Sanders (2006b) compared a self-directed BFI (SD-BFI) for parents of toddlers, to a telephone-assisted self-directed (TASD-BFI) version and a wait-list control. There were significant short- and long-term effects of the self-directed intervention in terms of child behaviour problems and maternal parenting style, confidence and anger. However, while participants in the SD-BFI condition made similar statistical gains to the TASD-BFI condition, the TASD-BFI conditions led to clearly superior outcomes in clinical terms. Participants in the TASD-BFI condition changed more reliably and there was a significant shift away from the clinical range for this group. While participants in the SD-BFI also made some gains, these were not as clinically meaningful as those in the TASD-BFI condition. These effects were maintained over a period of six-months. Finally, parents in the TASD-BFI group were more satisfied with the program than those in the SD-BFI condition.

A unique aspect of this study was that using a stringent methodological approach, it demonstrated that self-administered interventions can provide significant benefits in terms of child behaviour and parenting confidence and skills. Furthermore, it was also demonstrated that a tiered effect was evident, where parents who received a small amount of clinical input were able to make more significant, clinically meaningful improvements. It is important to note that the clinician input in this study was relatively minimal. Telephone consultations lasted an average of approximately 10 minutes, and overall on average each participant in the TASD-BFI received just over an hour of clinical input over the course of the program. What makes this hour unique, is that it is designed to enhance parents' self-regulatory skills – that is, enable them to make their own changes and be able to generalise these changes over time and situations. Parents set the agenda for these sessions and they are guided to solve their difficulties or concerns using the resources that have been provided to them, rather than the clinician providing advice or solutions.

The combined results of these studies provide strong support for the use of telephone assisted self-directed versions of Triple P as a low cost, clinically effective intervention for children of all ages. The self-directed Triple P interventions led to results that were not only statistically significant, but also clinically meaningful. These effects were evident particularly for the telephone-assisted versions of the program. The studies provide a strong evidence base for self-directed interventions, which form an

effective part of a behavioural family intervention suite that allows tailoring of strength of intervention to individual problems and families. Furthermore, there is clear evidence for the important role of therapist involvement and support.

Sanders, Markie-Dadds, Tully, and Bor (2000) conducted a large scale clinical trial of 305 families with a 3-year-old child comparing two therapist-assisted versions of BFI and a self-directed BFI condition. Families completing any version of the program showed significant improvements on a variety of self-report and observational measures compared to a wait-list control group, however, there was more improvement in the therapist directed versions of the program, compared to the self-directed version. At 1-year follow-up families in the self-directed group continued to show improvements and were more comparable to the other two groups, and these results were maintained at 3-year follow-up (Sanders, Bor, & Morawska, 2006).

Finally, Sanders, Montgomery et al. (2000) demonstrated that a self-directed minimal intervention, delivered in the format of a television series with accompanying parent tip sheets for each episode, significantly reduced parental perceptions of child behaviour problems and increased self-reported maternal parenting competence, compared to a wait-list control.

There is also evidence that a BFI based on a self-regulatory model, delivered by trained telephone counsellors can have significant effects across a range of measures of family functioning (Morawska & Sanders, 2006a). The intervention led to reductions in parental reports of child behaviour problems, reductions in dysfunctional parenting for mothers, and increases in parenting efficacy and confidence for both parents. There were also reductions in parental conflict over parenting and maternal stress. These effects were evident not only in statistical terms, but also in clinical terms with a shift in the population norm towards lower levels of risk. Importantly, the effects were also maintained at follow-up, indicating that the intervention has not only immediate effects, but benefits continue over time.

Conclusions and Implications

The review presented here indicates that there is a paucity of research on methodologically sound, structured self-directed intervention approaches. At the same time, there is a growing need to increase access to efficacious parenting interventions for parents who find it difficult to access traditional services. Triple P is a behavioural family intervention with significant empirical support, and the studies reviewed here provide considerable evidence for the efficacy of self-directed versions of the program. Furthermore, the studies provide support for the importance of some therapist involvement in promoting clinically meaningful and reliable change in child behaviour and family functioning. It was a clear finding that therapist assistance in completing a self-directed parenting program led to greater positive change for families. While this therapist involvement was clearly important, it was very minimal and was focused on enhancing parents' self-regulatory skills. This emphasis on self-regulation enables parents to make successful, enduring changes for their children and families, and provides them with the structure and skills necessary to effectively problem-solve future difficulties.

There is growing evidence that self-directed behavioural family interventions based on a self-regulatory model provide a low-cost, effective intervention for families in the treatment of a range of behavioural difficulties across childhood. They allow parents who cannot access traditional services to access high quality evidence-based interventions. They also have the potential to form a valuable role in a multi-level intervention model, for example, when parents are on waiting lists for services. A therapist-assisted intervention socialises parents to the self-regulatory framework and key strategies that may be refined later in individual therapy if necessary, reducing demands on services. This review has provided evidence that therapist involvement is important and has considerable impact on the outcomes of behavioural family interventions across the spectrum of child development. While parents are able to

make changes on their own, their ability to implement strategies and maintain these in the longer term is affected by whether or not they are supported in doing so. Parents who receive therapist support make greater changes in their parenting and thus report increased levels of improvement in their child's behaviour. An area for future research is to consider the mechanisms involved in this effect. We posit that the self-regulatory framework utilised by therapists is key to better outcomes for families participating in a self-directed program. In addition, a motivational effect may also play a role in increasing parents' implementation of strategies. Clarification of the mechanisms involved would be important to specify the nature of therapist involvement, the training therapists need to conduct telephone-consultations and thus, the most efficient way of delivering support to families.

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Factors Associated with Attrition in Weight Loss Programs

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Abstract

Attrition in weight loss programs is a complex process, influenced by patients' pretreatment characteristics and treatment variables, but available data are contradictory. Only a few variables have been confirmed by more than one study as relevant risk factors, but recently new data of clinical utility emerged from "real world" large observational studies. Practical difficulties, unsatisfactory results, a few psychological variables (e.g. lack of motivation, unrealistic weight loss expectations, overall level of stress, self-confidence in the ability to lose additional weight without professional help, and sense of abandonment from therapists), seem to play a crucial role in the patients' decision of interrupting the weight loss treatment.

Keywords: obesity, behavior treatment, dropout, weight loss.

Attrition is one of the major causes of treatment failure in the field of obesity. In obesity trials, attrition rates range from 10 to 80% (Farley, Wade, & Birchmore, 2003), and vary according to the experimental design (randomized vs. observational study), and the type of treatment (drugs, behavior, bariatric surgery). Adherence to weight loss programs is a key component of long-term success (Dalle Grave, Melchionda, et al., 2005; Perri, Sears, & Clark, 1993), and therefore strategies are needed to reduce the dropout rates. These strategies can only rely on precise identification of factors leading to premature program termination (Grossi, et al., 2006).

Unfortunately, many studies on weight loss treatment do not report data on attrition or incompletely describe them. The reasons for this attitude probably come from the view of attrition as an index of poor treatment quality (Wadden & Letizia, 1992). Most of available studies measured attrition in research settings and used different exclusion criteria, such as diabetes (Bennett & Jones, 1986), heart disease, or the use of antidepressant medication (Ho, Nichaman, Taylor, Lee, & Foreyt, 1995). These restrictions limit the usefulness of these reports for a general understanding of the process of attrition in the "real world" of weight loss clinics. Very few studies evaluated attrition in typical clinical settings (Honas, Early, Frederickson, & O'Brien, 2003; Inelmen, et al., 2005; Melchionda, Besteghi, et al., 2003). In this area, the largest report is the QUOVADIS study (QUality of life in Obesity: eVALuation and DIsease Surveillance) (Melchionda, Marchesini, et al., 2003), an observational study on quality of life in 1,891 treatment-seeking obese patients. It extensively evaluated the factors associated with attrition in the "real world" setting of 25 medical centers accredited by the Italian Health Service for the treatment of obesity (Dalle Grave, Calugi, et al., 2005; Dalle Grave, Melchionda, et al., 2005; Grossi, et al., 2006). In the QUOVADIS study attrition rate was as high as 57% at 12 month (Dalle Grave, Calugi, et al., 2005) and 81.5% after a median observation period of 41 months (Grossi, et al., 2006). The study examined both the patients' pretreatment characteristics and the reason for attrition as reported by patients during a structured telephone interview.

In this review we shall revise data on the variables associated with attrition in adult weight loss programs dividing them in two main categories: 1) patients' pretreatment variables, and 2) treatment variables (Table 1). We reviewed data from published studies examining attrition in research and clinical settings, with a particular emphasis on the data from the QUOVADIS study.

Patients' pretreatment variables associated with attrition**Table 1**

Causes of attrition in weight loss programs of obesity

Patients' pretreatment variables

- A) Demographic variables
 - a. Age
 - b. Age at onset of obesity
 - c. Female gender
 - d. Full-time job
- B) Anthropometric variables
 - a. Body Mass Index
- C) Dieting and other behavioral variables
 - a. Lower age at first dieting
 - b. Higher level of dietary restraint
 - c. Dietary habits
 - d. Smoking and sedentary habits
- D) Psychological variables
 - a. High weight-loss expectations
 - b. Lack of motivation
 - c. Binge eating
 - d. Depression and stress
- E) Medical variables and quality of life

Treatment variables

- A) Practical difficulties
- B) Unsatisfactory results
- C) Type and setting of treatment
- Miscellaneous reasons

Demographic variables

Age and age of onset of obesity do not consistently predict attrition in research weight loss programs (Inelmen, et al., 2005; Perri, McAdoo, Spevak, & Newlin, 1984; Teixeira, et al., 2004). However, both the QUOVADIS study (Dalle Grave, Calugi, et al., 2005; Dalle Grave, Melchionda, et al., 2005)(Table 2) and another large observational study (Honas, et al., 2003) found that younger age was one the most important predictors of dropout. Female sex, divorce, and African-American race were associated with greater attrition rates in one study (Honas, et al., 2003), but these results were not systematically confirmed by others (Dalle Grave, Calugi, et al., 2005). Finally, one study found that full-time job was an independent factor associated with dropout (Inelmen, et al., 2005).

Table 2

Univariate analysis of pre-treatment factors associated with 3-year dropout in the QUOVADIS population (Dalle Grave, Melchionda, et al., 2005).

Data are presented as odds ratio (OR) and 95% confidence interval (CI).

	OR	95% CI	P value*
<i>Demographic Variables</i>			
Age (years /10)	0.79	0.72 – 0.86	< 0.001
Male gender	1.21	0.97 – 1.52	0.097
BMI (kg/m ² /5)	1.00	0.93 – 1.08	0.982
<i>Historical Variables</i>			
BMI at age 20 (kg/m ² /5)	1.09	0.99 – 1.19	0.074
Age at first dieting (years /10)	0.88	0.81 – 0.97	0.008
Maximum weight loss in previous dieting (%/10)	1.08	0.97 – 1.21	0.173
<i>Weight Loss Expectations</i>			
Maximum Acceptable BMI (kg/m ² /5)	0.91	0.82 – 1.02	0.120
Dream BMI (kg/m ² /5)	0.78	0.67 – 0.90	< 0.001
Expected One-Year BMI Loss (kg/m ² /5)	1.05	1.02 – 1.07	< 0.001
<i>Psychological variables</i>			
Symptom CheckList 90 (Total score > 1)	0.98	0.80 – 1.20	0.850
Symptom CheckList 90 (Depression score > 1)	1.25	0.92 – 1.71	0.151
Binge Eating Scale (Score > 16)	1.18	0.87 – 1.61	0.296

Note that the probability of dropout increases systematically with increasing weight loss expectations and with lower dream BMI. Younger age and younger age at first dieting were also associated with dropout.

Anthropometric variables

A 1992 review pointed out that neither initial weight, nor body fat or percentage of overweight consistently predicted attrition in subjects entering weight loss programs both with low or very low calorie diets (Wadden & Letizia, 1992). Subsequent studies found conflicting results. Two studies found no association between body mass index (BMI – kg/m²) and attrition (Dalle Grave, Melchionda, et al., 2005; Honas, et al., 2003), one study found a lower BMI in subjects who did not complete their weight-reducing programs (Inelmen, et al., 2005), and two studies a lower BMI in completers (Clark, Guise, & Niaura, 1995; Teixeira, et al., 2004).

Similarly, the analysis of body fat distribution produced conflicting results. One study observed a higher waist-to-hip ratio in noncompleters (Teixeira, et al., 2004); a second study showed a higher waist circumference in completers (Inelmen, et al., 2005).

Dieting and other behavioral variables

A younger age at first dieting (Dalle Grave, Melchionda, et al., 2005)(Table 2) and a higher number of previous weight loss attempts (Teixeira, et al., 2004; Yass-Reed, Barry, & Dacey, 1993) are independently associated with attrition. One study found that a low susceptibility to hunger, measured by

high level of dietary restraint at the Eating Inventory (Stunkard & Messick, 1983), were more likely to complete treatment (LaPorte & Stunkard, 1990), but this association was not confirmed (Wadden & Letizia, 1992).

Also dietary habits may play a role in the process of attrition. Dropouts are characterized by a significantly lower daily consumption of fresh fruit, a higher alcohol consumption at meal time (Inelmen, et al., 2005) and lower total energy, carbohydrate, and fiber intake at baseline (Teixeira, et al., 2004). Higher attrition rates are also reported in smoking and sedentary patients (Clark, Niaura, King, & Pera, 1996).

Psychological Variables

The roles of patients' psychological variables in attrition have been extensively investigated. Negative effects were reported for weight loss expectations, lack of motivation, binge eating, depression and life stress.

Weight Loss Expectations

A few studies suggested that having higher initial weight loss expectations is associated with higher dropout rate (Teixeira, et al., 2002; Teixeira, et al., 2004), whereas one study failed to associate goal and dream BMI with attendance to sessions of behavioral therapy (Linde, Jeffery, Finch, Ng, & Rothman, 2004). The QUOVADIS study widely evaluated the role of weight loss expectations and of other primary weight loss goals on attrition (Table 2). At baseline, the large group of obese Italian patients reported a mean dream BMI corresponding to a 32% weight loss, and a maximum acceptable BMI corresponding to a 23% weight loss (Dalle Grave, et al., 2004). After 12 months 51.7% of patients had interrupted their treatment program. The strongest predictors of attrition were lower age, and higher expected one-year BMI loss. Attrition was also higher in subjects with a primary motivation for weight loss based on appearance. The risk of drop-out increased systematically for unit increase in expected BMI loss at 12 months, and was particularly elevated in the first 6 months (Dalle Grave, Calugi, et al., 2005). After 36 months, only 15.7% of patients were in active treatment in the 15 medical centers that applied a continuous care model of treatment (Dalle Grave, Melchionda, et al., 2005). Again, the strongest predictors for continuous care were lower expected 1-year BMI loss and older age. The study adds two original observations to the area of obesity treatment outcome: 1) time to drop-out is progressively shorter in relation to expected BMI loss; 2) attrition is influenced also by goals other than weight loss, such as the primary motivation for weight loss based on appearance.

Lack of Motivation

Andersson and Rössner (Andersson & Rossner, 1997) were the first to show that drop-out might stem from decreased motivation, and lack of motivation was the leading cause of premature withdrawal in another study (Lantz, Peltonen, Agren, & Torgerson, 2003). In the QUOVADIS study, 12% of dropout patients retrospectively reported that lack of motivation was a leading cause of attrition (Grossi, et al., 2006)(Table 3).

Binge Eating

Greater attrition rates among obese binge eaters compared with nonbingers were initially reported (Marcus, Wing, & Hopkins, 1988; Wadden, Foster, & Letizia, 1992), but these results have been challenged. A few studies confirmed the association of binge eating with attrition (Sherwood, Jeffery, &

Wing, 1999; Teixeira, et al., 2004), others did not find any relationship (Wadden, Foster, & Letizia, 1994), and finally another study found that binge status had a protective effect against dropout (Ho, et al., 1995). In the QUOVADIS study, no significant differences were observed in the score of the Binge Eating Scale (Gormally, Block, Daston, & Rardin, 1982) between continuers and dropouts (Dalle Grave, Calugi, et al., 2005)(Table 2).

Depression

Higher levels of depression have been associated with treatment attrition in obese (Clark, et al., 1996; Teixeira, et al., 2004), and in obese with diabetes (Marcus, Wing, Guare, Blair, & Jawad, 1992). However, the QUOVADIS study did not observe significant differences in the Depression score of the Symptom Check List-90 (SCL-90)(Derogatis & Melisaratos, 1983) between continuers and dropouts (Dalle Grave, Calugi, et al., 2005)(Table 2).

Stress

Two studies observed that the overall level of stress discriminates patients who discontinue treatment from those who complete their program (Wadden & Letizia, 1992; Yass-Reed, et al., 1993).

Medical Variables

The impact of medical comorbidities in attrition from weight loss treatment has never been clearly demonstrated. Although the common sense would indicate that motivation might be increased by comorbidities, pharmacologically-untreated high blood pressure (Clark, et al., 1996) and a higher number of obesity-related diseases (Inelmen, et al., 2005) have been surprisingly associated with higher attrition rates.

Quality of Life Variables

One study found that noncompleters had lower level of physical, mental and weight-related quality of life, as measured by the Medical Outcome Survey Short Form-36 and by the Impact of Weight on Quality of Life-Lite questionnaires (Kolotkin, Crosby, & Williams, 2002).

Treatment variables associated with attrition

Practical Difficulties

Weight loss programs have a strong impact on everyday life. Repeated visits to the medical center may interfere with working activities, and dieting may disrupt family and social life.

In the QUOVADIS study, practical difficulties accounted for almost half of the primary causes for attrition (45%) reported by dropouts (Grossi, et al., 2006)(Table 3). These difficulties included family problems, problems at work, distance problems (all linked with time constraints) and health problems other than obesity. Practical difficulties seems to play a major role in both early and late dropout, since no relation was observed between time to dropout and the prevalence of practical difficulties (Grossi, et al., 2006).

Unsatisfactory Results

In one study, 57% of dropouts indicated that slow weight loss was responsible of their withdrawal from treatment (Perri, et al., 1984). A subsequent study found that women who dropped out during the

first three month of treatment had achieved a significant lower weight loss than continuers (Wadden & Letizia, 1992). These findings were confirmed by the observation that unsatisfactory results were the second reason of attrition (14%) reported by the QOVADIS study participants (Grossi, et al., 2006)(Table 3). Unsatisfactory results may lead to loss of motivation, whereas a large weight loss in the initial phase of treatment may strengthen adherence.

Table 3

Reported reasons for attrition in obese patients of the QOVADIS study. The reasons were collected during a phone interview carried out after a mean period of 41 months from enrollment in 766 patients who had discontinued treatment (Dalle Grave, Melchionda, et al., 2005; Grossi, et al., 2006).

Reasons for treatment stop *	Total number and % within group
Disagreement with the treatment plan	n = 45
Satisfied with treatment results	n = 38
Confident to loose additional weight without professional help	n = 64
Logistics	n = 279
Living far from the medical centre	104 (37%)
Work problems	143 (51%)
Family problems	151 (54%)
Financial problems	17 (6%)
Health problems other than obesity	58 (21%)
Holidays	1 (0%)
Unsatisfactory results	n = 139
Unsatisfied with weight loss	68 (49%)
Unable to keep following treatment program	82 (59%)
Lack/loss of motivation	n = 94
Other reasons	n = 44
Lack of encouragement, sense of abandonment	23 (52%)
Bad interaction with health personnel	10 (23%)
Personal health problems	8 (18%)
Choice of other treatments/centres	6 (14%)
Shame for being unable to cope with prescriptions	6 (14%)
Program too difficult to follow	5 (12%)
Administrative problems barriers	5 (12%)
Problems in taking appointments	4 (9%)
Health problems of husband	2 (5%)
Turn around of medical personnel	2 (5%)
General practitioner influence	2 (5%)
Other reasons	16 (36%)

*Patients were allowed to report more than one reason for treatment stop. A few patients did not report reasons.

Type and Setting of Treatment

Two reviews analyzing 17 and 13 group behavioural weight loss programs found an average rate of attrition of 13.5% (Wilson, 1980) and 13.8% (Wadden & Bell, 1990), respectively. Attrition in group

behavioural weight loss treatment is much lower than the 35% to 70% reported in commercial setting using conventional low calorie diets (Wadden & Letizia, 1992), the 55% to 75% reported in hospital-based very low calorie diets (Wadden & Letizia, 1992), and the 81.5% in clinical continuous care settings (Grossi, et al., 2006). Comparison between these data must be taken cautiously since different studies had heterogeneous modality of recruitments and the observation period varied dramatically (from about 24 weeks in the typical groups of behavioral weight loss programs to 40 months in the QUOVADIS study). Interestingly, a multicenter controlled trial that compared 63 obese men and women who were randomly assigned to either a low-carbohydrate, high-protein, high-fat diet or a low-calorie, high-carbohydrate, low-fat (conventional) diet found no significant differences in attrition between groups (Foster, et al., 2003).

Miscellaneous Reasons

In the QUOVADIS study, the majority of patients reported multiple reasons for attrition (Grossi, et al., 2006). After practical difficulties, unsatisfactory results and lack/loss of motivation (12%) (Table 3), the main reason reported by patients was the confidence in the ability to lose additional weight without professional help (9%). Forty-four patients (8%) reported 'other reasons' for attrition. Within this subset, there was seven pregnancies, six cases of 'personal problems', four surgical interventions, three cases of depression, and a number of single different causes. Satisfaction with the results achieved during treatment was the reason for interrupting the contact with the obesity center in 7% of cases, and disagreement with the treatment plan in 5%. A large percentage of patients (9%) reported the feeling of being abandoned by the clinical personnel after an initially intensive program, or an unsatisfactory interaction with the therapists. One hundred and seventy-one patients gave differently combined causes for attrition. The most common combinations were (a) unsatisfactory results associated with non-adherence and (b) practical difficulties associated with lack of motivation or other reasons. In general, over 140 different causes or combinations were selected by patients to describe the reasons of their premature program termination, which could be assembled in at least 30 different prototypes.

Are all drop-outs treatment failures?

The QUOVADIS study provides data on long-term weight loss in 1,000 patients treated in 15 Italian obesity centers applying a continuous care model of medical treatment (Dalle Grave, Melchionda, et al., 2005). After 36-month follow-up, the mean percentage weight loss was significantly greater in continuers than dropouts (5.2% vs. 3.0%), thus supporting the advantage of the continuous care model. However, an interesting observation of the study was that the dropouts satisfied with the results achieved or confident in their ability to lose additional weight without professional help reported a mean weight loss of 9.6% and 6.5%, respectively, figures that are on average larger than in continuers. This observation indicates that not all the dropouts must be considered treatment failures.

Discussion

This review confirms that attrition in weight loss treatment is an extremely complex process, influenced by a combination of several patients' pretreatment characteristics and treatment variables, differently interacting in individual patients. It is conceivable that conflicting results are partly due to the different type and length of treatment, and partly to the definition of attrition. However, the predictive role of some patients' pretreatment characteristics and treatment variables on attrition have been confirmed by more than one study and new data of clinical utility come from large observational studies.

In general, practical difficulties, unsatisfactory results, psychological variables and type of treatment seem to play a crucial role in the patients' decision of interrupting the weight loss treatment.

Practical difficulties, as cause of attrition, received a lot of interest in cancer-screening programs (Bergenmar, Tornberg, & Brandberg, 1997), and interviews were used to develop programs to reduce non-attendance (Elkind, Eardley, Haran, Spencer, & Smith, 1989). The QUOVADIS study found that more than half of the reported reasons for attrition to follow-up were linked to practical problems. These problems arise from organizational or physical barriers, which are often overlooked in clinical medicine and should be carefully matched in the future.

Unsatisfactory results, in particular a modest initial weight loss, are reported by patients as one of the principal reasons for treatment interruption in retrospective analysis (Grossi, et al., 2006; Wadden, Foster, Letizia, & Stunkard, 1992). Unsatisfactory results could be in part the consequences of patients' unrealistic weight loss expectations. In the QUOVADIS study (Dalle Grave, et al., 2004), both dream weight and maximum acceptable weight largely exceeded the weight loss target recommended by international guidelines (World Health Organization, 2000). Higher weight loss expectations were the strongest predictors of attrition at long-term follow-up in subjects under continuous care (Dalle Grave, Melchionda, et al., 2005). A proposed factor linking unrealistic weight loss expectations and attrition is the dissatisfaction with weight loss obtained with treatment (Dalle Grave, Calugi, et al., 2005). Support to this hypothesis comes from the finding that the difference between weight goals and treatment-induced weight loss is correlated with post-treatment satisfaction (Foster, Wadden, Vogt, & Brewer, 1997). The higher is this difference, the greater is dissatisfaction, and frustrated patients tend to interrupt the treatment. In the QUOVADIS study, dissatisfaction with the results was reported as a major cause of attrition by 25% of dropouts (Dalle Grave, Melchionda, et al., 2005). Interestingly, also satisfactory results achieved with treatment are associated with attrition, but this reason cannot be considered a treatment failure, since these patients reported an even larger mean weight loss than continuers at long-term follow-up (Dalle Grave, Melchionda, et al., 2005).

Other psychological variables that seem to play an important role in predicting attrition include lack of motivation, overall levels of stress, self-confidence in the ability to lose additional weight without professional help, and sense of abandonment from therapists. The psychological obstacles are rarely addressed during weight loss treatment and this could be the main reason of treatment failure in a few patients. Behavioral weight control programs have typically been standardized as group interventions based on psycho-education more than on psychological therapy (Cooper, Fairburn, & Hawker, 2003). To overcome these limitation a new cognitive behavior therapy for obesity (Cooper, et al., 2003) has been developed to address ambivalence using well-established strategies to enhance motivation, and to remove psychological and behavioral individual obstacles to weight loss and weight loss maintenance (e.g. promoting greater acceptance of realistic loss goals, addressing binge eating). While data on efficacy are not yet available, the importance of addressing motivation to reduce attrition is supported by a study in which adding three sessions of a motivational interview (Miller & Rollnick, 2002) to a behavioral weight control program for patients with Type 2 diabetes resulted in a significantly better adherence to treatment and a better glucose control compared with the weight loss program alone (Smith, Heckemeyer, Kratt, & Mason, 1997).

The type and the duration of treatment are also other important factors associated with attrition. Group behavioral weight loss programs applied in a research setting reported a very low attrition rate (around 13.5%). Higher rates of attrition (from 35% to 81.5%) have been reported in commercial and continuous care clinical setting. Behavioral weight loss programs are typically delivered in closed groups and follow a structured and time-limited protocol. It has been suggested that closed-group formats facilitate cohesiveness and interaction (Yalom, 1985), while the structured and time-limited protocol gives the patients specific goals and methods of achieving weight loss (Wadden & Letizia, 1992). These two factors are not usually present in commercial and clinical programs; they could be the reason for the low attrition rate reported in behavioral weight loss programs. A partial support to this hypothesis comes from the observation that patients treated with very low calorie diets and behavior therapy in closed and

time limited groups tend to have a lower dropout rate than patients treated by similar diets but with open-group sessions and open-ended therapy (Wadden & Letizia, 1992). However, the lower attrition rate of behavioral weight loss programs could also be determined by other factors, such as the inclusion of more motivated patients, and subjects with a lower number of medical and psychological comorbidities.

Other factors, such as BMI, age, gender, dietary restraint, body fat distribution, binge eating, depression have been associated with attrition in some studies but not in others. The reasons of these conflicting results are not entirely known. It is possible that some factors are predictive of attrition only in subjects undergoing specific treatments, and not in subjects enrolled in other programs that adopt different procedures and strategies. Future studies have to investigate this hypothesis.

Finally, a variety of factors, such as age of first diet, number of previous diets, dietary habits, full time job, smoking, medical comorbidities, diet composition, and quality of life, have been observed to predict attrition only in selected reports, and their role in different settings remains to be determined.

The data of this review have clinical implications. Firstly, physicians are mostly interested in the clinical evaluation, while patients' practical difficulties to adhere to treatment (e.g. social and familial environments) are rarely considered a relevant part of the interview. Physicians should dedicate part of the office consultation to understand and/or to remove barriers, in order to improve patients' compliance to treatment (Grossi, et al., 2006). Secondly, the importance of motivation in the failure of weight loss programs makes the assessment of motivation a core procedure for all obese patients both before and during treatment. It has been recently suggested that a motivational interview could be used as a separate intervention throughout the course of treatment, when the motivation of obese patients decreases (Wilson & Schlam, 2004). Thirdly, the association between early weight loss and attrition indicates that an intensive treatment in the first part of the program might be useful. Increasing the number of sessions from once a week to twice weekly in the first month could be a potential effective way to increase the rate of initial weight loss and consequently to reduce the rate of attrition. Fourthly, the association between unrealistic weight loss expectations and attrition indicates that the problem of weight loss goals should be addressed both in the initial interview and during the entire course of the treatment. This would help to detect and to address promptly any warning sign of weight loss dissatisfaction, thus minimizing the risk of attrition (Dalle Grave, Calugi, et al., 2005). Specific strategies to change weight goals have been recently described in the modern cognitive behavioral treatments of obesity (Cooper, et al., 2003). Our clinical experience with obese patients suggests that a trusting and collaborative relationship between physician and patient is a crucial aspect favoring the modification of unrealistic weight goals (Dalle Grave, Calugi, et al., 2005). The development of a trusting and collaborative relationship is also a key factor to avoid the sense of abandonment from therapists that patients report as one of the major reason of attrition. Fifthly, the data linking overall stress with attrition confirm the clinical impression (Wadden & Letizia, 1992) that patients experiencing stressful life events should wait for a more peaceful period to initiate their weight loss program. Even if the data on depression and binge eating are not unequivocal, our clinical experience suggests that patients with severe clinical depression should be treated for this disorder before starting a weight loss program, while patients with binge eating should be helped address this eating disorder behavior during treatment if it constitutes an obstacle to weight loss (Cooper, et al., 2003). Sixthly, the lower attrition rate of group behavioral weight loss programs suggest that some procedures adopted by these treatments (e.g., accurate recruitment, closed groups and a structured and time-limited protocol) should be incorporated into standard clinical practice. Finally, the good results on weight loss obtained by dropout patients confident to loose weight without any additional professional help and satisfied with the results achieved suggest that clinician should dedicate time to help the patients to increase their self-efficacy and to develop a positive acceptance of the weight loss achieved with treatment.

Future studies should evaluate more carefully both patients' pretreatment variables (e.g., depression, binge eating, age) and treatment variables (e.g. practical difficulties, quality of therapeutic relationship, type and duration of therapy) associated with attrition. This careful evaluation must be systematically carried out in any clinical setting, since most data on attrition come from obesity weight loss trials in which some procedures (e.g., the use of specific inclusion and exclusion criteria) could conceal the common factors associated with attrition in the real world treatment. The experience with the QUOVADIS study suggests that it is possible to retrieve a sizable amount of information regarding obese patients lost to follow-up in typical clinical settings by means of a structured telephone interview from 3 to 4 years after treatment stops. Over 75% of participants were traced and most of them were collaborative with the interviewer, and agreed to answer the 54 questions of the interview (Grossi, et al., 2006).

In conclusion, there is now evidence that new strategies may be adopted to decrease the attrition rate in the treatment of obesity. The strategies proposed in this review and by others (Wadden & Letizia, 1992) should be evaluated in randomized controlled trials or in large observational studies with adequate statistical power. The results are likely to be of great value in improving clinical outcomes.

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The Impact of Positive Behavior Intervention Training for Teachers On Referral Rates for Misbehavior, Special Education Evaluation and Student Reading Achievement in the Elementary Grades

Susan Polirstok, Ed.D. & Jay Gottlieb, Ph.D.

Abstract

A professional development program which trained whole school staffs in the use of positive behavioral interventions for the purpose of reducing referral rates of students for misbehavior and special education evaluation. The program focused on training teachers and paraprofessionals in behavior management strategies to increase “high approval teaching,” to develop structured and organized classroom environments, to engage in contingent teaching, and to improve the overall school climate. The findings suggest that training whole school staffs is an efficient way to reduce referrals for student misbehavior, to reduce the number of conduct-based referrals for special education evaluation and to impact positively on student achievement vis-à-vis reading performance. The data demonstrate that increasing on-task behavior in classrooms and reducing misbehavior results in increased student achievement. This work stresses the importance of teaching prosocial and proacademic behaviors to elementary grade students, how these behaviors are critical to school success, and the way in which school principals can provide leadership for this work.

Keywords: contingent teaching, pro-social behaviors, pro-academic behaviors, reciprocity of approval.

Introduction

The relationship between behavior management and student achievement has long been documented in the literature. Pre-service teacher education programs especially in the elementary grades must recognize the importance of training teachers in positive behavior intervention techniques as a way to maximize student social and academic learning. All too often, novice teachers arrive at busy, urban schools lacking the techniques they need to create positive learning environments that can best meet the diverse needs of elementary level learners. Both pre-service teachers and novice in-service teachers lack the years of experience which over time informs classroom management generally and behavior intervention more specifically. As a consequence, while they may know some behavior management techniques, they clearly have not had adequate training in how to implement these techniques nor how to maintain or generalize prosocial or proacademic behaviors in students after they begin to emerge in response to intervention.

What is key for classroom teachers in elementary school settings is that teachers understand both deficit and excessive behaviors relative to developmental norms and can design whole class and individual interventions that will seek to increase deficit behaviors and decrease excessive behaviors using high frequency social approval and tangible reinforcers during behavior acquisition. Positive classroom climate and classroom organization including structure and routines are essential for at-risk children to learn how to function in school. The importance of the classroom environment has been noted by Polloway, Patton and Serna (2001), who maintain that classroom organization and management are essential “precursors to teaching.” Without this basic learning, the likelihood is that many young children, who may already come from chaotic and disorganized homes, will not have the opportunity to learn behaviors which will optimize their performance in school over time.

Hence this article will address how positive behavioral intervention training can be of great importance in providing elementary school teachers with myriad techniques that can literally change school outcomes for significant numbers of children who are often referred to special education because they have not developed the prosocial and proacademic behaviors necessary for school success.

The long-term causal relationship between teachers' abilities to manage students' behavior and teachers' referrals of misbehaving students for special education was evident in a series of studies conducted in the same schools where the behavior training program being described here was conducted. In fact, these studies, conducted over a multi-year period, alerted the school district administration to the problem and to request the behavioral intervention training.

These studies highlighted a couple of important facts. Whereas virtually all teacher referrals were based in some part on poor academic performance, about half also included misbehavior as a reason for referral. Moreover, in these schools the statistical probability of a teacher-referred students having a disability and being found eligible to receive special education services was about 90% (Gottlieb, Gottlieb & Trongone, 1991). Teacher referrals were not evenly distributed. One-eighth of the teachers made two-thirds of all referrals (Gottlieb & Weinberg, 2000). Thus, the motivation for the district administrators and the principals was the prospect that if high-referring teachers were taught and subsequently used effective behavior management strategies, there would be a substantial reduction in the special education population in the district's schools.

Changing Cycles of Mutually Aversive Interactions between Teachers and Students

In order to implement positive intervention strategies, teachers need to understand how behavior is both interactional and transactional. In other words, what the teacher does or says to students impacts the students directly and in turn, what the students do or say in response impacts the teacher directly, putting in motion a cycle of interaction that can either be mutually positive or mutually aversive. All too often, teachers fail to recognize how their own behaviors contribute to students' misbehaviors and how this impacts negatively on student learning. Polirstok and Greer (1977) were able to document how teacher-student interactions could be mutually positive or mutually aversive. "High approval" teaching was a critical variable in increasing the appropriateness of student behaviors as well as strengthening student achievement in response to teacher approval. This reciprocity of approval phenomenon was also documented in subsequent studies by these researchers examining the relationship between tutors and tutees (Polirstok & Greer, 1986; Greer & Polirstok, 1982). The converse has been documented as well. When the teaching in classrooms is "high disapproval" (extremely negative and critical), then student responses to this teaching are typically characterized by increased verbal/physical aggression, often escalating in severity in response to the frequency and magnitude of teacher disapproval. Helping teachers to learn how to be structured, organized, and high approval is a very important lesson, one that our professional development program hoped to teach.

A Whole School Training Approach to Reduce Disciplinary Referrals and Referrals to Special Education

Gottlieb and Polirstok (2005) report on a professional development program where the instructional staff of three schools were trained to use positive behavioral interventions in order to reduce the number of disciplinary referrals made by teachers to the school principal and/or guidance counselor and the impact of these reductions on the overall number of referrals for special education evaluation and placement in each of the schools. While the performance of each of the schools on standardized reading measures was not an intended variable for assessment in this professional development program, the findings strongly demonstrated the interrelationship among "high approval teaching," increased student on-task behavior, and academic achievement.

The three schools were selected to participate in this professional development program by district supervisors who were concerned with each of the school's disciplinary referral data and declining academic performance. The three schools had similar student populations, mainly poor (91% - 99% received free lunch) and mainly minority (40.3% African American, 55.7% Latino, 3.2% Asian, and .8% Caucasian). Each of the schools was characterized by low academic achievement, high teacher requests for transfer and retirement, high percentage of novice teachers and pervasively low staff morale.

School #1 was the first school selected for training. School #1 was a K-8 school with a total of 550 students. Approximately 300 of these students were in grades K-5. The number of disciplinary referrals made by teachers to the school principal and/or counselor for the year prior to the initiation of the professional development program was 625. This number was substantially more, in fact 42% more, than the 360 disciplinary referrals forwarded to the principal for grades K-5 two years prior to the professional development program. Hence not only was the number of disciplinary referrals quite high the year before the onset of the program, but in fact the number of referrals had been increasing over time and the data suggested very serious problems regarding classroom management and appropriate student deportment on a building-wide scale. Another concern that the district administration had about this school in particular was the high rate of referrals for special education evaluation and placement due to conduct problems, which was more than 200% higher than the district average (11.2% as compared with a district average of 4.7%). Relative to the entire school system, School # 1 placed in the top 5% of the total 811 elementary and middle schools.

Consistent with the district administration's concern regarding high referral rates for special education evaluation and placement due to conduct problems, two additional schools were chosen for the professional development program. In these two elementary schools (School #2 and School #3) selected for training during the year following the training at School #1, the total number of referrals for special education evaluation and placement represented 8% of the enrollment in each of the two schools, almost double (170%) the average district special education referral rate.

From an administrator's perspective, when teachers are making both disciplinary referrals and referrals for special education evaluation and placement due to conduct problems occurring at high rates, it suggests that the teaching staff depth of training in whole class management overall and in individualized strategies for increasing student rule compliance, on-task behavior and academic performance.

The Professional Development Program

To address the problem of too many disciplinary referrals in Schools 1, 2 and 3, a training program for all administrators, clinical personnel, teachers, and paraprofessionals was initiated. The training focused on behavior management procedures employing positive behavioral interventions to increase the level of teacher praise and reinforcement to students, thereby decreasing punishment and negative teacher comments. This is in keeping with current trends in behavioral intervention which stress positive interventions over the use of more negative and punitive strategies (Smith et al., 2004).

Techniques that were taught in this program included: identifying classroom rules, using contingent, "high approval" teaching, structuring hierarchies of no-cost or low cost tangible reinforcers, and selective ignoring. These are all techniques which have been widely documented in the literature as effective in managing student behavior and in promoting student learning (Lloyd, Forness, & Kavale, 1998). Helping teachers change their overall approach from "high disapproval" to "high approval" and to recognize that "high approval" teaching does not make them appear weak or insincere to students was a significant component of this professional development program. The program sought to empower teachers to create high approval classrooms where children would feel safe to take the necessary risks to

tackle difficult academic tasks and change their inappropriate behaviors. In a contingent classroom, the rules are clear and the teacher approval and/or reinforcement is dispensed in an organized and consistent manner. Contingent classrooms with “high approval” teaching provide the kind of environment where students can begin to demonstrate prosocial and proacademic behaviors because the structured environment supports those behaviors.

An overriding intent when developing the training program was the desire to minimize demands on teachers regarding record keeping. Deliberate steps were taken to insure that teachers did not have to do things that were overly demanding of their time in order to implement the program successfully. The rationale was that if teachers were asked to do things that were too taxing or foreign to their normal routines, they would not attempt the required activities, an outcome often evident when new behavioral programs are piloted.

The school district administration dedicated seven half days between September and January for training in School 1. About 8 weeks following the training, a 45-minute follow-up session at a regularly scheduled faculty meeting was provided to review several key points and answer teacher questions. The two additional schools, School 2 and School 3 were trained jointly during the following year; only five half day sessions were available for the professional development program between September and January. Similarly, a follow-up refresher session 8 weeks later was held for both schools at their regular monthly faculty meetings.

Each of the 150-minute professional development sessions typically began with a question and answer period, where teachers raised questions about problems they encountered in their classes. The trainer encouraged group discussions to address these problems. Another portion of each session focused on a specific behavior management technique and how that technique could readily be used in classrooms.

The overall professional development training included:

- (1) How to develop classroom rules that were behaviorally specific (few in number & stated positively);*
- (2) How to teach classroom rules to students to foster student ownership of academic and behavioral performance (increase locus of control through self-monitoring);*
- (3) How to increase teacher consciousness about language used with students to either praise or reprimand and whether teacher comments were appropriate given classroom rules (how to be a contingent teacher in the use of approval and disapproval);*
- (4) How to increase the number of positive statements made by teachers to individual students as well as to the whole class, as compared with the number of negative statements made to individual students as well as to the whole class (how to be a high approval teacher and change the approval/disapproval ratio in the classroom);*
- (5) How to develop reinforcement systems that were "user-friendly" in terms of time and record keeping (limit the complexity of the system developed);*
- (6) How to use selective ignoring while trying to "catch students being good" (change the focus from “catching students being bad”); and*
- (7) How to work with high frequency disruptive behaviors by reducing them gradually over time (set realistic behavior change goals which recognize that change is often a slow process). (Gottlieb & Polirstok, 2005)*

Time during each training session was allotted for participants to meet in small groups, usually by grade level taught, to discuss how specific techniques presented could actually be applied in their classrooms in a developmentally appropriate way. Clinical personnel were integrated in these small

group discussions and provided insight from a developmental perspective about what strategies might work with particular grades. The collective sharing of group members during training sessions led to additional discussions at other times when the professional development program was not taking place. In essence, participants were learning how to collaborate and support each other with respect to general classroom management issues, as well as issues related to the special needs of individual children.

Monitoring the Success of the Professional Development Program

The evaluation of outcomes varied slightly according to the data available in individual schools. Some data, such as standardized achievement testing and referrals for special education evaluation and placement, were available in all three schools. Other data, such as the number of disciplinary referrals forwarded to the principal, were available for only School #1.

Information on disciplinary referrals in School #1 was provided by the building principal. The number of referrals that the principal received from the teachers was recorded monthly. Information regarding the number of referrals for special education evaluation and placement as well as the reasons for them was obtained from the clinical team that was responsible for processing all special education referrals for each of the three respective schools. Members of the clinical team assigned to each school received the referrals and the accompanying documentation, conducted the multi-disciplinary assessments and determined eligibility and placement recommendations. Information on referrals from each clinical team was gathered at the end of the academic year.

Decreasing Disciplinary Referrals to the Principal

Disciplinary referrals detailing student misbehavior(s) were sent to the principal in School #1. In the year prior to the training, 625 disciplinary referrals were sent to the principal, a significant increase over the 360 that had been submitted the year prior. During the school year that the professional development program was offered, 246 disciplinary referrals were forwarded, a reduction of 61% over the prior year and 32% over the year before that.

Decreasing Referrals for Special Education Evaluation and Placement

Special education referrals to the clinical team for behavioral problems were collected in Schools #1, #2 and #3. In School 1, data on referrals to special education during the training year were compared with data from the previous year. The data showed declines that paralleled the decrease in disciplinary referrals, a drop of 30 to 11, or 63% reduction. Data on referral rates to special education were collected in Schools #2 and #3 during the training year in both of these schools and those rates were compared with the previous year's data, yielding a 31% drop.

Fostering Increases in Academic Achievement

School achievement data on standardized reading tests administered to all schools in the school system were used as measures of academic achievement. During the school year prior to the initiation of the professional development program in School #1, 27% of the students in that school scored at or above grade level on the California Test of Basic Skills, administered annually to all students in the school system beginning in the third grade. In the year immediately following the training, 35.3% of the students in School #1 scored at or above grade level. The increase of 8.3% of children reading at or above grade level was substantially higher than the 3.5% average increase for that school district as a whole across its 15 elementary schools. In fact, it was also the first time in six years that reading scores in School #1 had improved.

Reading scores for Schools #1, #2 and #3 at the end of the second training year were compared with the remaining twelve elementary schools in the district. The percentage of children reading at or above grade level in the three schools that received the professional development program increased from 28.8% to 32.3%. During the same period, scores for the remaining twelve schools declined from 39.2% reading at or above grade level to 37.7%. Despite the fact that the district had allocated the same level of resources for literacy development in all 15 elementary schools, the three schools that received the professional development program improved five percentage points beyond the other schools. Indeed only two of the twelve schools in the comparison group improved their performance during the same time period.

Improving School Climate

As a consequence of the professional development program, tangible changes in school climate in Schools #1, #2, and #3 were noted. Observational data supplied by the principals characterized the nature of these changes: (1) teachers treated children with greater respect; (2) there was less "backbiting" among teachers than had occurred in previous years; (3) the faculty seemed less stressed; (4) teacher-paraprofessional teams functioned more consistently and more effectively with regard to classroom management; (5) itinerant teachers saw positive changes in the school environment; and (6) clinical staff interacted with teachers in a broader context as resource personnel.

It is important to note that the changes in school climate occurred even though not every teacher had adopted the program. Principals reported that about one-third of the teachers attempted the program and dropped it within a day or two, claiming that it was not effective. Another third attempted to implement the behavioral program, stopped, and then resumed it, sometimes for several iterations. A final third of the teachers implemented the program and stuck with it for the duration of the school year. The principals were questioned as to why some teachers believed that the program was unsuccessful. They responded that those teachers who saw the program as a failure were seeking total and immediate elimination of the inappropriate behaviors they were trying to improve. When the behaviors were not extinguished immediately, the teachers concluded that the program was not viable. Other teachers who kept coming back to the program were more willing to accept a gradual reduction in inappropriate behavior rather than a total and sudden elimination, as a criterion for success. Changing classroom behavior of whole classes or individual students requires that teachers examine their use of reinforcement and punishment and the provision of incentives to foster engagement of students in the change process. For teachers who had the patience to work with the program, results were evident.

Implications

The findings of this professional development program confirmed what researchers and teachers typically say about classrooms - that successful behavior management is a critical prerequisite for successful academic instruction. Less time spent on managing behavior translates into more time available for instruction. This finding is supported in the literature: "Effective classroom management is required if students are to benefit from any form of instruction, especially in inclusive classrooms where students display a wide range of diversity [Jones & Jones, 2001]" (Smith, Polloway, Patton & Dowdy, 2004, p. 42).

As a result of this professional development program, disciplinary referrals and behaviorally-based special education referrals declined substantially. When teachers were provided with the skills to manage disruptive behavior, they referred fewer students for special education. In reviewing the referrals to special education that did occur over the intervention period, it was noted that the nature of these referrals shifted from primarily conduct-based referrals to more academically-based referrals that were skill specific. Clearly children who need special education services should be referred for special

education evaluation and placement. All too often however, once children are referred for special education evaluation, the number of students found to need services is extremely high. While the goal is that students who truly need special education get those services, the problems inherent in the assessment/evaluation process especially related to children from diverse backgrounds may result in students being placed in special education incorrectly because they have not had the opportunity to develop the prosocial and proacademic behaviors required for success in school. Pre-service teachers and novice teachers need to acquire the dispositions and knowledge necessary to develop social skills, on-task time, and rule following behaviors in children in very directive ways, so as to maximize student performance in general education classrooms and decrease special education referrals.

While all three schools in the study demonstrated improvement on the variables targeted for intervention, School #1 showed greater improvements than Schools #2 and #3. This may be due in part to the fact that School #1 was trained by itself over 7 half-day sessions, while Schools #2 and #3 were trained together over 5 half-day sessions the following year. In all three schools, the number of available staff development hours was determined apriori by the school system; no additional funds or times were provided for additional training. This was a true limitation of the study because while the intervention curriculum was covered during the allotted times during both training years, additional time for questions, content integration and shared faculty discussion were limited. Moreover, training two schools together in comparison with training one school by itself could have negatively impacted on the comfort level teachers experienced when sharing concerns regarding their teaching and management and made teachers reticent to address the group during the training.

Finally, the role and reputation of the principal as a leader and respected colleague could have also had an impact on the performance of each of these schools. School #1's principal was highly regarded by the staff, attended all training sessions and actively participated throughout the program. In School #1, the principal was a "high approval" administrator, dispensing praise to staff for decreased disciplinary referrals and improvements in the climate and operation of the school building. In contrast, while the principals of Schools #2 and #3 supported the program and encouraged the staff to participate, they did not actively participate in the sessions themselves. It would seem that the active participation of the principal in this type of school-wide intervention may be a critical variable.

Using this school-wide approach to improving behavior impacted significantly on school climate and highlighted the roles clinical personnel can play in supporting school change. Clinical personnel met more often with groups of teachers to discuss reinforcement programs for whole classes as well as individual students with special needs. The gap between "in-classroom personnel" (teachers and paraprofessionals) and "out of classroom personnel" (clinical psychologists and social workers) was bridged by this positive intervention program.

The professional development program highlighted in this article recognizes the importance of creating school communities rich with approval and opportunities for success. Interactions between teachers and students that are characterized by high approval can contribute to a successful instructional program and a positive school climate, which can yield the types of academic and behavioral gains described in this work.

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Resistance Is Not Futile: An experimental analogue of the effects of consultee “resistance” on the consultant’s therapeutic behavior in the consultation process: A replication and extension

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Abstract

In the school system, school psychologist serves a role as consultant to teachers in regard to children’s behavioral problems (Bergan & Kratochwill, 1990). The defining feature of children’s success is plan implementation (Bergan & Kratochwill, 1990). For school psychologists, ensuring consistent and accurate implementation of behavior strategies and tactics is the defining feature of successful treatment (Piersel & Gutkin, 1983). Failure to implement is commonly referred to as treatment integrity. Based on our previous review of the research (Cautilli, Tillman, Axelrod, & Hinline, 2005), we concluded that treatment integrity goes beyond successful training procedures to the need for a behavioral analysis of the consulting relationship- in particular the area referred to as resistance. We propose that effective consultation consists of a repertoire of skills based on principles of behavior analysis for promoting effective action within the consultation relationship. However, this model is seriously hindered by the lack of such a functional analysis. This study presents an experimental analogue of resistance in the consultation process. Using an ABAB reversal design, the experimenter measured the ecological effects of teacher resistant behaviors on consultant therapeutic behavior. The results of the study found that participants decreased therapeutic questioning in response to consultee’s resistance. In addition, teacher resistance also led to increased missed sessions by the consultant and greater negative perceptions of the consultee by the consultant.

Key Words: Consulting relationships, functional analysis, resistance, treatment integrity.

Introduction

Resistance can be defined as anything that a client or consultee does that impedes progress (Wickstrom & Witt, 1983). What is termed resistance in consultation can have serious implications for treatment integrity (Wickstrom, Jones, LaFleur & Witt, 1998). Resistance to change in verbal therapies and consultation is a phenomenon that has substantial representation (Cautilli & Santilli-Connor, 2000; Patterson & Chamberlain, 1994) with some early representation within the behavioral literature (e.g., DeVoge & Beck, 1978; Skinner, 1957). Resistance appears to interest a broad spectrum of clinicians both behavioral (e.g., Lazurus & Fay, 1982; Munjack, & Oziel, 1978; DeVoge & Beck, 1978) and non-behavioral (e.g., Mandanes, 1981) in orientation.

In one study, Patterson and Forgatch (1985) explored the impact of therapist behavior (the independent variable) on client resistance (dependent variable). These researchers used an ABAB experimental design and observed the resistance displayed by parents in parent training for two conditions. The baseline involved the therapist using verbal behavior to convey “support” or “facilitate” (short statements indicating attention or agreement). In the treatment phase, the behavior of the therapist was to “confront” and “teach.” Resistance was measured by a coding system developed by Patterson and colleagues (Chamberlain, Patterson, Reid, Kavanagh, & Forgatch, 1984) which identified as resistant such

behaviors as talking over/interrupting, challenging / confronting, negative attitude, “own agenda,” not tracking as resistant. As was predicted by the model, teaching and confronting led to increases in resistance, while facilitate and support led to decreases in resistance.

In Patterson’s model, resistance serves three main functions: (a) it reduces the amount of confrontation and teaching the consultee receives; (b) it increases the number of sessions needed to bring about therapeutic change; and (c) it reduces the therapists’ “liking” for the consultee. Patterson and Chamberlain (1994) found in cases where the mother’s resistance decreased, greater gains were evident in parental discipline. In addition, regression analysis showed that decreasing “resistance” lead to more teaching of the parents and, in turn, decreases in future arrests of the child. Thus, through a decade of research, this line of research has shown that therapist behavior can lead to an increase in client resistance (Chamberlain & Patterson, 1994; Patterson & Forgatch, 1985). This resistance follows a struggle-with-and-work-through pattern (Patterson & Chamberlain, 1994; Stoolmiller et al., 1993). That is, parents become resistant to using the techniques offered by the behavior therapist until they begin to experience the benefit of those techniques in the child’s behavior. At the point of the techniques success, the parent’s begin to reverse their resistance becoming more complaint. Stoolermiller and colleagues (1993) found that resistance mediates parent training effectiveness in which parents who do not experience a reduction in resistant behaviors acquire less parenting skills. In addition to acquiring fewer skills, these parents’ children experience more arrests in the future (Patterson & Chamberlain, 1994).

In education, consultation is a primary form of prevention (Albee & Ryan-Finn, 1993). As a service delivery model, consultation has considerable research to support its effectiveness in both reducing behavioral problems and enhancing academic performance (Bergan & Kratochwill, 1990). With efforts to ensure that children are not left behind, schools are turning to evidenced-based pre-referral interventions such as consultation.

In addition to the above, behavioral consultation utilizes evidenced based and functional interventions. These interventions are scientifically based and meet the criteria for scientifically based instruction. A growing interest in schools is in the use of scientifically based practices as the basis for multiple gating models for prevention and intervention. This model is often referred to as the response to treatment model. In the response to treatment intervention model it fits as a tier two prevention procedure (Stewart, Martella, Merchant-Martella, & Benner, 2005). Tier two procedures are designed for children who are at risk of reading problems. Since reading and behavioral problems covary (Stewart et. al. 2005) then it is critical for school psychologists to serve as effective problem solvers.

This study attempts to give this point further scrutiny by observing whether the same factors occur in the parallel relationship between consultant and consultee. Thus, the conclusion from Patterson and colleagues is that client resistance lessens therapist effectiveness by lessening therapist attempts to engage in effective response classes such as “teaching behavior,” “identification and analysis of problems,” and “confrontation of the consultee.” It is likely that the consultant is terminating therapeutic response classes negatively reinforces resistant behaviors in the consultee. In addition, resistance is a positive punisher to the consultant’s therapeutic verbal interventions. This project attempted to assess whether resistance serves the same function in the consulting relationship with the teacher. Thus, the authors explored whether the teacher’s resistant behaviors serve to lessen the consultants’ identifying and analyzing problems, teaching effective solutions and confronting the consultee. It was the authors’ hypothesis that teachers engage in resistant behaviors to lessen therapeutic behaviors on the consultants part. Specifically, these behaviors consist of identifying problems, analyzing problems, teaching how to perform interventions and confronting of the consultee.

This study also attempted to provide more direct experimental evidence than offered by statistical analysis and correlation. This study serves as a replication of Cautilli, Riley-Tillman, Axelrod, and Hineline (2006) and it extends the results by look at the integrity data (i.e., if the teachers were resistant in the resistant phase). In addition, we added a Likert scale to determine if resistance effected consultant perception of consultee. Direct graphical analysis may be the signs of a more mature science then statistical analysis (Smith, Best, Stubbs, Archibald, Robertson-Nay, 2002). This paper proposed to perform a direct experimental manipulation of consultee's behavior to identify its effects on the behavior of the consultant. Studies that bridge findings from principles studied in basic research to applied areas can have important implications for the process involved in clinical phenomena (Wacker, 2003).

Methods

Participants and setting

Four school psychology students from a large inner city university served as the participants for this study. All students had some formal training in behavioral consultation as members of a doctoral program in school psychology. All participants were paid \$5/session. The consultations occurred on the campus of the University in the library. The teachers chose sites convenient for the participants.

Procedure

Experimenters

The experimenters for the study were the first author and an assistant. After each session, the experimenter sent all tapes to Accurate Business Services (ABS) for transcription. ABS transcribed each tape and then the author coded each tape. The author coded all of the transcript interactions with interrater reliability checks performed by the assistant. Through workshops and coursework, the author has had training in behavioral consultation and the consultation coding system. The assistant had similar training. The assistant was blind to the phases of the study.

Instructions

The author gave the participants the instructions "You are involved in a study of the consulting process. We are especially interested in the dynamic of the consulting relationship." This form stated that they were serving as consultants to a teacher on a classroom problem and limited consultation to approximately 12 sessions. They were encouraged to use the consulting skills that they had learned in the courses that they had in their graduate program.

The Teacher and process

The experimenter used two teachers for the study, one man and one woman. The teachers were actual teachers but also be confederates for the study. The experimenter instructed the teacher to discuss a child's behavior in their classroom. The teacher remained compliant for a specified number of sessions. This means they produced data when asked by the participants to do so. In addition, they completed homework assignments that participants given them to fill out. After achieving a stable baseline, the teachers became non-compliant with any suggestions for the next four sessions. Several behaviors such as stating, "That will never work" and "This is all crap anyway" in response to suggestions or outright

statements of refusal. Another tactic frequently employed was talking over the consultant and speaking about an unrelated topic. All sessions were taped and scored for inter-observer agreement.

Inter-observer agreement

The experimenter calculated the inter-observer agreement between his coding and the coding of the assistant on four-tape transcript by tape transcripts. The experimenter randomly chose four sessions and compared (two baseline phases and two treatment phases) to assistant scoring. The experimenter scored agreement scored if both coders score the item the same. The experimenter scored disagreement if the two score differently. Of the 127 statements compared 108 agreed. Using the (equation of agreements / agreements + non-agreements) multiplied by 100, to calculate the percent of agreement. Thus, 85% coding agreement occurred between author and assistant.

Measures

The Consultant Analysis Checklist- All sessions were reviewed and coded for their effectiveness by Bergan's task analyzed scale of consultation verbal behavior (see Bergan & Kratochwill, 1990) - the consultant analysis checklist (CAC). In addition, the number of change statements (i.e., requests or suggestions of interventions that might solve the problem), the experimenter scored as therapeutic statements. The CAC is a task analysis of consultation and gives a specific list of the types of verbal behavior usually required to achieve the purpose of a given consultation interview. The first step in coding with the CAC is to code the number of observations on the transcript of the interview. Because the CAC only codes the verbalization of the consultant, the experimenter coded only those verbalizations and numbered them on the transcript. To code the CAC, one simply enters a line for an utterance beside the appropriate description of the utterance on the list. If a second emission of the verbal behavior occurs in that session, we coded its line next to the first one and so forth. When an utterance did not correspond to a number on the list, the coder does not code it. Thus, the coding system gave the experimenter a basis for discriminating therapeutic statements from non-therapeutic statements.

Other Codes- In addition to codes on the CAC, the author used codes from previous studies for resistance such as teaching or re-teaching a particular skill and confronting the consultee. These codes allow for a more dynamic and interactive assessment of consultant behavior.

Independent Variable

The teacher's resistant behaviors, such as making statements like "I can't do ..." or "That won't work" or teacher making own agenda statements, served as the independent variable for the study versus making accepting statements.

Dependent Variable

The number of statements made in which the consultant engaged in problem identification, analysis and evaluation behaviors identified on the CAC (Bergan & Kratochwill, 1990), as well as the number of statements that the consultant engaged in teaching and confronting were measured as the dependent variable for the study.

Design

This study used five reversal (A/B/A/B design) designs. We compared the behavior of each participant during the no intervention condition, or baseline condition, to the participant's behavior during the experimental condition. After the initial baseline, in which the teacher was cooperative the teacher became resistant. After the initial resistance, we initiated the withdrawal phase. In this phase, teacher returned to being cooperative. After this condition, we had the teacher reinstate resistant behaviors.

Each participant had approximately 12-14 sessions with the teacher. Sessions occurred one time /week, and the participant determined the amount of time that each session lasted. The sessions ran approximately 5-20 minutes. The teacher made an excuse to leave if sessions went more than 20 minutes. This approximates the real life consulting relationship, where consultants meet with teachers weekly and time with teacher is a critical factor. The experimenter recorded missed sessions as breaks on the graph.

A-phases. In each of the A- phases, the teacher engaged in highly compliant verbal behavior. The teacher appeared to follow the consultants suggestions and give the consultant positive feedback about the way the interventions are working. The consultants believed that the teachers were carrying out their interventions. Each A-phase varied but never lasted for more than four sessions. These phases served as baseline data for comparison.

B-phases. In each of the B-phases the teacher engaged in four sessions where each of the consultants, therapeutic statements was met with statements such as "I won't or I can't ...X" and engaged in other resistant behavior such as talk over and going off and speaking about off topic Participants. These were the experimental phases and the experimenter contrasted their results with the baseline phases above to determine if an effect exists.

Evaluating the Teacher's perception in each phase

The experimenter collected qualitative data in the form of a Likert rating collected from the participants regarding their perception of the sessions with the teacher after each session. Due to some miscommunication during the first few sessions, the experimenter asked only three of the four participants to fill out an evaluation form of their perceptions of the teacher after each session.

Procedural integrity

To ensure that the teacher implements the phases correctly each session, the experimenter coded the behavior of the teacher (see Table 2, which is a variant of the coding system used by Chamberlain, et. al., 1984 changed to look at consultation rather than therapy sessions). After coding the experimenter reviewed the scores to ensure that sessions marked as cooperative have low rates of resistance and sessions marked as resistant have high rates of resistant behavior. For example, in resistant sessions the teacher is truly resistant.

Of the 62 sessions conducted, the experimenter reviewed eight sessions for procedural integrity. This represented approximately 13% of the sessions. The experimenter randomly chose two sessions were from each phase. As table 3 suggests, the absolute number of statements varied greatly by session. It is clear that sessions in the resistant phase were resistant and the sessions in the cooperative phases were cooperative.

Results

The author employed a reversal design. Thus, the author implemented this design, which involves the sequential application and withdrawal of the independent variable (in this case the teachers resistant behaviors). In interpreting the data, we draw attention to the fact that a stable baseline occurred for all participants.

Table 1 summarizes the rates of therapeutic behavior and the standard deviation of those rates by participant and by session. For participant one, see figure 1, the mean rate of therapeutic behavior during baseline was 26.6 with a standard deviation of 4.49. In the first resistance phase, the mean rate of therapeutic statements was 2.33 with a standard deviation of 2.05. In the return to baseline phase, the mean rate of therapeutic behavior was 29.75 with a standard deviation of 5.17. In the reapplication of resistant behavior, the mean rate of therapeutic statements dropped to 1.66 with a standard deviation of .94.

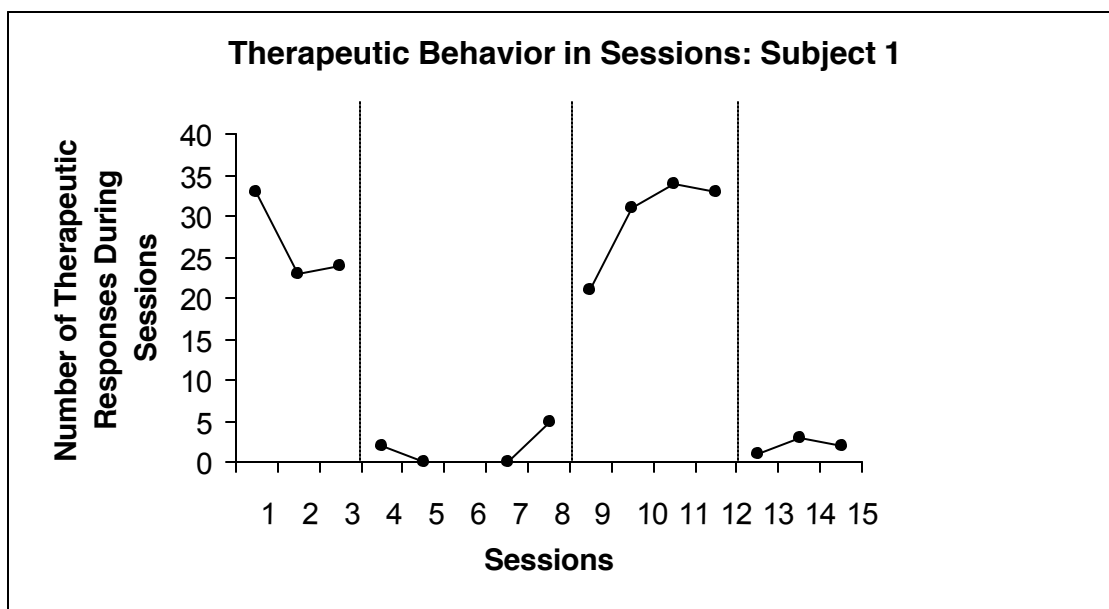


Figure 1 The number of therapeutic statements made during the session for participant 1

Table 1 Summary of Change in Phases

Subject	Phase 1 mean and standard deviation	Phase 2 mean and standard deviation	Phase 3 mean and standard deviation	Phase 4 mean and standard deviation
Subject 1	Mean- 26.6 SD- 4.49	Mean- 2.33 SD – 2.05	Mean- 29.75 SD 5.75	Mean – 1.66 SD- .94
Subject 2	Mean- 15.33 SD- 1.69	Mean- 1.25 SD- 1.09	Mean- 7 SD- .82	Mean 1 SD- 0
Subject 3	Mean- 16 SD- 5.10	Mean- 2 SD- .82	Mean – 13.33 SD- 6.90	Mean- 3 SD- 1.699

Subject 4	Mean- 32.33 SD- 1.699	Mean- 4 SD- .82	Mean- 27.33 SD- 3.09	Mean 5.33 SD- 1.89
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For participant two, see figure 2, the mean rate of therapeutic behavior during baseline was 15.33 with a standard deviation of 1.69. In the first resistance phase, the mean rate of therapeutic statements was 1.25 with a standard deviation of 1.09. In the return to baseline phase, the mean rate of therapeutic behavior was seven with a standard deviation of .82. In the reapplication of resistant behavior, the mean rate of therapeutic statements dropped to one with a standard deviation of zero.

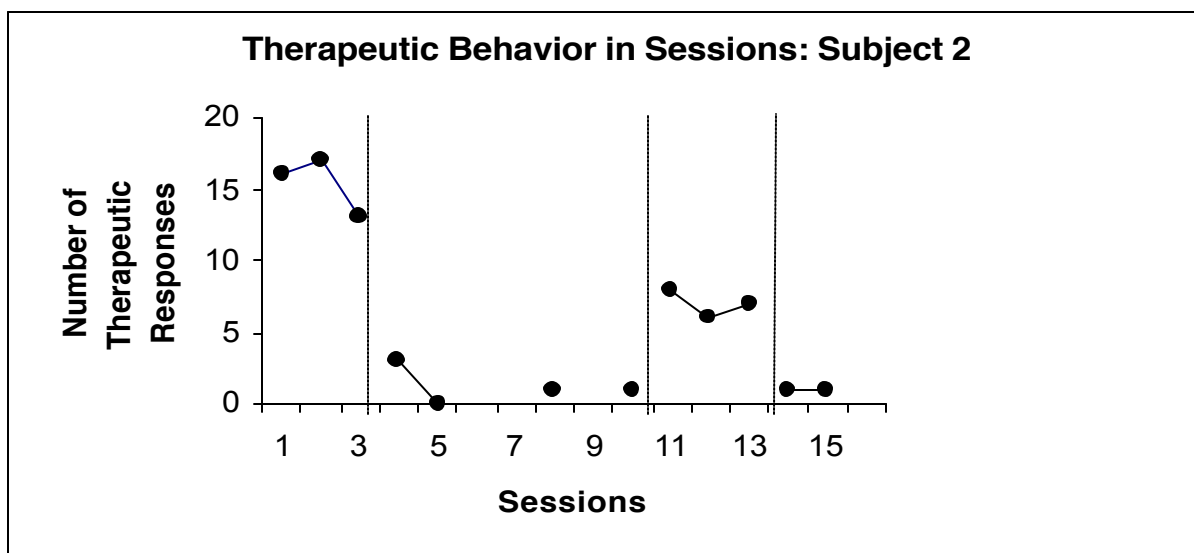


Figure 2 The number of therapeutic statements made during the session for participant 2

Table 2 Likert Scale of teacher's perception

Question	Mean Score Phase 1 & SD	Mean Score phase 2 & standard deviation	Mean score phase 3 & standard deviation	Mean score phase 4 & standard deviation
1. The teacher is a warm and caring person	Mean= 4.66 SD= .47	Mean = 4 SD= .43	Mean = 4.36 SD= .48	Mean = 4.1 SD= .33
2. The teacher is skilled in dealing with this child	Mean= 4.11 SD= .31	Mean= 3.77 SD= .42	Mean = 4 SD= 0	Mean = 3.33 SD= .67
3. Overall this is a highly competent teacher	Mean= 4.61 SD = .50	Mean = 4.22 SD= .42	Mean= 3.44 SD= .31	Mean= 3.44 SD= .68
4. Overall I feel very effective with this teacher	Mean= 4.22 SD= .42	Mean= 3.42 SD= .50	Mean= 3.78 SD= .42	Mean= 3.33 SD= .82
5. I believe that	Mean= 4.56	Mean = 4	Mean = 4	Mean= 3.56

consultation can help with this students' problem behaviors

SD= .50 SD= 0 SD = .63 SD= .50

For participant three, see figure 3, the mean rate of therapeutic behavior during baseline was 16 with a standard deviation of 5.10. In the first resistance phase, the mean rate of therapeutic statements was two with a standard deviation of .82. In the return to baseline phase, the mean rate of therapeutic behavior was 13.33 with a standard deviation of 6.90. In the reapplication of resistant behavior, the mean rate of therapeutic statements dropped to three with a standard deviation of 1.64.

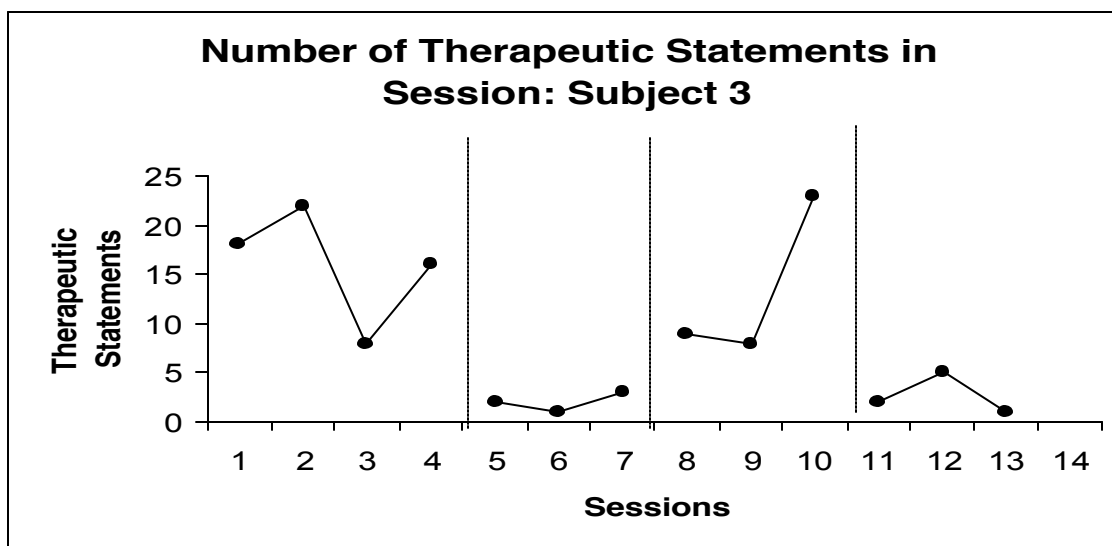


Figure 3 The number of therapeutic statements made during the session for participant 3

Table 3 Missed sessions by Phase

	Phase I	Phase II	Phase III	Phase IV
Total Missed sessions/ Total sessions in Phase	0/16	6/23	0/17	2/17
Percentage missed	0%	26%	0%	12%

For participant four, see figure 4- the mean rate of therapeutic behavior during baseline was 32.33 with a standard deviation of 1.699. In the first resistance phase, the mean rate of therapeutic statements

was four with a standard deviation of .82. In the return to baseline phase, the mean rate of therapeutic behavior was 27.33 with a standard deviation of 3.09. In the reapplication of resistant behavior, the mean rate of therapeutic statements dropped to 5.33 with a standard deviation of 1.89.

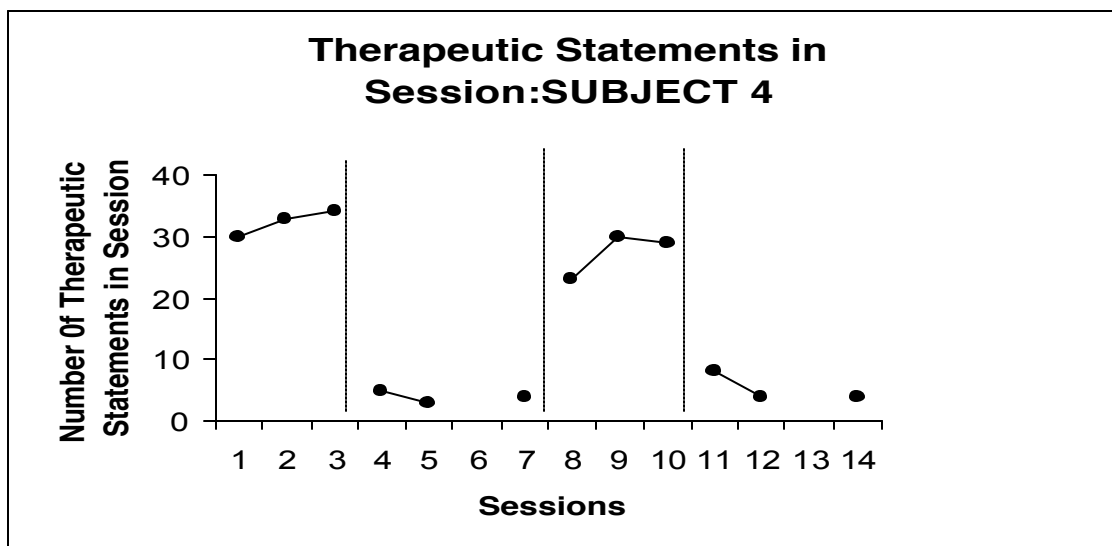


Figure 4 The number of therapeutic statements made during the session for participant 4

Table 4 Intervention Integrity Sampling

<i>Number of resistant and cooperative statements Phase 1</i>	<i>Number of resistant and cooperative statements Phase 2</i>	<i>Number of resistant and cooperative statements Phase 3</i>	<i>Number of resistant and cooperative statements Phase 4</i>
Subject 1 session 1 119 cooperative statements about child 0 resistant statements	Subject 3 session 5 0 Cooperative statements about child 89 resistant statements	Subject 2, session 7 125 cooperative statements about child 3 resistant statements	Subject 3, session 12 1 cooperative statements about child 102 resistant statements
Subject 2 Session 2 79 cooperative statements about child 3 resistant statements	Subject 4 session 4 2 cooperative statements about child 119 resistant statements	Subject 4, session 8 96 cooperative statements about child 12 resistant statements	Subject 1, Session 12 0 cooperative statements about child 63 resistant statements

One way to determine participants' interest in the study is to look at the number of sessions missed. Table 3 describes the missed sessions- none of the sessions missed were due to the teachers. Missed sessions broke down as follows participants missed no sessions in phase one, six sessions in phase two, no session in phase three and two sessions in phase four.

In an overall look at the participants' perception of the teacher and themselves in the study, the author found again interesting results. In Table 2, for question 1 the mean is 4.66 with a standard deviation of .47 in phase 1. In phase 2, the mean is four with a standard deviation of .43. In phase three, the mean is 4.36 and the standard deviation is .48. In phase four, the mean is 4.11 and a standard deviation is .33.

For question number 2, in phase 1 the mean is 4.11 with a standard deviation of .31. In phase 2, the mean was 3.77 with a standard deviation .42. In phase three, the mean is four with a standard deviation of zero. In phase four, the mean was 3.33 with a standard deviation of .67.

For question number 3, in phase 1 the mean was 4.6 with a standard deviation of .50. In phase 2, the mean was 4.22 with a standard deviation of .42. In phase three, the mean was 4.11 with a standard deviation of .31. In phase 4, the mean was 3.44 with a standard deviation of .68.

For question number 4, in phase 1 the mean was 4.22 with a standard deviation of .42. In phase 2, the mean was 3.4 with a standard deviation of .50. In phase 3, the mean was 3.78 with a standard deviation of .42. In phase 4, the mean was 3.33 with a standard deviation of .82.

For question 5, phase 1 the mean was 4.56 with a standard deviation of .50. In phase 2, the mean was four with a standard deviation of zero. In phase 3, the mean was four with a standard deviation of .63. In phase 4, the mean is 3.56 with a standard deviation of .50.

Discussion

This study supports the view of resistance serving an escape function for the consultee and having aversive qualities for the consultant. In each phase of resistance, the consultee suppressed the consultant's therapeutic talk. In behavioral terms, resistance punished therapeutic talk. In addition, resistance took a toll on the consultant. The consultant was more likely to not attend the sessions in resistant phases and was more likely to rate both themselves and the teacher in a less favorable fashion. Accordingly, resistance functions to escape consultants' therapeutic statements and questions related to the child. These extended effects of resistance are consistent with the animal studies on escape and avoidance (Herrnstein & Himeline, 1966).

Resistant behavior has both immediate suppressive effects and it would appear for the participant a more long-term effect on perception. Even this short termed study suggests that resistance experienced over the course of the consultant's career could have more lasting and profound effects with respect to job enjoyment and perception of self. Studies that bridge findings from principles studied in basic research to applied areas can have important implications for the process involved in clinical phenomena (Hastings, 1999; Wacker, 2003).

Interestingly enough, the behavior analytic literature would suggest that one intervention that consultants should be taught would be to block verbal escape and make verbal escape contingent on task completion (i.e., verbally stating the information needed). This intervention bears a striking resemblance to the "struggle with and work through intervention" often heralded by the psychoanalysts. However, whither

or not this would correspond to actual changes in the consultee's behavior with the child is a different question but one that could be empirically tested.

The effectiveness of the suggested "struggle with and work through intervention" could be analogue tested in a similar fashion to this study. Using a multiple baseline design across Participants, the experimenter could instruct teachers to remain resistant through the study. After several sessions of resistance, the experimenter could train one consultant participant in "struggle with and working through intervention" method and see if it forces the confederate teacher to stay on task greater. In one session, of this study the participant tried to refocus the confederate teacher back on task and was able to increase the teachers talking about the participant to a minimal extent (see participant one session 6 and participant 5, sessions four and seven).

The logical follow up to this study would be to see what naturalistic methods were used by consultants to get teachers to remain on task in the resistant analogue conditions; however, one problem with this is that there were so few attempts to redirect teachers back to task that the data set of interventions would be limited.

Another interesting finding was that while therapeutic behavior resurfaced in later sessions when the teacher became cooperative again, it did not return to previous levels. This finding was quite unexpected and might suggest that the aversive quality of resistance might have a more long-term effect on consultants than initially thought.

Conclusion

Behavior analysts can study resistance within the behavioral tradition, as a form of operant punishment. This view of resistance offers a focus on function. The function of resistance appears to be to suppress therapeutic behavior on the part of the consultant. This effect creates a bi-product where the consultant views both themselves and the consultee in a less favorable light.

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Family Mode Deactivation Therapy Results and Implications

Jack A. Apsche & Christopher K. Bass

Abstract

This article highlights the inclusion of Mode Deactivation Therapy as a treatment modality for families in crisis. As an empirically validated treatment, Mode Deactivation Therapy has been effective in treating a wide variety of psychological issues. Mode Deactivation Therapy, (*MDT*) was developed to treat adolescents with disorders of conduct (Apsche, Bass, Murphy 2004), personality (Apsche, Bass, Murphy, 2004), as well as sexual and physical aggression (Apsche & Bass, 2005). *MDT Family therapy (Apsche & Ward)* was developed to implement *MDT* methodology within the family system.

Keywords: Mode Deactivation Therapy, *MDT*, *MDT Family Therapy*, Conglomerate of Beliefs and Behaviors, (*COBB*), fear-family assessment, family core belief assessment.

Introduction

Historically, Cognitive Behavioral Therapists have attempted to identify and address both distorted schemas and maladaptive behavior patterns in family interactions (*Dattilio, Epstein, Baucom, (1998)*). According to Dattilio cognitive-behavioral therapists interview the family to determine their perceptions of the family and how things operate in the home environment. In addition, the Cognitive behavioral family therapist views the entire family as a case, avoiding the stigma of one individualized patient/client.

Epstein (1986) found that negative exchanges by individual family members increase the overall family distress. Dattilio et. al., (*1998*) suggested that the cognitive behavior family therapist pays attention to the antagonistic exchanges between individual family members. Dattilio further suggested the cognitive behavior family therapist pays attention to the following:

- 1) Frequencies and patterns of antagonistic/discordant behavior exchanges.
- 2) Expressive and listening skills for communicating thoughts and feelings.
- 3) Problem solving skills.

Dattilio, et. al. (*1998*) also stated that similar to system theorists, cognitive behavior family therapists “carefully focus on the ‘process’ of family interactions.”

MDT Family Therapy also examines the “process” of family interactions, (*Apsche, Ward, (2003)*), although *MDT* attempts to move the family to a new script of the family based on the collective case conceptualization process, (*Apsche, Ward, (2003)*).

Unlike Multisystematic Therapy, (*Henggeler, Schoenwald, Borduin, Rowland and Cunningham, (1998)*) which focus the youth as embedded in the multiple system that have a basic direct and indirect influences on the youths behavior, *MDT* focuses on the system as a collective of a system of family beliefs and modes based on the collective and individual modes.

MDT also suggests that any basic CBT would be implemented on the individual adolescent, client, (*Henggeler, et. al. (1998)*). *MDT* is a process that focuses first on the adolescent following the completion of the family core conceptualization, then the family. *MDT* includes a family workbook and exercises which helps to reintegrate the troubles youth and his family and extended family.

To avoid the individualized stigma, Apsche & Ward (2004) created the MDT Family fear and belief assessment to determine the collective family case conceptualization. This allows the MDT therapist to interpret his/her treatment approach as stemming from an empirically derived methodology.

MDT Family Therapy is designed as an extension of the MDT Methodology for Adolescents (Apsche & Ward (2004). MDT Family is not designed for implementation as a separate methodology.

Method

MDT Family Therapy was implemented with three families in an out patient setting. Families had pre treatment averages of 6 arguments per week, 5 acts of aggression toward objects, 8 acts of physical aggression and 25 threats per week.

The first author met and conducted MDT Family Therapy with immediate family members in office for one-two hours per week for 6 weeks.

Application of MDT-Family

The MDT family was initiated by implementing the Family MDT assessments. The Family MDT assessments resemble the individual MDT assessments.

1).***The fear-family assessment:*** is an assessment of sixty items that identifies basic difficulties, anxieties, or fears of the family. Each family member completed the assessment individually and the scores were totaled and a mean score was determined across each item.

2).***The Family Core Belief Assessment:*** is an inventory of ninety-six questions related to the familiar belief systems. The Family Core Belief Assessment was scored in the same manner as the Family Fear Assessment.

3). ***The Functionally Based Treatment Development Form*** is a form that addresses the collective family beliefs and supplies the family a specific methodology to develop and maintain more functional family beliefs.

The family was taught how to balance its beliefs with the **V-C-R** method. V-C-R is a methodology of *validation*, *clarifying* and *redirecting* the belief of the family. While there may be some identification of opposing beliefs, this method attempts to expose the irrational, illogical beliefs deeply held by families in crisis. The individual components of the V-C-R method included:

Validation. Each family member's thoughts and beliefs were validated initially. Therapists searched for grains of truth in each family member's responses. It was important to assure each member that his/her responses were accurate as far as his/her interpretation of his/her perceptions. Each member was given appropriate reinforcement that (s)he was certain that (s)he fully understood and believed. Caution was used not to create triangulation.

Clarification. Therapists clarified the content of responses. Therapists also clarified the beliefs that were activated. It was important that clinicians understand and agreed with the content of the clarification. The Clarification step was crucial in understanding the long held thinking schemas. This was clarification of the member's perspective or reality and beliefs.

Redirection. Therapists redirected responses, to view other possibilities or the continuum of held beliefs. The goal of this step was to help the family member find the exception in the belief system. The

redirection involved examining the opposite side of the dichotomous or dialectical thinking. It was crucial to partner with the member to see the “grain of truth” in each of the dichotomous situations presented.

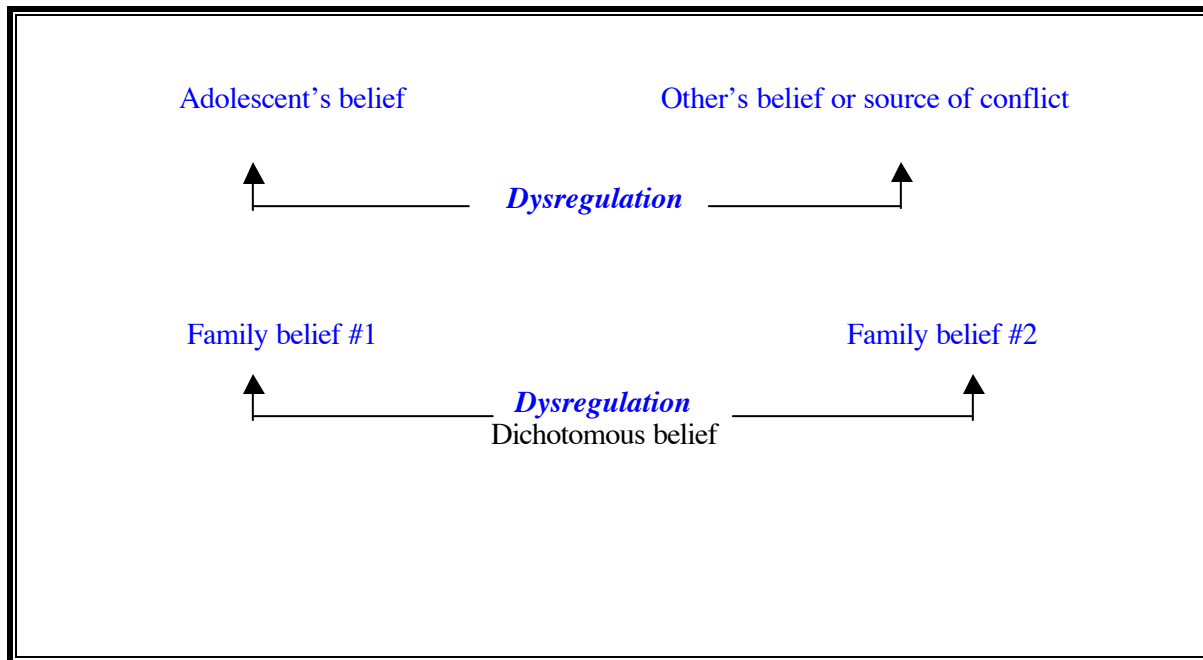


FIGURE 1: Diagram of the Dysregulation process.

Figure 1 highlights the direction of the dysregulated belief system. The redirection was an attempt to aid the youth and family member in seeing both sides of the dichotomous belief(s). Also, important was to look for the truth in each and compromise in understanding the truth in both beliefs. The use of a continuum of belief was implemented to examine the individual's belief of truth in both of the dichotomous beliefs and situation.

Each individual in the family, as well as the family collectively completed the Conglomerate of Beliefs and Behaviors, (*COBB*). The *COBB* examined each individual's belief as well as their corresponding behaviors. Once the families Beliefs and Behaviors were determined they were compared to each individual's beliefs and behaviors.

These methodologies addressed the specific behaviors of each family member and contrasted it to the family at large's score. The behaviors were explained and understood as the individual integrated their beliefs and behaviors within the family system at large.

CHART 1: Family Beliefs, Behavior and subsequent behavior.

Beliefs held by adolescent	Direct Behavior	Sibling reaction	Mother	Conclusion
“Whenever I hurt emotionally I will do whatever it takes to feel better”	Self Mutilation	Isolate	Yell and “put things right.”	Things go back to “normal”
	Wait for the pain to go away	Wait for the pain to go away		Continuation of illogical belief schema.

If we look at this example of the client’s behavior, he cuts or hurts him, his isolated, the mother would, “put things right”, yet as a family they said they waited for the “pain to go away” and things will go “back to normal.” “Normalcy” was a continuation of illogical belief schema which in time would be the catalyst for a new cycle of self mutilation in the future.

The work of the MDT therapist was to implement V-C-R with the family while pointing out and balancing the individual and family beliefs.

Results

MDT Family Therapy was implemented with three families in an out patient setting. The results suggest that MDT reduced arguments, aggressions, both verbal and physical. The results suggest that MDT might be an effective methodology for treating the families of the adolescent. Important in the data, is the reduction of all of the family’s target behaviors. Argument’s were antecedents of more serious problems and the reduction of argument from 6t per week to .45 per week suggests that argument’s served as a trigger to aggression and violence in this limited study. *N=3 out patient families.*

CHART 2: Pre and Post treatment totals on Arguments, Aggression toward objects, Aggression toward Self or others and Threats.

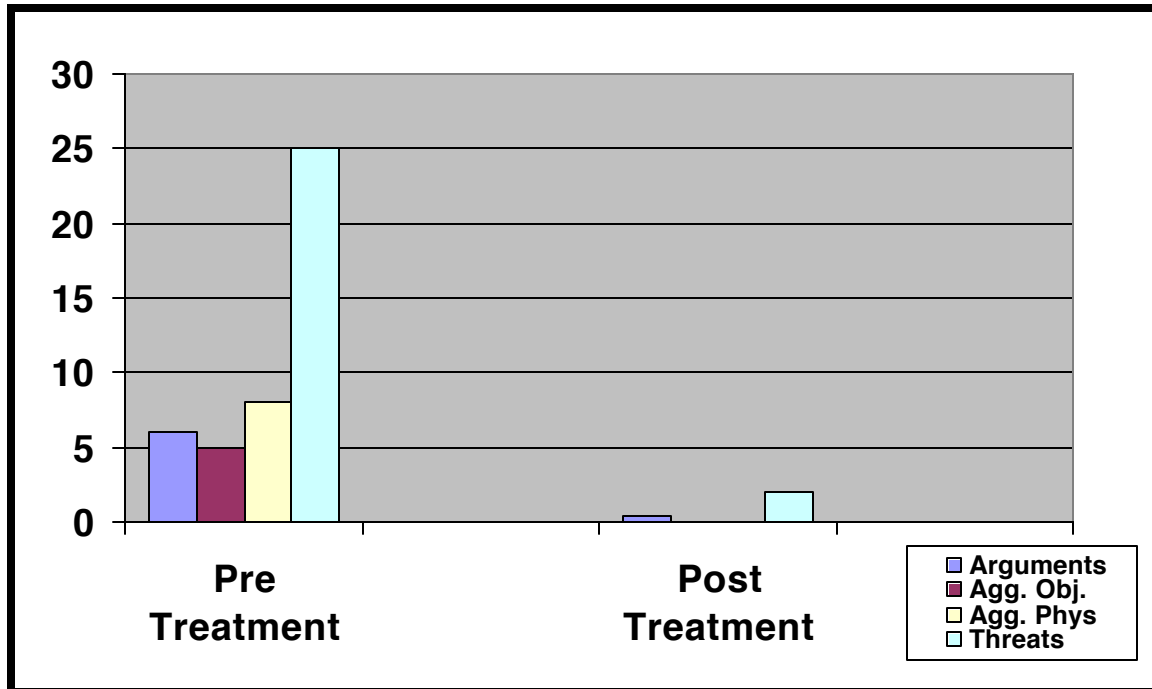


CHART 3: Pre and Post treatment totals on Arguments, Aggression toward objects, Aggression toward Self or others and Threats

Condition	Pre-baseline totals	Post-baseline totals Treatment
Arguments per week	6	.45
Aggression Destroying objects per week	5	0
Physical aggressions	8	0
Threats per week	25	2

Threats were also interpreted as an antecedent to the more violent family behaviors and the reduction of threats suggest that hypothesis might have some validity. The overall reduction of physical destruction and aggression were significant to opening more appropriate and desired means of family communication.

Discussion

This study was limited in scope and design. It was intended to serve the function as a description of a promising treatment result. Many of the limits of this paper are apparent. There were only three families and there were no random assignments of families to either treatment or control group. There was no control group. These results suggest that MDT family may be a viable extension of MDT for adolescents. Their methodology deserves further study and might be helpful if developed into a full family therapy methodology.

It is hoped that the family MDT might become an evidenced based treatment for troubled adolescents and their family. There are no claims from this study other than it appears to be a promising clinical methodology at this point.

The MDT Family Workbook is merely a prototype at this point and is being updated and reviewed for a possible additional study. The author wants to that the families that were reviewed in this article as they have taught me that there is much to learn from these troubled adolescents and their families.

Summary

The development of Family MDT remains a great challenge. Often the family units are not in tact. We must learn to help the adolescent to identify extended families and to help them succeed through intensive training and psychotherapy. MDT might be a useful tool in this process, in that it extend the adolescent's skills from MDT treatment to the entire family. It allows the family to identify beliefs and to balance their beliefs, as well as learn to support each other through the VCR process. The VCR process allows the family member to accept things as they are and to look at the process of MDT as an alternative solution. The MDT family process changes the families failed scripts and to move out of their misery and helplessness to a new script supplied thru MDT.

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A Review and Empirical Comparison of Three Treatments for Adolescent Males With Conduct and Personality Disorder: Mode Deactivation Therapy, Cognitive Behavior Therapy and Social Skills Training

Jack A. Apsche & Christopher K. Bass

Abstract

This research study compared the efficacy of three treatment methodologies for adolescent males in residential treatment with conduct disorders and/or personality dysfunctions and documented problems with physical and sexual aggression. The results showed that Mode Deactivation Therapy, an advanced form of cognitive behavioral therapy based on Beck's theory of modes, was superior to Cognitive Behavioral Therapy and Social Skills Training in reducing both physical and sexual aggression. At the same time, Mode Deactivation Therapy was the only treatment of the three that significantly reduced sexual aggression for these youth. The results also showed that MDT was superior to CBT and SST in reducing external and internal psychological distress as measured by DSMD and CBCL.

Key words: CBT, MDT, Social Skills Training, Conduct Disorder, Aggression.

Introduction

Adolescents with conduct disorders and personality traits have proven to be extremely difficult to conceptualize and treat effectively. Many of these youth typically come from deprived environments with multiple stressors and often extensive histories of physical, emotional and sexual victimization and neglect. As a group, conduct disordered youth present with an complex array of recurrent behavioral problems, including aggression, bullying, violence, intimidation, delinquency, rule violations, recklessness, property destruction, callous disregard for others, substance abuse, sexual abuse and other disruptive and anti-social behaviors (Kazdin and Weisz, 2003). In fact, the prevalence rate for conduct disorder is 6% to 16% for males under age 18 and it is one of the most frequent problems diagnosed in outpatient and inpatient mental health programs. Moreover, 80% of these youth are likely to meet criteria for psychiatric disorders in the future (Kazdin and Weisz, 2003). For example, a longitudinal study by Johnson, Cohen, Brown, Smailes, and Bernstein (1999) showed a clear connection between childhood maltreatment and the development of cluster B personality disorders in later adolescence. Moreover, conduct disorder is by far the most frequent psychiatric diagnosis given to youth involved in the juvenile justice system with rates as high as 81% to 91% of incarcerated youth (Boesky, 2002).

Dodge, Lochman, Harnish, Bates and Petti (1997) have contributed a useful distinction between two types of conduct disordered youth: "Reactive aggressive" youth show extremely strong emotional responses to perceived threats and then react aggressively. The second type, "proactive aggressive" youth, initiate or use violence and aggression in an instrumental fashion to gain an objective or "pay-off." The former category appear to share a common characteristic pattern of "emotional dysregulation," in which the youth is overwhelmed by a sudden surges of intense emotions, sensations and irrational thoughts that are occur in combination and are disproportionate to the situation. Koenigsberg, Harvey, Mitropoulou, Antonia, Goodman, Silverman, Serby, Schopick and Siever (2001) found that many types of aggression, including self-destructive behavior, are linked to the personality

disordered traits of affective instability and impulsivity (i.e., emotional dysregulation). Our research and clinical experience with violent and sexually aggressive youth suggests that this common phenomenon of “emotional dysregulation” is the same process that Aaron Beck (1996) has described as “modes” and that treatment must be modified to accommodate and address this process in order to be effective.

Need for Effective Treatment

Given the prevalence of conduct disorders and its major contribution to juvenile crime, societal violence, delinquency and sexual violence, there is a urgent need for effective treatment methods for such youth. While Kazdin and Weisz (2003) delineates some evidence-based treatment practices for children with Conduct Disorder, the same has been not achieved for adolescents over 14 years old. In recent years, Multisystemic Treatment has shown promise for antisocial youth (Henggeler, Schoenwald, Borduin, Rowland and Cunningham, 1998) and for adolescent sex offenders (Swenson, Henggeler, Schoenwald, Kaufman, and Randall, 1998), but it requires a resource-rich combination of services, one of which is psychotherapy, and it is not a realistic option for most such youth. Cognitive behavioral therapy (CBT) is widely employed in the treatment programs for behaviorally disordered youth across many settings and is frequently used with aggressive youth and adolescent sex offenders. But there are clear limits to the effectiveness of CBT in the treatment of personality disordered clients, especially borderline and narcissistic types (e.g., Young, Klosko and Weishaar, 2003).

Apsche and his colleagues developed an advanced form of cognitive behavioral treatment called “Mode Deactivation Therapy” (Apsche and Ward Bailey, 2004a) in order to simultaneously address the multiple problems issues of conduct- and personality-disordered youth, while also accommodating the particular defensive characteristics of the adolescent. Mode Deactivation Therapy (MDT) has been applied to adolescent sex offenders and mentally ill adolescents alike. MDT is an evidence-based treatment that blends key elements from Beck’s theory of “modes” (Beck, 1996); traditional Cognitive Behavioral Therapy and Schema Therapy (Alford and Beck, 1997; Beck and Freeman, 1990); Dialectical Behavior Therapy (Linehan, 1993); and Functional Analytic Behavior Therapy (Kohlenberg and Tsai, 1993; Nezu, Nezu, Friedman and Haynes, 1998).

Beck’s Theory of “Modes”

Recognizing that his earlier model of cognitive schemas was inadequate to explain a number of psychological problems, Beck (1996) introduced the concept of “modes” in his article, “Beyond belief: A theory of modes, personality and psychopathology.” Beck conceives of “modes” as sub-organizations of the personality, which are comprised of integrated networks of cognitive, affective, motivational and behavioral components, that have developed through experience as an “automatic” response to particular types of situations, notably perceived threats (Beck, 1996; Apsche, 2004). Thus, modes are consistent, coordinated, self-protective response systems for an individual, which are controlled by schema. Moreover, modes are charged (or “cathected”) such that some schemas are more intensive and powerful than others in driving responses to perceived threat.

In Beck’s theory, when an individual is faced with a perceived danger or potential threat, his orienting schema can activate a dysfunctional “mode” with all its simultaneous aspects – a particular conglomerate of beliefs, emotions, motivation, and behavior (Apsche, 2004). Dysfunctional modes are typically characterized by high levels of anxiety, fear, irrational thoughts and feelings, and aberrant behaviors. Further, “modes” are self-reinforcing and maintained by a group of fundamental beliefs. For this population, individuals have developed maladaptive orienting schemas and modes as protective strategies in response to their traumatic and abusive life experiences. Originally these modes were

useful survival strategies that protected the individual from distress and threat, but they have become ingrained, virtually automatic, maladaptive responses.

As repeated victims of various trauma, neglect and abuse, these youth are ultra-sensitive to learned experiential cues, often unconscious, that signal danger and vulnerability. Alford and Beck (1997) refer to this phenomenon in describing how the schema that typify personality disorders operate on a more continuous basis and are more sensitive to triggering events. Hence, such individuals are always ready to defend and/or attack at the first sign of perceived danger. In short, when faced with a perceived risk of victimization/vulnerability, such individuals are unable to override the primal, automatic “mode” response by employing cognitive controls because they are instantaneously flooded with powerful feelings, sensations and fear.

Mode Deactivation Therapy (MDT)

Mode Deactivation Therapy is designed to disrupt (“de-activate”) the pre-established maladaptive cognitive/affective/motivational/behavioral response set (“mode”) that is automatically triggered by the situational occurrence of the orienting schema. For example, a youth has the orienting schema that, “You can’t trust anyone because you will be betrayed” and he is in the situation of developing more closeness with a peer or staff person in the treatment program. For this youth, his orienting schema would trigger a maladaptive “mode” in which the youth may become anxious, have intense physiological sensations, have paranoid thoughts that the person is “out to get me” and start to withdraw or act aggressively.

Apsche and his colleagues in numerous studies have repeatedly found that traditional cognitive behavioral therapy was not adequate to the instantaneous, primal and extremely powerful effects of maladaptive “modes” with conduct disordered and personality disordered adolescents. Similarly, in using CBT with Axis II disorders, Young, Klosko and Weishaar (2003) found that personality-disordered clients, especially borderline and narcissistic, continue to experience significant emotional distress following treatment. Apsche observed that most aggressive and sexually aggressive youth tend to lose control with such sudden primal intensity that they are unable to tolerate the traditional procedures of cognitive restructuring. Moreover, cognitive behavioral therapy itself needed to be modified to accommodate the adolescent’s natural developmental sensitivities to resisting authority in the therapeutic relationship.

Consequently, Apsche and his colleagues blended methods from three proven treatment models – Cognitive Behavioral Therapy, Dialectical Behavior Therapy, and Functional Analytic Behavioral Therapy – to create an advanced form of cognitive behavioral therapy called “Mode Deactivation Therapy” (MDT).

Elements from Cognitive Behavioral Therapy: As described above, the term “mode de-activation” itself derives from Beck’s (1996) term “modes” and uses his cognitive behavioral theoretical formulation of “modes.” MDT shares the basic tenets of classic cognitive behavior therapy, including “Schema Therapy,” which holds that internal schemas are at the core of the personality disorders (Young, Klosko and Weishaar, 2003). MDT agrees that aberrant behavior derives from dysfunctional schema that trigger “modes,” but it takes a radically different approach to correcting such schema. Unlike cognitive therapy, MDT does not directly challenge the irrationality of the orienting schema by “arguing” the concepts of cognitive distortions. Even when the therapist has a good rapport, such youth are acutely sensitive to the power dynamic of being in a one-down position. Given their histories of victimization, they typically have serious difficulties with interpersonal trust. Challenging the reality of a youth’s beliefs and perceptions is negatively experienced as an attack on his esteem, his world-view and his fragile sense of self. Developmentally, such youth perceive the cognitive therapist

as another adult trying to impose their authority and force him to change. Adolescents bristle and respond poorly to direct cognitive corrections – even when such interventions seem to be delivered in the most gentle and collaborative fashion. Cognitive therapy then, as it is normally practiced, can trigger a negative response that undermines progress (Apsche and Ward Bailey, 2004a).

Elements from Dialectical Behavior Therapy: To accommodate this developmental and clinical barrier to traditional cognitive therapy, MDT uses two key principles from Dialectical Behavior Therapy (Linehan, 1993), which was originally developed to treat extremely unstable and volatile patients with severe personality disorders. Dialectical Behavior Therapy (DBT) uses the technique of *radical acceptance* in which the therapist elucidates and validates the unique “truth” in each individual’s perceptions. Rather than directly challenging the validity or empirical support for the youth’s beliefs and perceptions, MDT uses radical acceptance in fully validating the “grain of truth” of the individual adolescent’s beliefs based on his life experiences and trauma history. The goal is to join with the youth in order to discover how the belief system is a legitimate reflection of the youth’s life experience, relationships, sense of self and world view. Subsequently, given radical acceptance and increased trust, the therapist can use the therapeutic relationship as well as the youth’s direct experiences in the treatment program to show how beliefs can be modified based on corrective therapeutic experiences. MDT also adopts the technique of *balancing* from Dialectical Behavior Therapy. This is an interactive method of introducing increasing flexibility or balance in the individual’s rigid and maladaptive dichotomous (either/or) beliefs by redirecting the person to considering a continuum of truth or a continuum of possibilities.

Elements from Functional Analytic Behavioral Therapy: MDT also incorporates principles from Functional Analytic Behavioral Therapy (Kohlenberg and Tsai, 1993). First, MDT aligns with FAB in affirming that perceptions of reality and unconscious motivations evolve from past contingencies of reinforcement, such as families of origin. Second, MDT uses an assessment and Case Conceptualization method that combines elements from Beck’s (1996) case conceptualization and the Factor Analytic Behavior Therapy model of Nezu, Nezu, Friedman and Haynes (1998). The assessment and case conceptualization procedure concentrates on core beliefs, fears and avoidance behaviors that are reflective of the Post-Traumatic Stress Disorder and developing personality disorders (see Apsche and Ward Bailey, 2003, 2004b, 2004c).

Unique Qualities of MDT

One crucial difference between Mode Deactivation Therapy and Cognitive Behavioral Therapy is that the core beliefs (or schemas) of the individual are *not* seen and challenged as dysfunctional because this action necessarily invalidates the person’s life experience. Instead, in MDT, core beliefs are consistently validated as legitimate creations from the person’s life experience (no matter how irrational and even if they have little more than a tiny “grain of truth”), which are then “balanced” through the collaborative therapeutic process to deactivate the maladaptive mode responses.

Another difference between MDT and CBT is that MDT uses the “balance the belief” technique to remediate the youth’s emotional dysregulation. MDT also uses a validation, clarify, technique (VCR). The VCR, uses unconditional acceptance and validation of the youth’s cognitive unconscious, or out of awareness learn experience. Given the youth’s background and history MDT espouses that he is exactly where and how he should be as a person with his history. The clarification offers an alternative explanation of the youth’s circumstances and history, as the redirection measures the “youth possible acceptance” of a slightly different belief.

MDT also includes a series of mindfulness exercises that are specifically designed for these adolescents. Exercises incorporated within the client workbook designed to allow the youth to practice

the technique which helps ensure trust, reduce anxiety and increase commitment to treatment as it helps develop mindfulness skills for the youth. These exercises are then translated into brief, safe relaxation exercise to promote awareness of where the youth is with his emotions and feelings. MDT mindfulness is a crucial part of the methodology.

The present study was designed to assess the effectiveness of Mode Deactivation Therapy (MDT) as compared to Cognitive Behavior Therapy (CBT) and Social Skills Training (SST) in the treatment of conduct disordered and personality-disorder youth with problems of aggression and sexual aggression.

Method

Sample Characteristics

A total of 60 male adolescents participated in the study. All subjects were referred to the same residential treatment facility for the treatment of aggression and/or sexual aggression. In this study, subjects were randomly assigned to one of the three treatment conditions at the time of admission based on available openings in the caseload of the participating clinicians. The three treatment conditions showed similarity in terms of the frequency of Axis I and Axis II diagnoses, age, and racial background. To ensure consistency in the delivery of the two respective treatments, therapists were specifically trained in the one of the three treatment curriculums/methods. The average length of residential treatment across all conditions was roughly 11 months.

Condition one: Cognitive Behavioral Therapy (CBT): A total of nineteen male adolescents were assigned to the CBT condition. The group was comprised of 14 African Americans, 4 European Americans and 1 Hispanic American with an average age of 14.5. The principal Axis I diagnoses for this group included Conduct Disorder (14), Oppositional Defiant Disorder (4), and Post Traumatic Stress Disorder (7). Axis II diagnoses for the group included Mixed Personality Disorder (4), Borderline Personality Disorder (2), Narcissistic Personality Disorder (1) and Dependent Personality Disorder (1).

The particular CBT methodology used for this group employed a published treatment curriculum and workbook system for adolescent sex offenders called "Thought Change" (Apsche, 1999, Apsche, Evile and Murphy, 2004). This structured treatment program is specifically designed for personality disordered and conduct-disordered youth with psychosexual disturbances and high levels of aggression and violence. Components of this psycho-educational treatment curriculum included daily recording of negative thoughts, cognitive distortions, cognitive restructuring, sexual offense patterns and beliefs, aggressive patterns and beliefs, mood management, dysfunctional beliefs, taking responsibility, mental health maintenance, substance abuse issues, and victim empathy.

Condition two: Mode Deactivation Therapy (MDT): A total of twenty-one male adolescents were assigned to the MDT condition. The group was comprised of 15 African Americans, 5 European Americans and 1 Hispanic American with an average age of 16.5. The principal Axis I diagnoses for this group included Conduct Disorder (15), Oppositional Defiant Disorder (2), Post Traumatic Stress Disorder (7), and Major Depressive Disorder, primary or secondary (5). Axis II diagnoses for the group included Mixed Personality Disorder (6), Borderline Personality Traits (3), and Narcissistic Personality Traits (2). The MDT condition used the methodology described earlier in this paper.

Condition Three: Social Skills Training (SST): A total of twenty male adolescents were assigned to the SST condition. The group was comprised of 14 African Americans, 4 European Americans and 2 Hispanic American with an average age of 16.1. The principal Axis I diagnoses for

this group included Conduct Disorder (17), Oppositional Defiant Disorder (3), Post Traumatic Stress Disorder (5). Axis II diagnoses for the group included Mixed Personality Disorder (4), Borderline Personality Traits (1), Narcissistic Personality Traits (1), and Avoidant Personality Traits. The Social Skills Training program included identification and reinforcement of appropriate behaviors, target skill identification, modeling, practicing skills, and role playing. The youth in this condition were encouraged to practice skills and were reinforced by shaping and fading procedures. All staff and therapists were trained and supervised in SST by a doctoral level psychologist. All skill training was performance based and evaluated each individual (Henggeler, Schoenwald, Borduin, Rowland and Cunningham, 1998).

Axis I	CBT	MDT	SST
Conduct Disorder	14	15	17
Oppositional Defiant Disorder	4	2	3
Post Traumatic Stress Disorder	7	7	5
Major Depression	0	5	0
Axis II			
Mixed Personality Disorder	4	6	4
Borderline Personality Traits	2	3	1
Narcissistic Personality Traits	2	2	1
Dependent Personality Traits	1	0	0
Avoidant Personality Traits	0	0	1
Race			
African American	14	15	14
European American	4	5	4
Hispanic/Latino American	1	1	3
Total	19	21	20
Average Age			
	16.5	16.5	16.1

Measures

The key measures of physical and sexual aggression used in this study consisted of Daily Behavior Reports and Behavior Incident Reports. The Daily Behavior Reports were completed by all levels of staff, both professional and paraprofessional, across all settings of the residential treatment program (e.g., schoolroom, psycho-educational classes, treatment activities, residential dormitories, etc.). The Behavior Incident Reports were only completed by staff following the occurrence of serious or critical incidents, namely, acts of physical and sexual aggression. Inter-rater reliability in the use of the measures was determined by independently totaling the number of physical and sexual aggression incidents on both the Daily Behavior Report cards and the Behavior Incident Report forms and calculating the percentage of agreement. The agreement for this study was at the 98% level.

The baseline ("pre-treatment") measure of physical and sexual aggression consisted of the average number of incidents per week that occurred during the first 60 days following admission and the post-treatment measure was the rate of occurrence during the 60 day period prior to discharge.

Two assessments were used to measure the behavior of the residents, which included the Child Behavior Checklist (CBCL; Achenbach, 1991) and the Devereux Scales of Mental Disorders (DSMD; The Devereux Foundation, 1994).

The CBCL is a multi-axial assessment designed to obtain reports regarding the behaviors and competencies of 11 – to – 18 year olds. The means and standards are divided into three categories: internalizing (which measures withdrawn behaviors, somatic complaints, anxiety and depression), externalizing (which measures delinquent behavior and aggressive behavior), and total problems (which represent the conglomerate of total problems and symptoms, both internal and external).

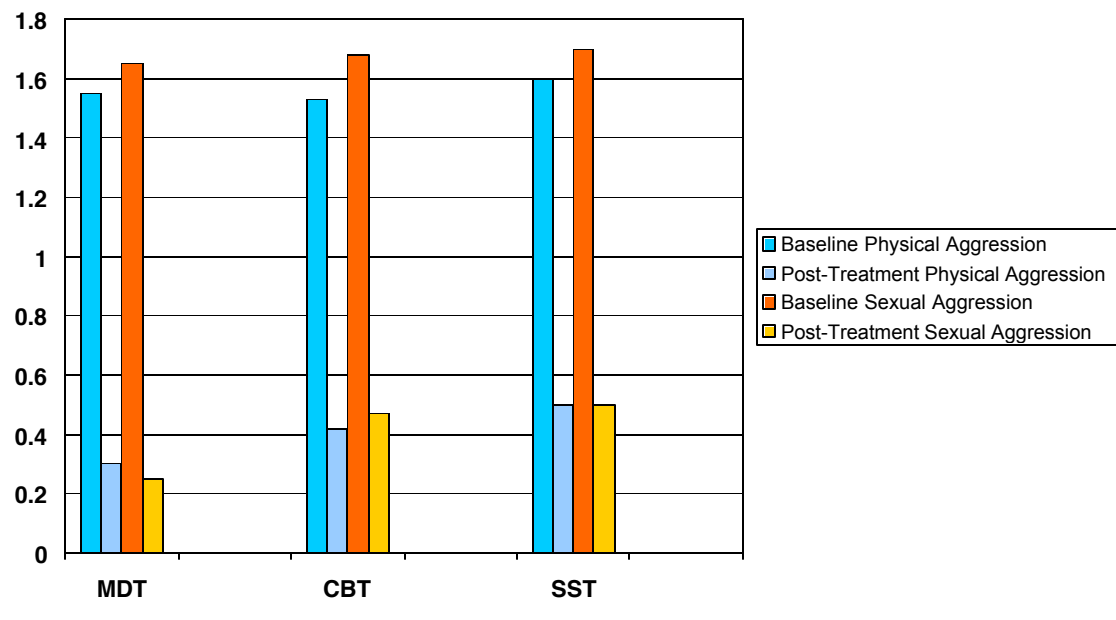
The DSMD illustrates level of functioning in comparison to a normal group, via behavioral ratings. T scores have a mean of deviation of 10; a score of 60 or higher indicates an area of clinical concern.

TABLE 2. Descriptive Statistics

Measure	Tx Type	N	Mean	Std. Dev.	Std. Error	95% confidence Interval		Min	Max
						Lower bound	Upper Bound		
Baseline Physical Aggression	CBT	19	1.53	.513	.118	1.28	1.77	1	2
	MDT	20	1.55	.510	.114	1.31	1.79	1	2
	SST	20	1.60	.503	.112	1.36	1.84	1	2
	Total	59	1.56	.501	.065	1.43	1.69	1	2
Baseline Sexual Aggression	CBT	19	1.68	.478	.110	1.45	1.91	1	2
	MDT	20	1.65	.489	.109	1.42	1.88	1	2
	SST	20	1.70	.470	.105	1.48	1.92	1	2
	Total	59	1.67	.471	.061	1.56	1.80	1	2
Post-Treatment Physical Aggression	CBT	19	.42	.507	.116	.18	.67	0	1
	MDT	20	.30	.470	.105	.08	.52	0	1
	SST	20	.50	.513	.115	.26	.74	0	1
	Total	59	.41	.495	.065	.28	.54	0	1
Post-Treatment Sexual Aggression	CBT	19	.47	.513	.118	.23	.72	0	1
	MDT	20	.25	.444	.099	.04	.46	0	1
	SST	20	.50	.513	.065	.28	.74	0	1
	Total	59	.41	.495	.065	.28	.54	0	1

Thus, the first analysis suggests that all types of treatment – Mode Deactivation Therapy and Cognitive Behavioral Therapy – had a positive effect of reducing rates of physical and sexual aggression over the course of treatment (see Table 3).

Table 3. Reduction in Rates of Physical and Sexual Aggression Across Treatment



The second analysis looked at significant differences in treatment effectiveness between the two treatment conditions. It was hypothesized that adolescent male aggressive sexual offenders would show greater improvements in terms of aggressive and sexual acting out behavior when treated with MDT as compared to CBT. To test this hypothesis, a one way analysis of variance (ANOVA) was conducted on the baseline and post-treatment measures of physical and sexual aggression. Both post-treatment physical aggression and post-treatment sexual aggression were significantly affected by type of treatment, $F(2, 56) = 8.32, p < .01$ (post-treatment aggression); $F(2, 56) = 10.02, p < .01$ (post-treatment sexual aggression).

Table 4. ANOVA -- Difference in Outcomes Between MDT and CBT						
Measure		Sum of Squares	Df	Mean Square	F	Signif.
Baseline Physical Aggression	Between Groups	.707	2	.353	1.413	.252
	Within Groups	14.005	56	.250		
	Total	14.712	58			
Post-Treatment Physical Aggression	Between Groups	3.299	2	1.649	8.316	.001
	Within Groups	11.108	56	.198		
	Total	14.407	58			
Baseline Sexual Aggression	Between Groups	.537	2	.269	1.074	.349
	Within Groups	14.005	56	.250		
	Total	14.542	58			
Post-Treatment Sexual Aggression	Between Groups	3.483	2	1.742	10.017	.000
	Within Groups	9.737	56	.174		
	Total	13.220	58			

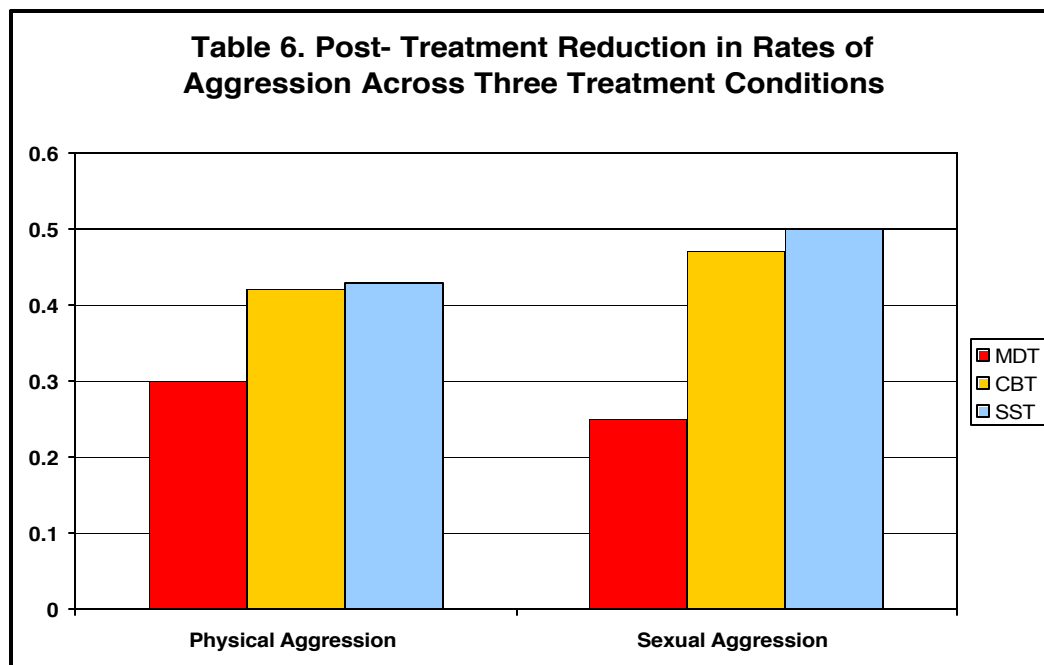
To better elucidate between-group differences in magnitude of effect, independent factorial analyses on treatment model and variable were conducted.

With an overall percent reduction of 80.7% in rates of post-treatment physical aggression, Mode Deactivation Therapy was found to be superior to Cognitive Behavioral Therapy at 72.6% and Social Skills Training at 68.8 %. The greater magnitude of effect for MDT was statistically significant compared to CBT and SST, which were not significantly different from each other.

The most dramatic difference between treatment groups was found in reduction of post-treatment rates of sexual aggression. In this instance, *only* Mode Deactivation Therapy showed a statistically significant reduction in rates of sexual aggression from baseline to post-treatment. MDT showed a reduction of 84.5% in sexual aggression compared to CBT and SST at 72.0% and 70.6% respectively. Post-treatment rates of sexual aggression were .30 for MDT and .42 for CBT, and .43 for SST. The differences were significant using an independent *T*-test comparing, CBT and MDT. The *T* test showed $T = 2.21$, $df = 39$, $p = .01$. The results clearly show that MDT produced significantly superior results when compared to CBT and SST. These differences in magnitude of effect are graphically represented in Table 6.

Table 5. Post-Treatment Scores and Percent Reduction in Types of Aggression Across Treatments

	MDT		CBT		SST	
	Post-Treatment Score	Percent reduction	Post-Treatment Score	Percent reduction	Post-Treatment Score	Percent reduction
Physical Aggression	.30	80.7%	.42	72.6%	.43	68.8%
Sexual Aggression	.25	84.5%	.47	72.0%	.50	70.6%

Table 6. Post-Treatment Reduction in Rates of Aggression Across Three Treatment Conditions

The CBCL is a multi-axial assessment designed to obtain reports regarding the behaviors and competencies of 11 – to – 18 year olds. The means and standards are divided into three categories: internalizing (which measures withdrawn behaviors, somatic complaints, anxiety and depression), externalizing (which measures delinquent behavior and aggressive behavior), and total problems (which represent the conglomerate of total problems and symptoms, both internal and external).

The DSMD uses T scores with a mean of 50 and a standard deviation of 10; any T score over 60 is considered clinically significant. The means and standards are divided into four scales and analyzed: (1) Internalizing (which measures negative internal mood, cognition, and attitude), (2) Externalizing (which measures prevalence of negative overt behavior or symptoms), (3) Critical Pathology (which represents the severe and disturbed behavior in children and adolescents), and Total (which represent the conglomerate of all scores including general Axis I pathology, delusions, psychotic symptoms, and hallucinations).

Table 7. T- scores, ranges, and standard deviations in all measures for both groups

Measure	Scale	CBT	MDT	SST
Child Behavior Checklist (CBCL) Pre-Treatment	Internal	71.43 (Range = 66 - 84)	72.57 (Range = 68 - 86)	72.45 (Range= 66-84)
	External	73.74 (Range = 66 - 86)	72.94 (Range = 64 - 86)	71.95 (Range= 68-88)
	Total	72.67	72.74	72.25
Child Behavior Checklist (CBCL) Post-Treatment	Internal	63.66 (Range = 55 - 80) SD = 10.04	51.75 (Range = 39 - 71) SD = 12.10	66.33 (Range= 58-86) SD= 8.94
	External	65.63 (Range = 52 - 82) SD = 10.76	50.04 (Range = 37 - 69) SD =11.74	69.63 (Range = 66-88) SD = 8.41
	Total	64 (Range = 52 - 84) SD = 9.24	51.00 (Range = 40 - 61) SD =10.28	67.98 (Range = 54-71) SD = 7.10
DSMD Pre-Treatment	Internal	70.5(Range = 62-84)	71.3(Range = 64- 83)	72.10 (Range = 62-84)
	External	73.1(Range = 64-86)	72.5(Range = 67- 84)	71.25 (Range = 60-86)
	Critical Path	68.7(Range = 58-88)	70.5(Range = 60- 86)	72.33 (Range = 68-86)
	Total	70.77	71.50	71.79 (Range = 62-84)
DSMD Post-Treatment	Internal	61.70(Range = 52-74)	49.70(Range = 46-56)	65.66 (Range = 58-82)
	External	57.81(Range = 52-72)	45.88(Range = 41-54)	56.86 (Range = 52-84)
	Critical Path	50.21(Range = 46-66)	46.15(Range = 42-56)	69.75 (Range = 58-88)
	Total	58.00(Range = 56-82)	46.15(Range = 40-56)	65.92 (Range = 58-86)

Mean scores on all scales are at least one standard deviation less.

At the time both CBCL and DSMD assessments, of the three groups differed significantly. Residents who participated in MDT had lower scores on all measures then did residents who engaged in CBT.

The results indicate that the mean scores the internalizing factor, externalizing factor, critical pathology, and total score for the MDT group is at or near one standard deviation below the CBT group.

Table 8. CBCL; Mean scores for MDT, CBT and SST groups Pre-Treatment

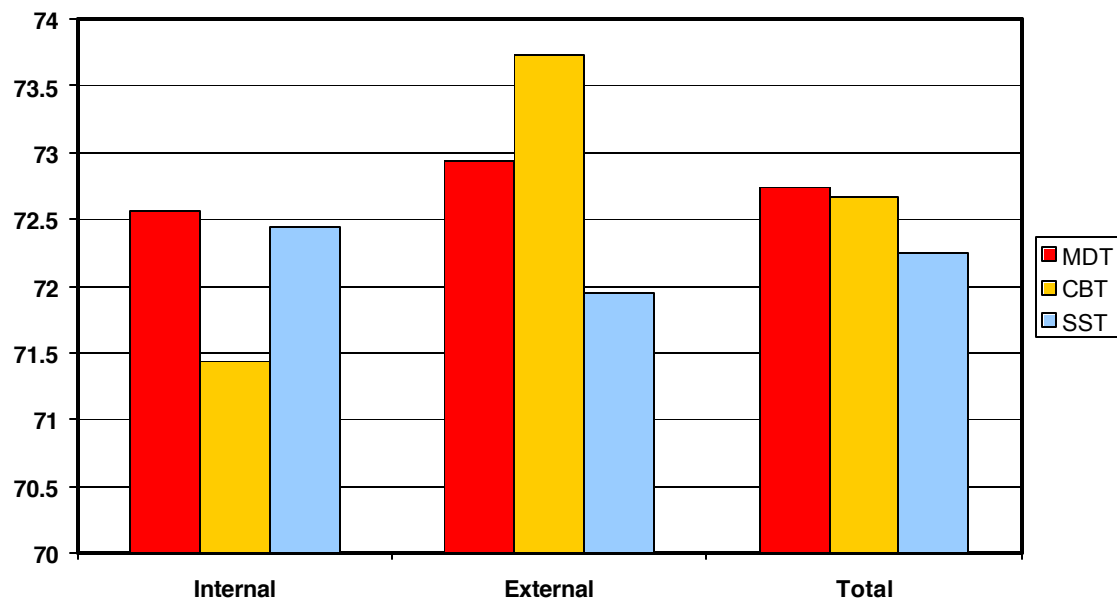
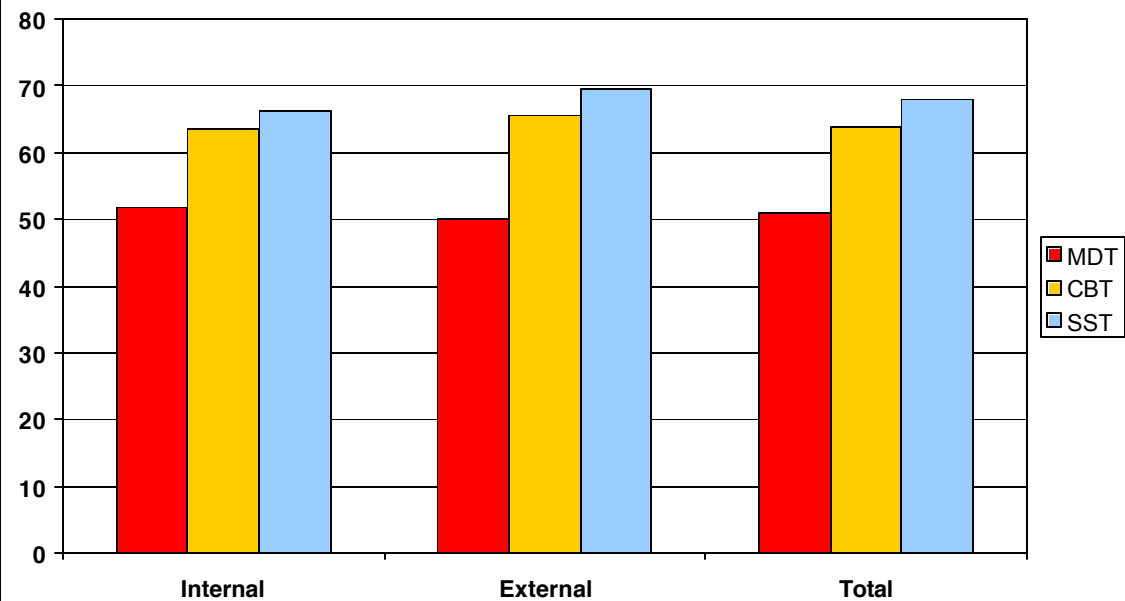


Table 9. CBCL; Mean scores for MDT, CBT and SST groups Post- Treatment



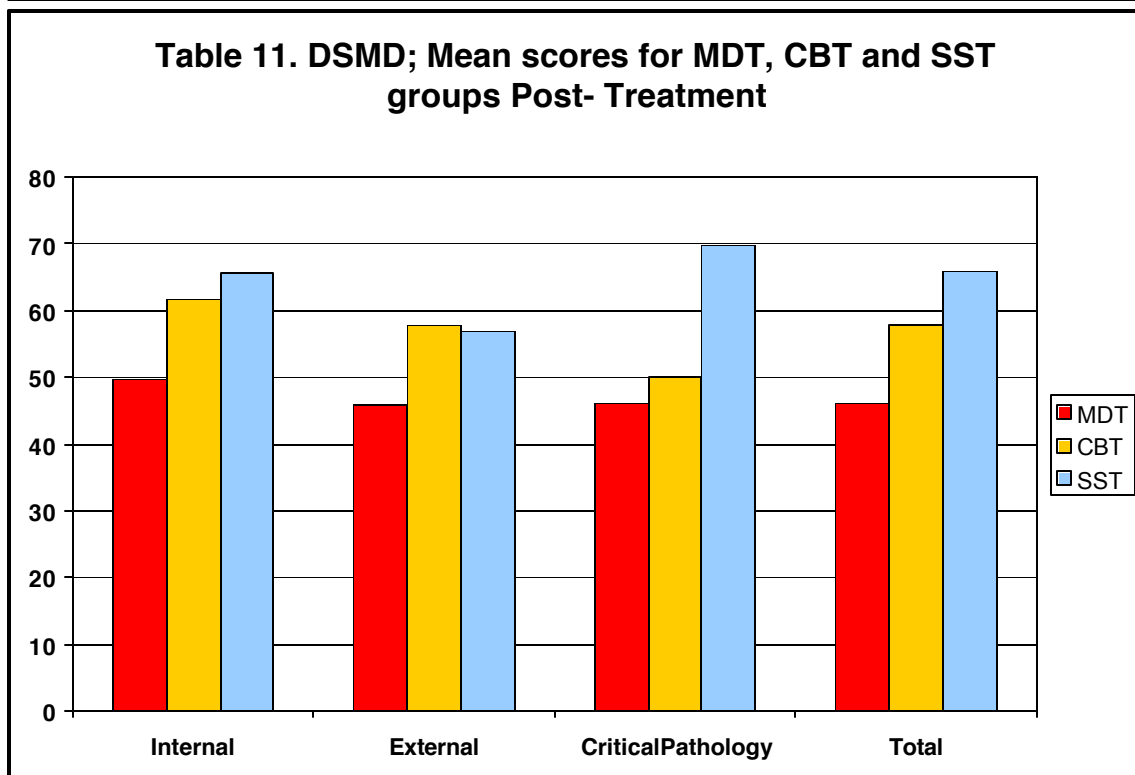
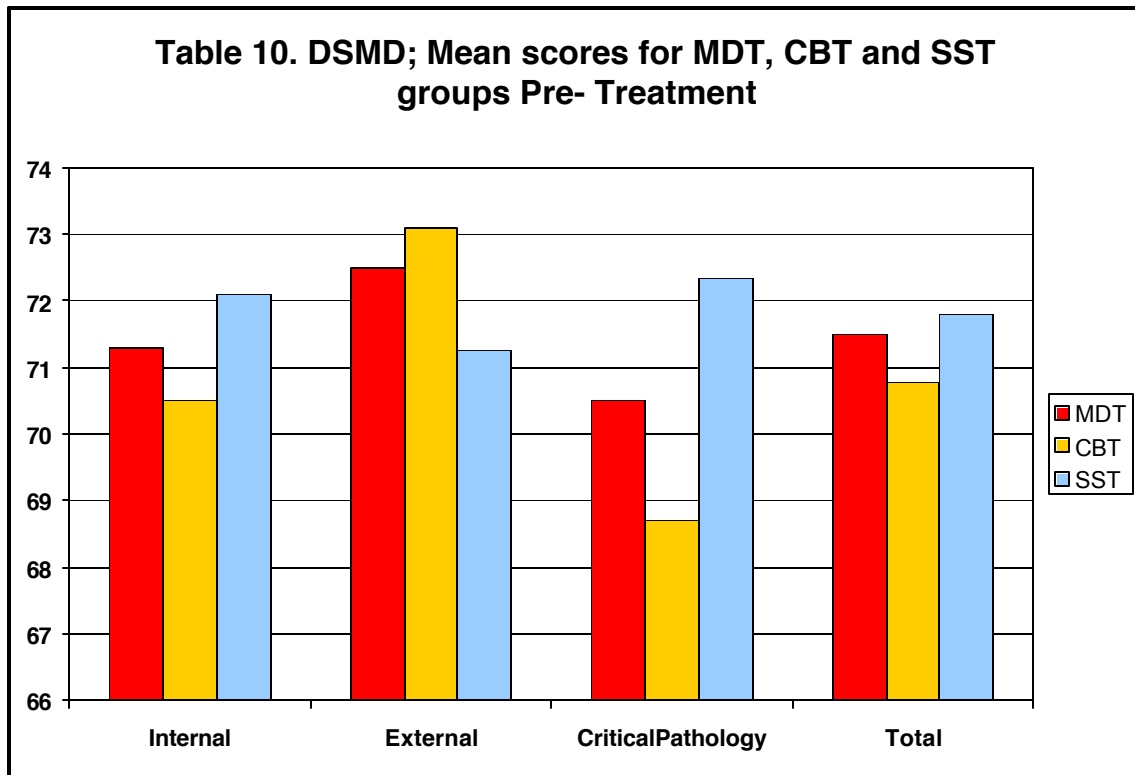


Figure 10 and 11. DSMD; mean scores for MDT and CBT groups Pre-Treatment and Post-Treatment.

Results

This research study was initiated to compare the efficacy of three different treatment methods for male adolescents in residential treatment for physical and/or sexual aggression. We began the analysis by assessing weekly behavioral reports, which indicated a number of observed sexual or aggressive acts. Once reports were compiled, statistical analysis of the results ensued. It was found that all participants benefited from treatment regardless of theoretical orientation (see table one). The baseline average rate of aggression across all groups was 1.56 with a total standard deviation of .501 and standard error of .065. There was a 74% reduction in rate of aggression to the post treatment mean of .41, with a standard deviation of .495 and standard error of .065. An independent T test was performed on the difference in means. The T-test found a significant difference between the baseline and post-treatment measures $T = 18$, $df = 39$, $p < .01$.

Further analysis was performed on the difference between baseline and post-treatment rates of sexual aggression. The baseline mean across both groups was 1.68 with a total standard deviation of .471 and standard error of .061. There was a 76% reduction in the rate of sexual aggression to the post-treatment mean of .41 with a standard deviation of .495 and standard error of .065. A One-way ANOVA was computed and indicated a significant difference, $F(2,56) = 8.32$, $p < .01$.

There was a significant difference 1SD or better, across all domains of DSMD and CBCL for the MDT group. On the DSMD the MDT total score was reduced to less than 60. This indicates that MDT reduced the score to “not of the level of clinical concern.”

On the CBCL both CBT and MDT reduced both internal and external scores. MDT scores on 1 SD or more significance than the CBT scores. These results suggest that MDT might be effective in reducing symptoms of Axis I pathology.

Discussion

The data indicates that Mode Deactivation Therapy (Apsche and Ward Bailey, 2004a) may achieve superior results to traditional Cognitive Behavioral Therapy (CBT) and Social Skills Training (SST) in reducing both physical aggression and sexual aggression in conduct-disordered and personality-disordered youth in a long-term residential treatment setting. Moreover, while both treatments were effective in reducing physical aggression, only Mode Deactivation Therapy (MDT) demonstrated a significant reduction in rates of sexual aggression. This finding suggests that the technical modifications of cognitive behavioral treatment used in MDT may be better suited to the unique developmental and clinical presentation of these behaviorally disturbed adolescents and yield superior outcomes, especially with regard to sexual abuse issues.

At the same time, several factors may limit the strength of the conclusions drawn from the outcomes. First, the results were derived in a long-term residential treatment program and may not find replication in less intensive outpatient treatment settings. Second, there are inherent difficulties in identifying “pure” diagnostic types for multiply-challenged youth such as these. While there was striking similarity in the distribution of diagnostic categories across treatment conditions (e.g. Conduct Disorder, Oppositional Defiant Disorder, Personality Disorders), exact matching by diagnosis could not be realistically achieved in this real world setting. Moreover, while all of the youth had documented histories of physical aggression and nearly all had histories of sexual aggression, it was not possible to definitively distinguish individual youth as primarily sex offenders or primarily aggressive youth nor match them accordingly across the two conditions.

As in any real world study, it is always difficult to control for the levels of competence of the participating therapists and their adherence to the “purity” of each of the three treatment methods. Best

efforts were made to control for this common problem by ensuring that therapists shared the same professional degree and level of clinical experience in each of the two methodologies and by providing training in the delivery of each model prior to the study. Training was provided by a doctorate level psychologist in both groups. The MDT group was trained by the first author and founder of MDT.

The strength of the outcomes could be further enhanced with the inclusion of additional outcome measures and, ideally, long-term follow-up of the youth who participated in the study. This study measured levels of psychological distress, including internal and external, as measured by the CBCL and DSMD. MDT demonstrated a significant decrease in all levels of behavior and Psychological distress.

It is important to note that the authors do not purport that MDT will generalize to any groups other than youngsters with conduct and personality disorders.

The authors hope that future research may use randomized trials in outpatient clinics and attempt to replicate these findings in other residential treatment facilities and with other relevant adult and adolescent populations, particularly with those identified with severe aberrant behaviors including personality disorders, conduct disorder and aggression. Thus, MDT might be considered in a future studies as a consideration to reduce problems related to Axis I disorders and internal distress.

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Educating Through the Physical - Procedures and Implementation

Eitan Eldar, Ph.D., BCBA

Abstract

The unique features of physical activity and play highlight it as a constructive context for attaining behavioral goals such as self-control and social skills. Strenuous activity, competition, adherence to rules, team play, frustration and joy are all characteristics inherent in sport that make it a perfect “school for life”. This paper presents a model of Educating through the Physical, in which behavioral goals are achieved and mastered within the context of physical activity and then generalized across other settings and individuals. It provides educators and clinicians with practical tools to design and implement movement-related lesson plans (scripts) based on functional analytic information in order to attain pedagogical and clinical objectives.

Keywords: self-control, social skills, physical education.

Participation in physical activity can contribute to psychological, cognitive and social functioning. Past research has indicated that carefully designed activities and games, can change behavior and attain positive outcomes (e.g., Ames, 1981; Bay-Hinitz, Peterson, & Quilitch, 1994; Collingwood, 1997; Cooper, 1982; Gough, 1997; Johnson & Johnson, 1985; Kohn, 1992; McKenney & Dattilo, 2001; Priest, Krause, & Beach, 1999; Sherif, Harvey, Hood, & Sherif, 1987; Staub, 1978). Play is perhaps the most natural form of human learning and what young children do when they are not eating, sleeping, or complying with the wishes of adults (Gallahue, 1989). School-aged students tend to view their Physical Education (PE) classes as a welcome break from the classroom that helps keep them fit, healthy, challenged and socially active (Browne, 1992; McKenzie, Alcaraz, & Sallies, 1994; Rice, 1988; Tannehill & Zakrajsek, 1993; Tjeerdsma, Rink, & Graham, 1996).

Furthermore, physical activity encompasses certain characteristics that are particularly dominant within this context (e.g., strenuous performance, competition, adherence to rules, etc.) while they are not inherent to other school subjects. Thus, the unique qualities of physical activity and games can serve as an enjoyable and constructive context in which students are presented with challenges and learning opportunities. Notably, the UN (2003) has recognized the unique qualities of sport education as a “school for life” that goes beyond mere teaching of physical skills. According to the special UN task force “sport provides a forum to learn skills such as discipline, confidence and leadership and it teaches core principles such as tolerance, cooperation and respect. Sport teaches the value of effort and how to manage victory, as well as defeat.” (p. 5). Consistent with this notion we present the concept of Educating Through the Physical as promoting educational objectives that are extrinsic to those of movement.

The aim of this paper is to provide educators and clinicians with practical tools to implement educational programs within the context of physical activity and play. The first part of the article presents a 5-stage model of educating through the physical. This model has been established throughout the author's 20 years of clinical experience. As part of a comprehensive effort, the main body of this paper concentrates on implementing lesson plans, as we introduce behavioral goals that can be attained and explain how to incorporate them into the curriculum. Notably, the procedures presented here are not exclusive to PE classes and they can be adjusted and applied to various intervention programs. Although many of the examples are derived from educational settings, in our clinical work we have implemented identical procedures with a single child or a small group of participants, both within and outside of school settings.

The Model of Educating Through the Physical

The model presented here is based on prearranged situations in which the target behavior is emitted in a predictable manner within a well structured and controlled curriculum (Axelrod, 1987; Iwata, Dorsey, Slifer, Bauman, & Richman, 1982/1994; Repp, Felce, & Barton, 1988; Rolider & Axelrod, 2000; Rolider & Van Houten, 1993; Skinner, 1953). The first step is to draw a clear picture of antecedents in which the target behavior is likely to occur and the consequences that tend to follow it. The functional analytic literature is rich with many strategies designed to obtain this information, which is then used to design scripts (specific lesson plans), in which the triggers associated with inappropriate behavior are incorporated, creating an opportunity for behavior change. For example, if the major context in which a problem behavior occurs is dealing with a specific cognitive demand, students will be presented with assignments, carefully planned to include manageable tasks. Level of difficulty should be gradually increased, while students' efforts are constantly supported and acknowledged. According to the model, the program is initially implemented in the context of physical activity by trained personnel. When a high level of cooperation is achieved in their presence, generalization to other important settings (e.g., other teachers, home) is addressed and assessed. It is essential to assure that the accomplished behavior change will be apparent in the presence of other people, in different places, and through time - with no stringent support. The model is presented in Figure 1, followed by a further description of its components.

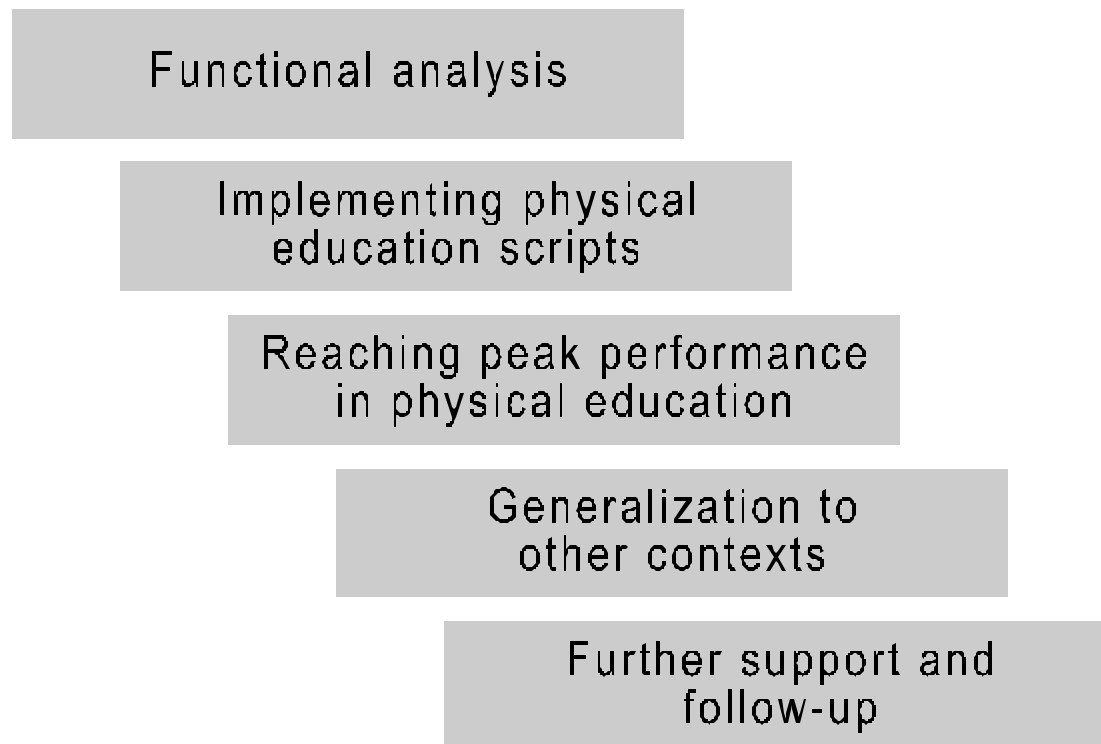


Figure 1. The components of the model.

Functional Analysis

Understanding the context for certain behaviors and the motivating factors that maintain them is achieved through Functional Analysis (Axelrod, 1987; Iwata et al., 1982; Skinner, 1953). Functional Analysis provides educators with reliable information about behaviors of concern, enabling the detection of frequent patterns through graphical representation of collected data. Thus, functional analytic conclusions are grounded in data collection rather than be based on the expected assumptions. The

information gathered during this stage enables the design of an adapted curriculum suitable for the unique necessities of individuals and groups sharing similar characteristics (e.g., having difficulties in concentration).

The PE context is perfectly tailored for conducting a brief functional analysis (Northup et al., 1991; Wallace & Iwata, 1999; Wallace & Knights, 2003). The repetitive nature of sport activities enables the programming of brief session in which certain variables (e.g., waiting, demand, attention, etc.) are manipulated sequentially. Games can be easily adapted to serve the analysis purpose, without losing their exciting properties. Furthermore, physical responses are visible, allowing for an accurate assessment of participants' functioning.

Implementing Physical Education Scripts

Scripts can be used to assess functional relationships between inappropriate behavior and specific environmental events (Iwata et al., 1982). In this pioneering endeavor Iwata and his colleagues observed developmentally disabled children during periods of brief, repeated exposure to a series of analogue conditions: play materials, demand, and social attention. Results showed that the motivation for inappropriate behavior may be explained as a function of distinct features of the social and/or physical environment. Similar strategies have been used to improve social-communicative interaction among children using socio-dramatic scripts (Goldstein & Cisar, 1992), to improve communication using the script-fading procedure in which embedded textual cues were gradually reduced (Krantz & McClannahan, 1998; Sarokoff, Taylor, & Poulson, 2001), and to teach self-control (Rolider & Axelrod, 2000; Rolider & Van Houten, 1993).

In the proposed model, scripts are short teaching-segments (about 5 minutes) that comprise a lesson within a comprehensive unit plan (i.e., a series of lessons sharing the same objectives). The scripts simulate real life situations, they gradually expose the students to the challenging antecedents, and they are highly adaptable based on the preliminary functional analysis. The scripts are comprised of physical activities or games that emphasize certain antecedents, consequences, or both. For example, during a strenuous anaerobic effort (e.g., two teams relay run) students are asked to adhere to rules and refrain from obstructing each other and cheating. Such a script exposes students to a stressful situation in which they had self-control difficulties in the past. Scripts are presented repeatedly while level of difficulty increases gradually (e.g., harder effort, proximity to opponent), keeping a high success rate (e.g., self-control in the presence of increased stress).

In order to help the students deal with “demand difficulties”, scripts are designed in a fade-in manner – from simple to complex (Heidorn & Jensen, 1984; Pace, Iwata, Cowdery, Andree, & McIntyre, 1993; Touchette, MacDonald, & Langer, 1985; Weeks & Gaylord-Ross, 1981). Such a process exposes the students to challenges they were used to decline by emitting an aberrant behavior. Persistency in performance, followed by teacher's support and encouragement, should lead to greater learning perseverance exhibited by the students in the presence of similar difficulties.

Scripts may also be tailored to alter consequences that maintain the inappropriate behavior. For example, when the functional analysis indicates that a deviant behavior increases when followed by attention, scripts can provide an opportunity to ignore this behavior while providing ample attention to an incompatible one. Students who tend to insult their peers during social interactions may continue, if this behavior elicits certain reactions from peers and staff members. In other words, this unwanted behavior is reinforced by the attention that follows it. Scripts that present similar social interactions (e.g., soccer game), where on the one hand, any sort of insult is ignored, while on the other hand, any appropriate behavior wins immediate attention, may change the behavior patterns of the “bullies” (Carr & Newsom, 1985; Weeks & Gaylord-Ross, 1981). Such scripts should be repeated consistently, followed by a clear

explanation of the behavioral goals. There is no reason to mask the educational process that is in effect, rather, it should be well comprehended by all participants.

It is essential to implement several scripts in each lesson. This way, each script becomes an episode in itself, allowing for a separate conclusion. Teacher's, peers' or self-feedback, provided at the end of each script, constitutes an important step in the learning ladder. A multi-script lesson enables various learning and progress opportunities. Students failing to achieve a specified goal in a certain script can do so later, given similar opportunities. Such positive learning atmosphere may support students in dealing with corrective feedback, and ease the negative emotional effect ("feeling of failure") that may be carried over from one script to a succeeding one. Furthermore, knowing that "make-up" opportunities are always available can help maintain motivation for improvement. For example, a teacher's comment following an unsuccessful script can include corrective feedback supplemented with the promise - "you can make it up right away in the following script". Such a statement may serve as an establishing operation (Michael, 1993, 2000), increasing the likelihood of persistent cooperation and desired behavior.

Reaching Peak Performance in Physical Education

According to the next component of the model, scripts concerning all behavioral goals continue to be implemented in the PE context until optimal performance is achieved. Criteria specifying attainable performance level should be drawn for each behavioral goal in the program and success is measured by grades assigned for each script. A grade may include quantitative or qualitative evaluation based on the pre-specified criteria. Successful performance throughout three consecutive scripts or more signify the initial internalization of a certain behavior pattern in the PE context.

Reaching optimal performance in this protected and supported context holds several advantages:

1. As a natural and favorite context (Gallahue, 1989; Tjeerdsma et al., 1996), it is possible to present complex challenges in Physical Education, while reducing objection and "escape from demand".
2. Consistent and prolonged success supports students' "self-esteem" and is associated with general contentment. When students "feel good" about their learning environment their attitude toward challenging learning goals and toward the education system improves. The emotional change, although specific to the PE context, may support similar learning efforts in other contexts (e.g., math class) – if the generality of behavior change is carefully programmed.
3. The relatively easily attained success within the PE context may encourage other teachers as well as the parents to support the generalization of change to a variety of other contexts.

Generalization to other Contexts

Once the behavior change is consistently demonstrated in the context of physical activity, the aim is to generalize the appropriate conduct to other settings in which the students are active. Thus, it is essential to establish effective communication among staff members, clinicians and family members who are in contact with the students. Planning for generalization can be applied in several ways:

1. Implementing generalization-planning strategies in the PE context. These structured strategies (Baer, 1981; Cooper, Heron, & Heward, 1987; Eldar, 1993; Sulzer-Azaroff & Mayer, 1991) include simulation of everyday situations, presentation of gradually increasing complex behavioral situations, encouraging self-management, and more.
2. Including "important others" in the implementation of the program. Having other teachers/clinicians and parents visit the PE lessons, may increase their motivation to support the behavior change and to collaborate. Furthermore, the visiting teachers and parents can then use terms and examples noticed in the PE lesson - in their own interactions. For example, "It's

wonderful to see you helping others / your sister, as you did in the physical education lesson I observed”.

3. Frequent visits of PE staff in other contexts during the generalization phase. The presence of teachers / clinicians with whom students have experienced success, can improve their effort and performance in other settings (Rolider & Van Houten, 1993). Moreover, the PE teachers can assist the students with a hint or an advice and provide other teachers and parents with feedback concerning generalization support.

Further Support and Follow-up

The acquisition of behavior change requires time and depends on continuous success and on an apparent support by teachers, parents, peers and important others. Therefore, it is essential to conduct an ongoing formative evaluation of students' progress, based on data collection. It is also recommended that teachers present periodic scripts to strengthen learning, and to encourage students' determination. Finally, teachers and parents are ought to remain observant, detect and support any form of self-management and accountability exhibited by the students with regards to learning and social functioning (Sulzer-Azaroff & Mayer, 1991).

Incorporating into the Curriculum

Models for curriculum development in physical education are designed and adapted according to national guidelines and standards, school philosophy and policy, students' characteristics, teachers' educational perception and more (Eldar, 1997; Siedentop & Tannehill, 2000). The model presented here does not offer a replacement for a conventional curriculum. Instead, it can supplement, infuse into, or operate in conjunction with the basic curriculum. It can also be adapted to support individual or small group clinical programs.

The behavioral goals included in the current model are based on successive progressions throughout the academic year or a certain time period (e.g., quarter, semester). However, they do not necessarily impinge upon the PE content taught. Values can be demonstrated and self-control and cooperation skills may be taught in the different contexts of ball games like soccer, individual activities like gymnastics, and in pair games like tennis. In the next section of this paper, we demonstrate how a series of movement games can be designed to achieve specific educational goals. Our experience of more than 20 years recommends a series of behavioral goals that are presented systematically. Mastery in each one of these stages “paves the road” for presenting the next goal in the program. However, the key points are: a) Stages in the program are not necessarily prerequisite to their followings. They are built in a logical order that may be altered due to didactic or managerial considerations; and b) The structure of the program is spiral, allowing for further strengthening of a certain goal, even when its direct intervention has been terminated. In other words, every goal presented in the program continues to be included or mentioned in advanced stages. This curriculum integrates goals stressing emotional features such as self-control with goals like self-management in which the cognitive demand is more prominent. Empirical investigation of the program sequencing is warranted but has not been accomplished yet due to its methodological complexity. The suggested goals in their recommended order are presented next.

1. Ensuring a Supportive and Convivial Learning Atmosphere

The initial lessons should focus on creating a positive learning climate. This goal is vital in order to ensure students' openness and willingness to deal with future challenges. An enjoyable start (establishing operation - Michael, 2000) is likely to increase students' motivation and create a constructive momentum (Nevin, 1996; Roane, Kelley, Trosclair, & Hauer, 2004; Wehby & Hollahan,

2000) for further learning. Thus, Initial lessons should eliminate aversive situations accompanying complicated demands and expectations.

It is also important to begin and terminate each lesson with favored activities (e.g., preferred games), in order to support the prompt attendance of students and their anticipation for future meetings. A few “peaks” like competitions, students’ demonstration, creative assignments and integration of music, embedded within the lesson, should add to its emotional excitement and attractiveness. It is also advised to conduct a few breaks in the lesson, during which short discussions can take place, questions can be answered and humorous relaxed remarks are welcomed. The transition from breaks to learning tasks is important as it teaches the students to discern between different levels of concentration and demand and to adapt to changing learning situations.

Program climate should be examined throughout the implementation of the program. Any “drift” in the students’ motivation should be detected and corrected by adjusting learning goals and procedures. However, positive does not mean having students do “whatever they feel like”. This may lead to a short relief, but in the long run, increase inappropriate behavior, negative student pressure and loss of control by the teachers. Therefore, students should not solely dictate the content and the nature of the lesson. They can, however, be given choices about their learning assignments during prearranged discussions, which tends to improve both behavior and learning (Dyer, Dunlap, & Winterling, 1990; Guess, Benson, & Siegel-Causey, 1985). Other contributors to a positive climate include frequent opportunities to respond with a high success rate (i.e., challenging, yet manageable scripts) and providing students with immediate and positive feedback for appropriate performance (Eldar, 1997).

2. Cooperation with Teachers

Students’ cooperation with teachers / clinicians is a prerequisite for any program. Teaching tasks should, therefore, be presented to the students clearly and gradually while the criteria for feedback during this stage are related to the following aspects:

1. Reaction time - elapsed time between the presentation of task by the teacher and the initial adequate performance by the student.
2. Performance quality - proximity of performance to task instructions evaluated according to specified critical elements and to explanations and demonstrations.
3. Duration - continuous time of appropriate performance is indicative of a higher cooperation level.

It is very important that at this stage, the teachers running the program remain sensitive to students’ cooperation as identified by the criteria specified above. It is the teachers’ responsibility to ensure that any functional improvement is recognized and supported. Similarly, teachers need to take various actions when levels of cooperation are lower than expected. These actions include re-evaluation of planning and learning climate, providing the students with constructive feedback supplemented with guidance, or alternatively, ignoring the lack of cooperation, especially when it is temporary or when it is supported by teacher’s or peers’ attention (Siedentop, & Tannehill, 2000).

3. Attention and Concentration

Attention and concentration are vital for effective learning. Movement and games are ideal for “sharpening” these qualities, that is, teaching students to focus on relevant stimuli and to ignore masking and overshadowing environmental and physiological distracters. For example, in order to perform well, students need to be attentive to demonstrations, they can relax in the preparation for the drill, but need to refocus when executing the taught activity. As in other stages of the program, level of difficulty is gradually increased, for example, by moving from a verbal and visual explanation to verbal or visual only. It is possible to gradually increase interfering stimuli such as noise and crowd as well as manipulate

physiological distracters through alternations in level of fatigue (Nideffer, 1993). Keeping high concentration and adequate performance levels despite such barriers can help enhance the students' attentiveness in various situations and in other contexts.

4.Responding to Rules and Routines

Rules and routines define the framework of the PE lesson and form the basis for any other educational and organizational setting. Rules define general expectations regarding students' functioning in different situations (Siedentop, 1991). Rules are developed by defining the appropriate behavior (e.g., we listen to others when they speak) and by defining the inappropriate one (e.g., we refrain from insulting others). Routines are procedures that aim to structure frequent behaviors during the lesson (Siedentop, 1991). For example, "When I lower my voice, you are asked to stop where you are and look at me". Short and clear rules and routines taught in each unit, help support their comprehension and may improve students' conduct in other lessons as well.

This stage of the program presents a series of games in which rules and routines become more complicated, while the punctuality and accuracy of following them is being emphasized. Providing students with everyday examples of similar rules and routines (e.g., we wait in line to purchase cinema tickets), is likely to support their generalization. Furthermore, it is important to "bridge" between rules and routines that are "natural" to game situations (e.g., a ball is reverted to the opponent in cases of pushing) and those of "real life" (e.g., we do not use aggression to achieve our goals). This may be accomplished through discussion, questions and short remarks during the game.

5.Waiting

One of the principles of effective teaching is to minimize waiting as much as possible in order to increase learning time and opportunities to respond. Therefore, incorporating practice of waiting into lesson plans may be perceived as violation of this didactic principle. However, this program integrates waiting situations as an integral part of the activities conducted, in order to improve students' restraint. Thus, when waiting is the behavioral goal of interest, the students are provided with feedback that relates to their capacity to wait when required, without losing control or breaking rules and routines.

The sport context is rich with waiting situation that may serve this goal. For example: waiting in line to shoot a basket; waiting to receive the ball during the game; waiting for one's performance on a certain apparatus, etc. Level of difficulty can be manipulated in several ways:

1. Waiting duration - longer time demands higher restraint.
2. Attractiveness level of the activity - waiting for an attractive activity requires a higher level of self-control.
3. Interfering stimuli - other students refusing to wait, noise and other competing activities increase the level of difficulty.
4. Teaching ambiguity - when instructions regarding waiting are unclear, unavailable or given in low frequency, level of difficulty increases.

6.Independent Performance

Inappropriate and aberrant behaviors may be emitted because they gain immediate attention (Thompson & Iwata, 2001). Physical education is well suited for practicing independent efforts, with no immediate attention from teachers and peers. This stage presents scripts in which students are required to deal with more complicated and longer tasks while no immediate feedback is provided. For example: practicing passing in basketball, without teacher's supervision and feedback; independent running drills;

gymnastic routines; a scrimmage between two teams with no teacher's feedback or attention and more. The main goal is to teach students to endure their learning in the absence of an immediate and available notice. This goal is presented to the students and discussed with them while the major feedback during this unit relates to their ability to act independently. This does not mean that the students' performance receives no recognition. Rather, it is achieved through self-reflection and by postponed feedback delivered later. Independent learning is a prerequisite to self-management, explained later on in the program.

7. Dealing with Demands

Our experience with functional analysis conducted for clinical purposes shows that substantial percentage of inappropriate behaviors occur in the presence of some sort of teaching and social demand. The target behavior eliminates or terminates an aversive situation (e.g., a learning task), thus it is negatively reinforced. In order to overcome this obstacle, this stage of the program presents a variety of tasks, that become gradually more and more demanding only when the students are well prepared for dealing with the increasing difficulty. Through this process the students learn to identify the critical elements of the task and to find ways to ease the burden.

This behavioral goal can be practiced by utilizing various tasks, depending on the students' needs. These tasks may highlight cognitive, emotional, social or physical demands. When progress is evident, demands from different domains may be integrated. An example is solving tactical problems during a game (e.g., change of defense strategy) presented to students while they are at the peak of an extensive and strenuous physical effort. This combination of cognitive and physical demands increases the level of difficulty and teaches students to cope with more complicated situations that have previously led to "escape behaviors". Social demands may be simulated by regrouping teams' lineup and posing new cooperation challenges for each team. Emotional demands may include functioning under a pressure, followed by challenging remarks and hustles by the teacher and peers.

Gradual presentation of learning tasks from least to most demanding sets the scene for continuous success. This process will be effective if exposure to the aversive triggers is also followed by a pleasant sensation, for example, success in completing a learning task (Friman, Hayes, & Wilson, 1998). In fact, this is a desensitization procedure (Taylor & Arnow, 1988; Wolpe, 1958) in which the difficulties are presented during a favored physical activity and game. Students are taught to identify the aversive triggers, experience self-control in their presence, and at the same time emit appropriate behaviors leading to success.

8. Perseverance (*"don't give up"*)

The ability to persist without giving-up is essentially an extension of dealing with a demand while being under strenuous emotional stress. The previous phase has emphasized students' ability to identify variables associated with demand difficulty and it presented strategies to confront such challenges. The perseverance stage introduces scripts characterized by tough situations that typically lead to "giving-up" reactions. Therefore, the aim of this behavioral goal is to teach students to cope with, rather than avoid or escape from unrefined difficulties thus gaining an opportunity to experience the successful results of their efforts. Level of difficulty can be manipulated by increasing task demand in different activity areas.

For example, a repeated anaerobic agility dash (running from one line to another), can be used to practice and support persistence, as this tiring and potentially boring task may simulate an "easy to quit" situation. Teachers can then encourage persistency, especially when the students are about to quit. Such encouragement may take the form of verbal comments that acknowledge the difficulty (e.g., "last time you gave up at this point") and promote enduring performance (e.g., "don't give up; try to hold for one

more minute.”). Additionally, at the end of the session it is best to amplify the sensation of success that resulted from the perseverance.

9. Termination of a Favored Activity

Ending a game or “fun activity” does not normally lead to aberrant behavior. However, it may result in complaining, bargaining and demonstrating discontent. Teaching students to cope with such situations may contribute to their self-control and learning persistency. In order to practice this goal, favored and less favored activities are executed in alternation. For example, the lesson is divided into four segments including free play, strenuous physical activity, peer teaching and a culminating competition. The termination of free play is likely to induce some protest, especially in light of the exhausting physical challenge that follows. Without proper planning, this scenario may develop into a mere confrontation between the teacher and the students. Yet the suggested solution is not to delay all favored activities to the end of lessons, but rather to use this as a structured opportunity to practice appropriate behavior and self-control despite the challenge.

Level of difficulty for this phase can be manipulated by increasing the attractiveness of the terminated activity, sequencing a less favored activity to follow a certain task or an abrupt cessation of the favored activity or shortening its extent. Other forms of manipulation can be incorporated into various activities regardless of the appeal of the activity itself. For example, changing teams match-up in a way that reduces success probability for one team or changing roles in different activities, from more favored to less favored, as when players become referees or feedback providers.

10. Cooperation with Peers

This phase is comprised of games that emphasize collaborative tasks. It represents a shift from small group participation and execution of simple tasks to larger groups and more complicated activities. Social tasks are fundamental in sport games as well as in collaborative movement like dance and gymnastics. They are also vital for individual performance in which students are supporting each other (e.g., spotting in gymnastics).

Many games are characterized by a potential discrepancy between the individual's and the team's objectives. At the personal level students are eager to fulfill their talent and to serve as “key players” as much as possible (e.g., scoring). However, at the team level they are expected to cooperate with their peers, grant them with equal opportunities and consider the “best interest” of the team. Thus, there are ample opportunities to teach cooperation and overcome egocentric participation style. Furthermore, games are easily adapted in order to plan creative circumstances that require cooperation. For example, dribbling can be banned in team handball, so that participants are forced to maintain eye contact and pass the ball to their teammates; rules in soccer can be set to enforce ball transfer between at least four different players before the team can score a permissible goal.

Furthermore, concepts such as “forfeiting” can be demonstrated and taught through games, in which several children play with limited equipment. Most participants will “naturally” do their best to be “first in line” and to engage with their favored equipment. In this context, children can learn to wait for their turn and they can be rewarded for socially desired behaviors such as sharing. Similarly, acceptance of others, especially students with special needs, is a vital value that can be well exemplified through physical activity. Games provide ample opportunities for all - even those who have difficulties in agility or in performing the correct technique. Furthermore, having students with difficulties share the game experience with high-level students enables the comprehension of individual variability and appreciation of others “as they are”. This value is emphasized especially when team's success is dependent on the accumulating contribution of all participants.

The tension and emotional involvement attached to competitions obscure the attainment of social goals and values. Therefore, collaborative tasks should be planned gradually and evolutionary while keeping high levels of teamwork throughout the unit plan. It is advisable to implement collaborative scripts in other activities such as dancing, planning choreography, preparing for gymnastic exhibitions, and the like.

Level of difficulty may be elevated according to the following considerations:

1. Changing the complexity of the social task.
2. Re-shuffling the students that comprise a team.
3. Increasing the number of students in a team.
4. Manipulating the consequences contingent upon performance. For example, emphasizing the winning value may increase tension and make collaboration more vulnerable.

11. Self-Control

Acquiring self-control is a pre-requisite to all other skills taught and is supported in each stage of this program. Nonetheless, it is presented here as a discrete goal, in order to evaluate students' capability to deal with higher level challenges. This goal is related to coping with frustrating situations and using appropriate communication skills for informing difficulties, rather than emitting aberrant behaviors for the same purpose (Durand, 1990, 1999; Hanley, Iwata & Thompson, 2001). To accomplish this aim, scripts are designed to introduce situations in which the frustration level is gradually increased. This is a sensitive process requiring specific knowledge and careful preparation. Self-control scripts are comprised of various game situations like tackles between players, extreme demand, fatigue situations and intense competitive episodes.

Furthermore, self-control can be developed and exercised through the manipulation of rules and refereeing during the game. For example, running a game with no external referee may impose a heavy responsibility on all participants who are committed to admit any violation with no reminders. Meeting such a challenge marks a significant progress indicating that the students are able to bring their behavior under control even without their teachers' involvement.

Any change in antecedents, making them more complex or frustrating, can serve as a way to increase the level of difficulty. Such an increase should be carefully planned and monitored, self-control should be acknowledged, while any form of aggression or emotional counterattack should be immediately detected and desisted. Such unwanted conduct may be indicative of inappropriate planning and should lead to adjustment in the progression and the content of the scripts.

12. Self – Management

Self-management is demonstrated when students assume responsibility and are held accountable for their learning and social functioning (Cooper et al., 1987; Eldar, 1990). In order to reach self-management, students should be well versed with all other components of the model, especially with independent learning and self-control.

The two terms - self-management and self-control are frequently interchanged in the literature. However, in this model they define two distinct capabilities. Self-control relates to "emotional situations" and to students' ability to inhibit their reactions and refrain from an abrupt response to frustrating triggers. Self-management includes the above capability but requires further cognitive qualities that are essential for situation analysis, problem solving, setting self and collaborative goals and taking responsibility for consequences (Eldar, 1990).

Self-management scripts shift the responsibility for planning and implementing the lesson from teachers to students. This gradual process requires the selection of learning topics, planning the lesson and taking part in carrying it out. Students collect data that reflect their learning progress and reach conclusions and recommendations based on this information. Level of difficulty increases when more responsibility is shifted to students and learning tasks become more complex. Self-management as a learning strategy does not discharge teachers from active doing, but it does change the nature of their functioning, as they serve as advisers who support students according to their own initiation.

13. Peer Teaching

In peer teaching (e.g., Gumpel & Frank, 1999; Kohler, & Greenwood, 1990) students assume responsibility for learning and performance of other students. For example, activities in which a designated student is responsible for the final product of the group; providing performance-related feedback to peers; assisting and spotting; refereeing, and more. Peer teaching is highly valued by students who are challenged by the granted responsibility and are willing to meet their teachers' expectations (Gumpel & Frank, 1999). This process can be beneficial to the teaching students who get to practice their knowledge and improve their self-esteem. It is placed as the last stage of this program because it combines the attainment of personal goals along with giving to others.

Physical education provides ample situations in which peer teaching may be integrated. This context in particular, enables students who may struggle in other their regular classroom, to guide other students. Further implementation of peer teaching in other learning contexts should be easier after students have acquired this skill in physical education.

Summary and Recommendations

Table 1 presents a summation of the stages in the proposed program, definition of stages, implementation examples, ways for increasing level of difficulty, and generalization possibilities.

TABLE 1, NEXT PAGE!

Table 1 Summation of the Stages, Definition and Various Examples of the Proposed Model.

Goal	Definition	Example	Level of Difficulty (LD)	Generalization
Supportive and pleasant atmosphere	Planning to ensure a high success level and favored activities	First lessons are devoted to familiar and favored games	No change in LD. Activity is designed to ensure success and joy.	Students describe their everyday favored activities
Cooperation with the teacher	Performance according to teachers instruction	Arranging students in groups. Students react promptly with no argument.	Complicated tasks / Time frame for completion / Less favored tasks	Cooperation at home – parents / Cooperation in other lessons.
Concentration Paying attention	Focusing on teaching stimuli and ignoring irrelevant ones	Focused stare at a student's demo. Directing body toward the teacher.	Explanation complexity & clarity / Interfering stimuli / Distance	Read a book / Watch a movie / Attend a lecture
Adhering to rules and routines	Following rules and routines according to instructions	Arrive on time / Touch the line in relay run / Sit at the end of activity	Number of rules / Motivation to break rules / Reminders for compliance	Adhering to school's rules / Behavior outside school.
Waiting	Student is not active while others are engaged in activity.	Before shooting a basket / Listening to or watching others.	Extending time / Increasing attractiveness of task waited for.	In line at the ticket office / When others at home are playing computer games.
Independent performance	Continuous engagement with no immediate attention.	Working out independently with no "external" involvement	Task complexity / Performance duration / Attention to others.	Doing homework without parents' assistance.
Dealing with demand	Performing complex physical cognitive, social & emotional tasks.	Extreme anaerobic effort / Cognitive tasks within exhausting drills	Task complexity / Duration / Fatigue / Distracters / Explanation clarity	Homework / Helping at home / Teamwork.
Perseverance Don't give-up.	Adhering to performance when task is difficult and student is tired.	3 more pushups / 2 more laps when student is about to give-up.	Duration / Fatigue Task complexity / Distracters	Completing an assignment / Fixing a defective apparatus.
Termination of a favored activity.	Stop activity and move to next task with slowdown or complaint.	Terminating basketball game and attending to teachers' remarks.	Activity appeal / Complexity of Succeeding task / Sudden termination	Returning home after a game / Lights turned off during a game
Cooperation	Collaborating with peers, showing support and patience.	Team strategy in a game / Forming a collaborative stunt.	Task complexity / Peers' ability / Contingent consequence	Helping at home / Collaborating in a team effort.
Self-control	Restrain during frustrating situations.	Confrontation games.	Contingent consequence / Frustration intensity / Emotional status	Playing soccer with friends / Receiving feedback.
Self-management	Self planning, performing & executing consequences.	Goal setting / data collection / implementing a conditioning prog.	Tasks complexity / Teachers' supervision level.	Being accountable for homework and home duties.
Peer teaching	Assuming responsibility on peers' performance.	Supporting peers in same or another class.	Tasks complexity / Peers' cooperation.	Assisting family members / Group work in class.

The didactic and practical principles associated with the implementation of the presented model have been discussed in this paper. Educators, physical educators and clinicians who choose to apply this conception can adjust a variety of programs to meet the unique challenges they face. Comprehending and appreciating the rationale is vital for designing programs and curriculums that utilize the exclusive advantages of physical education and sport. The educational conception recommended here regards teachers and clinicians as independent planners, who are able to adapt curriculums to their students' needs

and conduct formative and summative evaluation of their implementation. Such a challenge is not easy because it requires educators to become producers rather than “technicians”. The “Are you Square” game (Eldar, Morris, Da Costa, & Wolf, 2006) exemplifies the application of this model. The game involves four groups or individuals based in four stations (e.g., hula hoops) that contain an equal number of objects (e.g., rings). The game challenges participants to collect as many objects as they can from other stations and place them in their own station in a limited time frame, while adhering to various rules. This strenuous and competitive framework presents challenging scenarios within a short period of time and thus, allows the implementation of all components of the model.

The current paper represents the fundamental principles of the proposed program, which deals with basic learning acquisition skills, self-control and mutual respect. Adapting these principles into an educational concept will enable the further acquisition of values such as responsibility, initiative, integrity, and forfeiting as an integral part of the curriculum. It is possible to incorporate these concepts into the annual curriculum and to present them consecutively as was done in basic skill acquisition.

The model presented here requires a thorough examination of educational philosophy by all its implementers. The didactical / clinical / educational values and goals it promotes, might presumably contradict the professional focus of a physical education curriculum. Consequently, teachers may adhere to the sport, fitness, posture and other physical education goals and withhold the implementation of the above. Nonetheless, the author’s experience clearly indicates that a “professional” conception focusing on skill and knowledge acquisition can be combined with an “educational” conception teaching personal and social values.

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Functional Analytic Psychotherapy and Supervision

Glenn M. Callaghan

Abstract

The interpersonal behavior therapy, Functional Analytic Psychotherapy (FAP) has been empirically investigated and described in the literature for a little over a decade. Still, little has been written about the process of supervision in FAP. While there are many aspects of FAP supervision shared by other contemporary behavior therapies and psychotherapy in general, there are unique aspects of FAP supervision that warrant a more elaborate discussion. The present article provides a brief summary of FAP and then details some of the essential skills required of FAP therapists. Client and therapist conceptualizations can be developed in FAP supervision to help train supervisees in behavioral terminology and identify strengths and weaknesses in the therapist's repertoire. The process of FAP supervision is described with an emphasis on the importance of utilizing the hypothesized mechanism of clinical change, in vivo contingent responding to problem and improved behaviors. This live in-supervision process of creating a more effective therapist repertoire remains at the heart of FAP training. FAP supervision in group format is addressed as are ethical and professional issues related to the demarcation of interpersonal supervision and the therapist-in-training's own psychotherapy. An approach to the assessment of changes in therapist skills over the course of supervision is presented. Keywords: Supervision, functional, analytic, psychotherapy, assessment.

There exists copious writing on supervision and its role in the development of psychotherapists' skills (see for example, Watkins, 1997). Much of this writing is paradigmatically rooted and deals with specific types of interventions such as cognitive, psychodynamic, or humanistic. The present article does not aim to repeat or summarize these writings on supervision nor to explore models that may or may not be more successful in imparting essential therapy skills to trainees. Instead, this paper focuses on supervision in one specific contemporary behavioral intervention, Functional Analytic Psychotherapy (FAP; Kohlenberg & Tsai, 1991).

Contemporary or contextual behavior therapies such as FAP, Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999), and Dialectical Behavior Therapy (DBT; Linehan, 1993) have all emphasized the role that supervision can play. Each of these three therapies takes a somewhat different position on the role of didactic instruction, experience, and emotion in training the supervisee to successfully conduct each intervention. In part because these therapies are relatively new among the community of psychotherapies and because there is considerable variation with regard to how each is trained (e.g., in workshops, one-one-one, or group supervision), not a great deal has been written about the process of supervision for these behavioral treatments.

This paper provides a brief summary of Functional Analytic Psychotherapy and discusses some of the key issues that face the therapist-in-training as well as the supervisor when learning FAP. Every psychotherapy has nuances that are difficult to learn, and FAP is not short of its own. Specific challenges to learning FAP and the unique opportunities it holds as a behavior analytic intervention are described. Issues relevant to the assessment of changes in therapist skills are presented. The article closes with a brief description of some of the ethical and professional issues surrounding this treatment and corresponding learning process.

Overview of FAP

This section attempts to provide the reader with a summary or review of the key concepts in Functional Analytic Psychotherapy that are particularly relevant for supervision while learning this treatment. FAP has been described in several articles and texts in much more detail than can be given justice here in such a brief overview. The reader is referred to the original text by Kohlenberg and Tsai (1991) and articles that are both highly behavior analytic (see for example Follette, Naugle, & Callaghan, 1996) and to those geared for a broader audience (e.g., Callaghan, Gregg, Marx, Kohlenberg, & Gifford, 2004; Callaghan, Naugle, & Follette, 1996). FAP has been used to enhance or make more effective standard interventions such as cognitive therapy (Kohlenberg, Kanter, Bolling, Parker, & Tsai, 2002) and well as creating comprehensive interventions with other contextual behavior therapies such as ACT (e.g., Callaghan, et al., 2004; Gifford et al., 2004).

Functional Analytic Psychotherapy is an interpersonally-oriented psychotherapy designed to help alleviate client problems that are fundamentally about human relationships. This client suffering may occur in the direct presence of another person or may occur in the absence of people, yet the emotional pain clients feel remains about their lack of meaningful connection. Such behavioral targets are not new for psychotherapy or behavioral interventions. However, what makes FAP unique is the use of basic behavioral assumptions of contingent shaping and the application of reinforcement during a therapy session. At the core of FAP is its hypothesized mechanism of clinical change, contingent responding by the therapist to client problem and improved behaviors live, in-session, while they occur. This method of operant shaping (Skinner, 1957, 1981) allows the therapist to watch for client problems, even evoke them in-session, and then shape alternative, more effective client behaviors. The contingencies the therapist and client have direct access to are social and experiential. Behaviors the client emits in-session occur in the context of the therapeutic relationship. One of the main assumptions that the therapist has about client behavior (about all human behavior) lies with the strength of responses in an interpersonal repertoire. The therapist assumes that if a client presents for therapy focusing on interpersonal problems then those problems will occur not only in relationships the client has with others outside of therapy, but they will occur in the context of the relationship with the therapist. By developing a therapeutic relationship with the client and establishing him or herself as a provider of salient social reinforcement (Follette, et al., 1996), the therapist can differentially reinforce more effective client behaviors in-session, strengthening those responses that will allow the client to create more effective relationships outside of therapy. While there are unique stimulus conditions that apply to therapy which may make some behaviors less likely to occur in that context, most interpersonal behaviors can occur in the context of the therapeutic relationship. It is essential to keep in mind that behaviors are defined by their functional properties, rather than the form or topography they may take. This is discussed in detail below.

Targets of clinical change have been described by the present author in the Functional Idiographic Assessment Template (FIAT) System (Callaghan, in press; Callaghan, Summers, & Weidman, 2003) and include problems with identifying and asserting needs or values in a relationship; difficulties with identifying and responding to feedback and recognizing one's own impact on others; effectively recognizing the appropriate context for and responding to interpersonal conflict; disclosing and creating meaningful interactions with others; and challenges with identifying, experiencing, and expressing emotions. While the FIAT is one attempt to create a consistent language for client problems with interpersonal interactions, it is by no means the only or definitive system. The FIAT allows the therapist to describe and then create individualized assessment instruments to track client change over the course of therapy. The client behaviors targeted for change are defined by their membership in functional classes. Functional classes of behavior are defined as groups of responses that occur under similar stimulus conditions or have similar consequences. This definition is in contrast with classifications of behavior based on their appearance or topographical features.

Most experienced clinicians would answer the question, “Is it good for a client to cry in-session (or anywhere)?” with the tried and true response, “It depends.” Functional classes attempt to specify on what such a response would depend. Such behavioral classes are defined by responses that produce similar outcomes, not on their structure or appearance. To answer “Is it good for a client to cry?”, the behavioral or FAP therapist needs to know what we mean by “good” and how crying functions or what consequences crying produces for the client. If under certain circumstances the client cries in front of others, this helps them understand the client’s emotional experience, and in turn this allows others to offer the care and support the client is seeking, then it may be an effective response at that time. Consider another client (or even the same client in another situation) who cries in such a way that its consequence is interpersonally distancing or ineffective at prompting the therapist or others to understand the client’s problems or assist the client in that moment. Defining what is effective or ineffective for the client in this functional way depends at least on knowing the client’s goals in relationships and analyzing the consequences of targeted responses on those relationships. The FAP therapist takes advantage of the opportunity of observing in-session behaviors in conducting this analysis.

The ultimate goal of FAP is to get the behaviors that are learned in-session to occur for the client outside of therapy. This is accomplished in several ways. One is through direct instruction by the therapist to the client to attempt what has been tried in-session that appears to work with the therapist (i.e., it has the desired interpersonal impact for the client) with others with whom the client has relationships. Provided these relationships would be safe and could conceivably reinforce some aspect of the developing repertoire, the client is encouraged to attempt what has been learned in-session with those outside of therapy. It is important that the therapist not provide too many rules about precisely how these behaviors are emitted by the client in other contexts. That is, if something the client has done works to help the therapist feel more connected to the client, allows the therapist to better understand the client, and perhaps be more genuinely supportive, the therapist provides a natural reward or reinforcer for that behavior such as a caring remark, support, empathy, or even assistance.

The therapist will often caution the client if he or she states something like, “Oh, I should just do that every time I need something.” The therapist will remind the client that interactions are different with everyone in important ways. If there is a general “rule” in FAP it is to notice what we would like to have happen, observe the impact of our behavior (i.e., watch for the function of that response), and if we did not accomplish our goals, then try another strategy to see if that worked. Therapists conducting FAP encourage their clients to conduct their own brief behavioral analyses of those targeted behaviors to better understand the controlling variables that give rise to more effective social interactions (Kohlenberg & Tsai, 1991). Using a three term contingency analysis, clients are asked to identify what comes before the behavior (the discriminative stimuli), the response itself, and the consequences of that response for the client.

In this way, FAP is a truly interpersonally-oriented behavioral intervention. The focus of FAP treatments continues to be on problems that occur between the client and others, including those problems that occur in the context of the therapeutic relationship. From a FAP perspective, the vast majority of clinical problems can be understood in such a context. The repertoires associated with diagnostic and nosological systems (e.g., the *DSM-IV-TR*; American Psychiatric Association, 2000) such as personality disorders, and long-standing difficulties such as dysthymic disorder can be conceptualized within an interpersonal and FAP framework. Even problems found with major depressive disorder and the interpersonal avoidance problems associated with post traumatic stress disorder have been addressed and treated within a FAP conceptualization (e.g., Kohlenberg, et al., 2002; Prins & Callaghan, 2002).

FAP interventions proceed under the same general rubric of an operant analysis and manipulation of behavior: Identify the behavior to be shaped, watch for or evoke the behavior of interest, differentially reinforce approximations to the targeted response, and for clinical behavior analysis generalize these

responses to multiple settings outside of therapy. The contingencies FAP uses to directly reinforce improved social repertoires by the client are social themselves. Conditioned secondary reinforcers that are used include (but are certainly not limited to) understanding and compassionate responses, caring, support, empathy, encouragement, and assistance.

FAP Supervision

The behavioral principles just outlined for changing client behavior are, predictably, the same used in FAP supervision. This section will highlight analytic skills the FAP therapist needs to possess in their repertoire as well as those complex social and emotional repertoires necessary for conducting effective FAP interventions. The use of supervision in instructing and shaping these skills is discussed in the section on the process of FAP supervision that follows.

Client Case Conceptualization Skills

Inherent in the name FAP is the use of functional analyses. This behavioral conceptualization of client problems is at the root of any FAP intervention. At the outset of supervision, the FAP supervisor must assess the level of basic behavioral knowledge that the therapist possesses. For many beginning FAP therapists, having a behavior analytic framework is fairly uncommon. However, as long as the therapist is not antagonistic towards a behavioral paradigm, instruction in this type of analysis can be fairly straightforward didactic clinical training using frequent clinical illustrations of learning principles. One issue that arises fairly frequently in FAP supervision around teaching functional analyses centers on the misconceptions and inaccurate information therapists bring to behavioral training. In the process of teaching therapists to think about clients from within a behavioral framework, supervisors may find it helpful to address the logical or epistemological barriers that must be overcome to fully consider this paradigm (O'Donohue, Callaghan, & Ruckstuhl, 1998).

The purpose of this instruction is so that therapists are able to identify client behaviors targeted for clinical intervention in a behavioral and contextual framework. From within this three term contingency analysis, supervisors help FAP therapists understand functional classes of behaviors consistent with the discussion provided above. Therapists must be able to define targeted client behaviors with respect to the function of these responses and use a three term contingency analysis to conceptualize their occurrence. Supervisors help therapists identify the stimulus conditions that give rise to the response class of interest, the immediate reinforcers of that behavior, and the definition of that response class. In defining a class, some supervisors have found using a common language for behavioral problems (such as those in the FIAT) to be helpful in learning this analysis. From here the therapist learns to specify targeted behaviors that may be more effective for that client and explicates the changes in stimulus conditions or reinforcement contingencies that would initiate and sustain these behavioral changes.

A full client conceptualization in FAP includes a specification of targeted client responses, a functional analysis of the contingencies maintaining those behaviors, and an explication of potential variables that could alter those responses. The framework of this analysis is decidedly behavioral and uses a vernacular that requires some therapists considerable practice to use accurately. Using frequent examples and consistently talking about the client's problems from within a behavioral paradigm can help the FAP therapist become more efficient in his or her conceptualization skills. Finally, the therapist is taught that the analysis and conceptualization are constantly evolving. With additional clinical information gathered during the on-going intervention, the analysis may change slightly or even dramatically. If the client is not responding in a way that the therapist has predicted based on his or her analysis, that analysis is likely incomplete or inaccurate. Clinical problems historically understood as resistance can be understood by the FAP therapist as an incomplete case conceptualization that did not include an analysis of variables that prevent the client from engaging in a more effective response. It is up

to the therapist and supervisor to re-think the conceptualization to include this new and important information.

A Conceptualization of the Therapist's Skills

In FAP supervision, it is essential not only to understand client behavior functionally but contextually as well. The FAP therapist asks, "What is occurring in the environment for this client, under these conditions, that give rise to this behavior, and what follows that supports or prevents that behavior occurring in the future?" The context of all psychotherapy includes the psychotherapist; therefore a complete analysis of client behavior must include an analysis of the therapist as well. FAP is certainly not the first to notice this. From its roots in Freudian analysis, therapist responding has been understood as fundamental in the process of treatment delivery (see Ekstein & Wallerstein, 1972 for a discussion).

From a FAP perspective, this means that the therapist's repertoire or skill set must be understood contextually in relation to each client in therapy. In same way that a client case conceptualization is created, the supervisor (or supervision team) assists the therapist is creating a functional analysis of their own responses that can hinder or help the therapeutic process. The therapist is taught that all people have their strengths and weaknesses, their behavioral excesses and deficits; and, just like clients, therapists have theirs, too. In order to effectively conduct FAP, the therapist must understand what will prevent him or her from discriminating situations where a response is necessary and how to effectively provide the response to help the client improve.

The process of creating a therapist conceptualization is both instructive and difficult. The therapist learns the same analytic skills used with understanding their clients, and the supervisee learns that creating such analyses is very challenging and complex. In addition, it is helpful for the therapist to come into direct contact with the distinction between a specification of contingencies of responding and actually changing a response class. It is not rare to hear of a beginning therapist to grow frustrated with a client who is not changing when the analysis of client behavior appears to be so "correct." Even with the accuracy of a conceptualization, complex social repertoires such as those targeted in FAP do not change readily. Therapists identifying their own difficulties as they relate to conducting FAP interventions experientially contact this challenge when attempting to engage in more effective therapist responses in-session and during supervision. This process of learning can help develop the necessary empathy if not sympathy for responding to clients when doing FAP. While empathy is considered important in FAP, it is not a sufficient ingredient in delivering the mechanism of clinical change, contingent responding to client problem behavior.

In the same way that client behavior is changed by this contingent provision of social reinforcers (or potentially punishers), supervisors can directly shape more effective therapist behavior. This in-supervision shaping directly corresponds to the process of clinical change for clients and is discussed below. Before addressing FAP in-supervision behavior change, it may be necessary to briefly address some of the therapist skills necessary to conduct FAP. These are the same skills that are then targeted as potential therapist behaviors for change in FAP supervision.

The FAP Therapist's Repertoire

There is no commonly agreed upon set of skills that must be possessed by a FAP therapist just like there is no set required by all therapists from all theoretical frameworks. Creating a case conceptualization is fundamental to FAP as the absence of a client formulation would make it difficult if not impossible to do this therapy. The FAP therapist's abilities can be broadly understood as being discrimination skills or sensitivity to contextual cues and elements of a response repertoire. In a system

similar to the FIAT described above, a corresponding therapist assessment system was developed, called the Functional Assessment of Skills for Interpersonal Therapists (FASIT; Callaghan, in press).

The FASIT (pronounced “facet”) outlines classes of therapist problems parallel to the FIAT manual. However, important differences exist between the two assessment systems given the professional role the therapist has with clients as a provider of care. Therapist skill problems are defined in five domains that are briefly described here. These classes of behavior describe possible problem areas that interpersonal or FAP therapists may have. In no way are therapists expected to have problems in each of these areas. Indeed, some supervisees may have few if any problems listed here. Typically however, a therapist-in-training has several difficulties from a few of the classes described below. The reader is referred to the FASIT system manual for a thorough description of how problems are included as targets for supervision and of the therapist skills briefly discussed here.

The first class of therapist behaviors deals with problems the supervisee has identifying or asserting his or her needs. It is clear that the treatment session is not the place for the therapist to get his or her personal needs met from the client. However, the FAP therapist will require the client to respond in different ways at different times as the therapist shapes more effective responding. In addition, supervision can be an important context for the therapist to get support or assistance and needs to be able to request this.

The second class of responding describes the therapist’s ability to discriminate his or her impact on others and the impact that clients have on the therapist. In addition, this second domain of behavior specifies challenges the therapist can have in providing feedback to the client and responding to feedback. The therapist’s repertoire regarding receiving feedback (particularly in supervision) is fundamental to the supervisee developing necessary skills to conduct any psychotherapy intervention. In addition, the therapist’s ability to provide feedback to the client is at the heart of FAP therapy. The therapist must be able to notice the impact the client has had on him or her, consider this in the context of the client case conceptualization, respond to the client given how he or she impacts the therapist (providing social reinforcement or a prompt for a more effective client response), and then discriminate how that therapist response impacted the client. This is a very complex set of skills. A deficit in any of these areas can create problems in effectively delivering FAP.

The third class of therapist behaviors in the FASIT includes those related to interpersonal conflict. Conflict here is defined as interpersonal tension occurring when two or more people do not appear to have a common goal. By no means does the class necessarily include hostility or aggressiveness, though it could. The therapist needs to be able to discriminate when conflict is occurring and whether the context appears to effectively support or allow this conflict to occur. In addition, this class describes difficulties in the therapist’s repertoire with how conflict is engaged. For example, does the therapist escape or avoid any interpersonal tension or conflict? Does he or she escalate conflict or directly punish its occurrence rather than help address or resolve it effectively? These problems can occur in-session or during supervision.

Problems with disclosure and interpersonal closeness are addressed in the fourth class of the FASIT system. Again, therapy is the place for the client to disclose and seek interpersonal closeness with the therapist. If closeness occurs in the therapeutic relationship, it is in the service of the client’s goals, not the therapist’s. The disclosure that occurs in FAP is most often that of the therapist’s emotional or social reactions to the client’s behavior. For example, if the client engages in a more effective interpersonal response with the therapist, one that has been targeted in treatment, the FAP therapist would respond naturally with the feeling that client behavior evoked. The therapist may tell the client how good that makes the therapist to hear or how much that allows the therapist to really understand the client, depending of course on the situation. The FAP therapist is unlikely to disclose a similar history as the

client, their own personal experiences, or any other response that shifts the focus from the client's process of change to the therapist's own struggles. This does not mean that the therapist never conveys aspects of his or her own life to the client, but these disclosures are carefully chosen and, again, are in the service of meeting the client's agenda for change. They are not gratuitous offerings by the therapist about his or her history. FAP is by definition an interpersonal behavioral therapy. If therapists struggle with this class of behavior, it will directly impede their ability to do FAP. Difficulties here include problems with discriminating opportunities to engage in the type of disclosure described above, noticing whether or not the therapist is sharing anything with the client at all, and types of disclosing (or avoiding disclosure) that occur. As with all of the other classes of behavior described in the FASIT, these can occur in the context of the therapy session and they can occur with the supervisor or in a supervision team.

The final class of behavior considers problems with emotional experience and expression. This class captures a more intrapersonal aspect of therapist responding (experiencing feelings) as well as the interpersonal process of sharing those feelings with others (emotional expression). Like clients, therapists' skills lie on a very broad continuum with respect to experiencing and expressing emotions. Some are more skilled with others. Still, it is important for therapists to have an intact repertoire in this domain to the extent that he or she can be effective with clients. The FASIT outlines problems therapist may have with discriminating their own experiences, noticing situations that are more likely to evoke feelings, and different challenges that occur when expressing the therapist's feelings.

It remains the FAP therapist's task to notice the occurrence of in-session client behaviors and then to respond effectively to them. This task of discriminating client behaviors based on the client conceptualization is complex and directly impacted by deficits or weaknesses the therapist has with the classes outlined above. Once the supervisee has discriminated an opportunity to respond to the client in an effort to shape a more effective client repertoire, the therapist must observe the impact of his or her response on the client. The therapist must look at the outcome of that response, not just the intention he or she had in making it. It is probably clear to the reader that difficulties in any of these steps can create problems for effectively delivering FAP. It is ultimately the goal of supervision to help the supervisee deliver FAP effectively while keeping in mind not only the ongoing client case conceptualization but the therapist's own conceptualization of his or her problems as well.

The Process of FAP Supervision

As mentioned above, FAP supervision parallels the process of FAP therapy with respect to changing targeted behavior. The FAP supervisor's task is to help develop a therapist's conceptualization of strengths and weaknesses and then address those in an effort to maximize the therapist's ability to effectively conduct this interpersonally-based intervention. These supervision interventions will utilize didactic training (particularly with case conceptualization and using behavioral principles), instruction in attempting strategies that may be more effective in the next session, and in vivo strategies attempting to alter therapist behavior during the supervision meetings.

This latter intervention, focusing on in vivo behavior change, is a large part of FAP supervision, playfully called "FAPpervision." It remains important for the FAP supervisor to both address therapist difficulties in conducting FAP but also to model the process of this treatment. Given the mutually created therapist conceptualization of problem behaviors, the FAP supervisor looks for and even attempts to bring these into the supervision session. Both therapist and supervisor share the paradigmatic assumption of the hypothesized mechanism of clinical change in FAP, in-session contingent responding to behavior. In this case, it is the therapist's behavior that is responded to by the supervisor or supervision team in an effort to ameliorate those problems and create more effective behaviors. As described in the FASIT manual, these target behaviors must be directly related to helping the therapist more effectively deliver FAP interventions. Targets which more broadly impact the therapist's life, but do not have a direct bearing on

the ability of the therapist to effectively engage either the treatment or supervision are not appropriate in this type of professional and evaluative relationship (American Psychological Association, 2002; see also Doehrman, 1976). General life issues, even those that are interpersonal in nature, that are not related to the goals of delivering FAP therapy are better dealt with in the therapist's own psychotherapy, not conducted by the supervisor (American Psychological Association, 2002; Kohlenberg & Tsai, 1991). A FAP supervisor could determine that the therapist should engage his or her own psychotherapy before being ready to conduct FAP. If, however, the supervisor believed that the difficulties the therapist had centered on attempting to engage FAP effectively, and the therapist consented to this process, then those may be discussed in forming the FAP therapist's conceptualization and would be addressed in supervision.

It is the opinion of the present author that while addressing a therapist's own challenges in supervision may be surprisingly difficult; those behaviors being examined and changed should not be a surprise to the supervisee. This is completely analogous to working on client behaviors in FAP sessions. While FAP can be very hard to, and clients can feel discomfort in an interpersonally focused session, the therapist and client are driven by the case co-created case conceptualization. The client and therapist even remind each other why they are working on the targeted behaviors. This same process is used in FAP supervision. The therapist's conceptualization is co-created with the supervisor, and each are driven by this as they address the therapist-in-training's interpersonal repertoire difficulties in conducting FAP. Because the supervisor-therapist relationship has different parameters than the client-therapist relationship, there are some pitfalls that can occur in the process of supervision. The inherent and complex power differential between supervisor and therapist and its potential for exploitation is briefly addressed later.

In FAP supervision, like the therapy, the supervisor needs to begin by building a relationship with the therapist so that when the supervisor attempts to alter therapist responding in-vivo, the supervisor has established him or herself as a mediator of salient social reinforcers (see Follette et al., 1996 for a description of this process for clients). This can be done during the didactic work on behavioral principles and FAP case conceptualizations. At this time, the supervisor in cooperation with the therapist develops the therapist's conceptualization of areas that may need to be addressed during training. From here, the supervisor will need to observe the therapist conduct treatment live or view video-recorded sessions to both assist with direct instruction in FAP and watch for occurrences of therapist problems and improvements. More than this, the FAP supervisor will watch for the occurrences of these behaviors during supervision sessions. This in vivo process best characterizes FAP supervision.

When a therapist problem behavior occurs during supervision session, the supervisor may initially model for the supervisee how this can be brought up with the client, pointing out the parallel that occurs in one context (the therapist's session with the client) with what is occurring in-session (in this case, with the supervisor). Focusing on parallel processes between therapy and supervision is by no means a novel strategy in the history of psychotherapy skills development and training (for a review, see McNeill & Worthen, 1989). However, such an approach is relatively new with respect to contemporary behavioral therapies (Follette & Batten, 2000; Kohlenberg & Tsai, 1991). In their account, McNeill & Worthen (1989) point out that the traditional focus on parallel process has its roots in the psychoanalytic constructs of transference and countertransference, ultimately to be addressed and reduced in order to focus on effective therapeutic interventions. Other authors from more traditional therapeutic positions have pointed out the metaphorical nature of the supervisor-supervisee relationship (Ekstein & Wallerstein, 1972).

Where FAP departs importantly with respect to these accounts of parallel process is that no relationship is seen as metaphorical, not the client-therapist relationship and not the supervisory relationship. Relationship skills are part of everyone's behavioral repertoire. As with any other behavior

they arise under stimulus conditions and are supported by contingencies of reinforcement. With FAP, client behaviors that occur with the therapist in the context of the therapeutic interaction are those same behaviors that occur outside in other relationships under similar functional conditions with other people. If a client has challenges getting his or her needs met, having his or her emotions understood by others, effectively disclosing, and so on, it is assumed those same behaviors can occur with the therapist in-session. The essential principle to keep in mind is function of responses. While it is not impossible for a client to self-injure during a therapy session as an approach to escape difficult emotional experiences, certainly the client can engage in a variety of functionally equivalent escape responses in-session with the therapist (e.g., making distracting comments, attempting to leave session, etc.). The same is true for supervision sessions. From a FAP perspective, the same therapist responses emitted in the context of a therapy session can be engaged with the supervisor. If a therapist is having difficulty responding effectively to his or her own discomfort or anxiety in-session with a client, the supervisor can watch for or even evoke this response during supervision.

It is important to draw the distinction between these assumptions in FAP from classical psychodynamic or psychoanalytic frameworks. While they may appear to be semantic to some, the distinction is in fact paradigmatic and directly impacts the intervention. Behavioral repertoires, either of the therapist or of the client, are the targets of interest in FAP. Ineffective therapist repertoires that occur with a client in-session are the same as those that occur in a supervisory session. Unlike transference and countertransference issues which can be seen as something to be worked through or eliminated to get to the true core of therapy, these repertoires are the substance of the intervention. There is nothing underlying them any more than the contingencies that give rise to and maintain them. That they occur in “parallel” settings simply means there are similar stimulus conditions or similar contingencies of reinforcement. They are not metaphors of another relationship; they are relationship behaviors. Moreover, the FAP therapist does not encourage the client to gain insight into the origin of these behaviors or processes. Similarly, the supervisor works with the supervisee not to gain awareness or understanding but to create a more effective repertoire to better help their clients in FAP.

Once the behavior of interest occurs in supervision, the supervisor will then attempt to have the therapist try an alternate response, one that might be more effective. If this response is more interpersonally effective with the supervisor, he or she will attempt to naturally reinforce that therapist behavior. This natural reinforcement (see Ferster, 1967, 1972 for example) is intended to provide a reinforcer that will be similar to those found outside of supervision and that will likely sustain the newly acquired behavior. Such reinforcers in FAP supervision may take the form of support, the answer to a difficulty question, assurance, and so on. At a principle level, this process of shaping more effective interpersonal repertoires is identical in therapy settings as it is in supervision. The mechanism of change that is seen as most salient and most efficient in FAP, in vivo contingent responding, is the same in both contexts. There are important differences to be outlined based on the nature or frame of the two types of relationships (training versus therapy), but the same behavioral technology is employed in both.

In that the supervisor relationship progresses similarly as the therapeutic relationship in FAP, more complex interpersonal repertoires can be addressed with time, the therapist's conceptualization may be modified, and the therapist will continue to try strategies that were effective in the context of supervision in his or her subsequent sessions with clients. As can occur in FAP therapy, the supervisory relationship often has an ending imposed upon it. Often this is time-related, such as with the end of an academic term or internship. In any case, termination issues can bring up important therapist repertoire issues just as they can with clients. It is important that the FAP supervisor be open to addressing these in an effort to better assist the developing FAP skills of the therapist in managing this often essential component of psychotherapy.

A powerful aspect of FAP supervision occurs when the supervisor is willing to discuss his or her own challenges or foibles in responding with the therapist-in-training. The modeling of effective responding to difficult emotional and interpersonal interactions will teach the therapist a great deal in FAP, provided the supervisee is prompted to engage in effective behavior as well. However, it is also highly instructive when the FAP supervisor is struggling with how to respond, or in fact has responded less effectively and in that moment notices this impact on the therapist. The supervisor can inform the therapist that this is really a difficult situation, that it is hard to do this “right” or “well,” and in the case of an error, that he or she is sorry that the statement “came out wrong.” All of these discussions will, of course, be in the vernacular of the supervisor. The key here is that modeling this process not only can be done in supervision, that it is an important part of doing FAP. Therapists may generate a great response to clients the first time out, but more frequently we doing this bluntly or less skillfully than we intend. Having a supervisor model this “repair process,” or more simply, addressing the complexities of interpersonal interactions, is very helpful to FAP supervises. The therapist-in-training can then take that same repertoire and model it effectively for clients.

Generalization of the FAP Therapist’s Repertoire

One of the overarching goals with FAP supervision is to teach the therapist responses that are flexible and generalizable to a variety of clients (Follette & Callaghan, 1995). The principle in FAP the supervisor returns to (as does the FAP therapist) is watching our impact on others, and trying something different if we did not achieve our goals. FAP therapy can be difficult to teach because it relies so much on the flow of interpersonal interactions. This process is by definition not scripted and very dynamic. The FAP supervisor cannot teach the therapist to “say this when the client says that.” Moment-to-moment interactions are driven by numerous contingencies, and it would be impossible to specify those in such a way that one could prescribe such statements. There are often good rules of thumb with clients that work in other interpersonal situations (don’t yell at them, for example), but these are too broad, and frankly even they may not be accurate in all settings.

In the service of creating robust effective interpersonal therapist repertoires, some (but not necessarily all) FAP supervisors may strongly encourage the supervisee to try what is being learned in supervision not only in subsequent sessions with clients, but out in other relationships as well. Again, the focus of the supervisor remains on those therapist behaviors that will create a more competent FAP therapist. The therapist may be encouraged to attempt these more effective behaviors in areas of his or her life when that practice could help to strengthen the required FAP repertoire. For example, if a therapist is having difficulty listening to a client and not engaging in rapid problem solving, he or she may be prompted to try this in multiple situations outside of therapy. The therapist is not encouraged to conduct therapy on anyone outside of the treatment setting in which he or she is supervised. Said more plainly, the supervisee is not directed to turn family or friends into clients. Nor is the therapist now a client. Still, if there is an opportunity for the therapist-in-training to practice a more effective interpersonal skill in a caring and supportive context, this may occur as a part of response generalization work with FAP supervision.

Group Supervision

In addition to individual supervision, the supervision process can be greatly benefited from a group format. As with many therapies utilizing feedback from multiple members, in group FAP supervision, the primary supervisor is still the most experienced and typically senior therapist on the team. However, the primary supervisor can take advantage of the social contingencies in the group to assist with assessment and training of therapist skills. Supervisees may divide up into teams, helping each other develop their own and clients’ case conceptualizations. They may be assigned to watch each other conduct therapy live and report back to the group on what they saw. Importantly, therapists in training

may use the group format to practice responding to in vivo therapist problem behaviors that are part of another supervisee's conceptualization of skills targeted for development.

Group supervision affords the supervisor and other therapists the opportunity to check out their own responses to other supervisees and adjust their behavior based on group feedback. For example, a supervisee may say to another therapist-in-training, "You know, when you are very vague like this, I have trouble really connecting to what you are trying to say - like maybe you need something from me, but I am not sure what it is. I feel like you are asking for something from me or the group, but I am not sure. Can I check with the other people here to see if they are having a similar reaction?" In this way, one supervisee can prompt the other therapist-in-training in a way that does not feel like peer competition, and he or she can use the group to help determine whether that response to the supervisee was idiosyncratic. If the group, for example, said that was not their experience at all, the person giving the feedback can be helped in focusing their skills of discriminating the impact others have on him or her. If, on the other hand, the group agreed with the supervisee giving the feedback, then they can also help provide opportunities for the therapist-in-training to try another strategy to effectively get what he or she needs in that moment.

In group supervision, the primary supervisor will at times let the group process progress under the natural contingencies as they evolve. However, he or she will need to frequently enter into the discussions in group supervision to help shape and guide supervisee interactions. This can be especially helpful in teaching therapists to discriminate which behaviors are appropriate to discuss and are consistent with each therapist's conceptualization. With that said, allowing the social and interpersonal process to occur for therapists provides numerous opportunities to practice FAP responding, shape discrimination skills of target behaviors, and notice supervisee problems with their interpersonal repertoire that can be addressed to create more effective FAP therapists.

Assessment in FAP Supervision

While there has been considerable interest in research on psychotherapy supervision, few conclusive findings exist about the effectiveness of this process in imparting complex interpersonal and social skills and relating this to therapeutic outcome (see for example Alberts & Edlestein, 1990; Holloway & Neufeldt, 1995; Lambert & Ogles, 1997). One advantage of behavioral therapies lies in their ability to be empirically studied. This empiricism can be translated onto research investigating behavioral change from supervision. Though there are many methodological challenges to this area of investigation, there may be some strategies used in the research that has begun on FAP that could be used with FAP supervision. This brief section highlights some of these approaches that may be used. It is not an attempt to convince the reader that there is research supporting FAP supervision as an effective way to impact clinical skills. FAP is still relatively new and lacks this body of literature.

There are several strategies for documenting behavioral change with FAP and FAP supervision. One entails coding behaviors on a more microanalytic level as they occur in a session. These behaviors or client and therapist "turns" can be analyzed for changes in frequency of occurrence across session. For example, using the Functional Analytic Psychotherapy Rating Scale (Callaghan, 1999), investigators can document how often a therapist responds effectively in-session to client improvements or problems compared to how often these opportunities are missed when those client behaviors occur.

This strategy was employed in a single subject study examining the effectiveness of a FAP therapist treating a client meeting criteria for personality disorder not otherwise specified (Callaghan, et al., 2003). In this study, the number of effective in-session FAP therapist responses to client behavior changed for a supervisee over the course of the treatment. The therapist had a documentable increase in effective responding, supporting the thesis that she had improved her in her ability to conduct FAP.

Relating this change in therapist responding directly to the supervision provided is still necessary, but this is at least a step in the right direction, empirically speaking.

Assessment systems such as the FASIT may be helpful in these situations targeting therapist behaviors for change and tracking that change over time. Supervisors and researchers can document the occurrence of both effective and ineffective responses over time and relate those to which behaviors were a focus of clinical supervision. Relating this change to improvements in client behavior is the ultimate goal of process-outcome research with FAP. The bottom line for psychotherapy research continues to lie with whether the client improved as a function of the psychotherapy. Using observational behavioral coding methodology such as that described with the FAP Rating Scale combined with consistent on-going assessment of client and therapist behavior may help with this process.

One of the critical assessment questions related to FAP centers on competence to conduct this therapy. A question that is repeatedly asked by supervisors and therapists alike is “Who can and cannot do FAP?” This is a difficult question, and certainly is better asked in a less binary fashion. The question remains, who can do FAP more effectively, but certainly we can ask “Who is more effective doing FAP with which kind of clients?” in a way that requires us to specify which interpersonal repertoires (excesses and deficits) are more problematic or more advantages with certain client repertoires. Future empirical research will hopefully provide answers to these questions.

Ethical and Professional Issues in FAP Supervision

The general ethical and professional issues related to conducting both FAP therapy and FAP supervision are the same as for any other psychotherapy. In the supervisory relationship, it is helpful to discuss issues of privacy, the challenges of promising confidentiality in a context that is partly evaluative by the supervisor and the issue of privacy and confidentiality by peers in group supervision. In any interpersonally rich interaction, particularly FAP supervision focusing on complex social skills, the risk of supervision shifting into psychotherapy for the supervisee exists (McNeill & Worthen, 1989). As stated before, the current author agrees with one of the definitions of supervision outlined previously (e.g., Holloway, 1997) that makes the distinction between supervision and psychotherapy for the therapist-in-training. Supervision continues to focus on those behaviors germane to the development of effective professional and therapeutic skills of the supervisee (American Psychological Association, 2002; see also Rigazio-Digilio, Daniels, & Ivey, 1997). While this can become a challenge to demarcate at times, separating the personal life of the therapist and the behaviors particular to psychotherapy, it is imperative the supervisor help these remain clear to members of the dyad or supervision team.

Like psychotherapy, there is a power differential in a supervisory relationship, and in this differential exists the potential for exploitation and abuse in the relationship (Holloway, 1999). It is essential that the supervisor and therapist continue to be mindful of the potential for exploitation and work to prevent this occurrence whenever possible (Falender & Shafranske, 2004). One aspect of preventing an abuse in this power hierarchy lies with the supervisee providing informed consent for the type of relationship he or she is entering with the supervisor. That is, in FAP, the therapist's interpersonal skills as they are relevant to conducting FAP effectively are open to evaluation and being addressed in supervision. It is important that the therapist (like a client) understand that this will be part of his or her training. In addition, the supervisor and therapist can clarify their roles and make the distinction between the development of professional skills as a therapist and psychotherapy for the supervisee. If the therapist is seeking the latter, their own therapy, it is important to help the supervisee understand the inappropriateness and the ineffectiveness of attempting that type of dual role in a supervisory relationship.

The supervisor and therapist-in-training relationship is a complex one. The supervisee should be made aware of and remain thoughtful about contextual variables that can create powerful dynamics in the supervisory relationship such as gender (Conn, 1996; Munson, 1997) and cultural diversity (Daniel, Rosircar, Abeles, & Boyd, 2004; Lopez, 1997). While there are multiple perspectives on when and how to address these issues, it is important that supervisors be aware of them and have a willingness to address their impact on the supervisory relationship. Indeed, some supervisors would argue that such contextual variables are inherent in any interpersonal dynamic interaction and should be addressed from the outset.

Additional professional and ethical issues that are not specific to FAP but can play an important role in FAP and other interpersonal psychotherapies during training include the inherent evaluative process of supervision (Falender and Shafranske, 2004; Holloway, 1999). The supervisor retains the task of being both the trainer of professional and interpersonal skills for psychotherapy and gate-keeper for the professional practice community and even academic requirements (Bernard & Goodyear, 2004). While this does not inherently create a dual role, it does put particular limitations on how information is processed, divulged, and used by the supervisor. Again, this is nothing new for FAP, but it is an important discussion for both supervisor and supervisee to have about the boundaries of the supervisory relationship in the same way that discussing the limitations of confidentiality (e.g., suicidal intent) is to the client-therapist relationship. Handling this discussion effectively and amicably can create an excellent model for therapist interactions with future clients.

One additional issue concerning FAP supervision merits a brief discussion. While this issue is not necessarily ethical, it remains at least a professional standard the present author feels strongly about when training new therapists in FAP. When altering client behavior, therapists are trained to contingently respond to the interpersonal impact of ineffective client behavior as it occurs in-session. This may create aversive contingencies for the client with which the therapist will attempt to prompt more effective client responding. During supervision, therapists are repeatedly admonished to never stop at the moment of simply pointing out ineffective client behavior or providing a consequence to that behavior. Stopping at this point does not allow the client to attempt an alternate, more effective behavior and have the therapist differentially reinforce that behavior. This is experienced as very aversive for the client and does not provide an adequate opportunity for behavioral change and learning to occur. This does not mean clients instantly engage in more effective behavior when a therapist prompts its occurrence. The key is that the therapist provides that opportunity (repeatedly, if necessary) and shapes an approximation for a more effective interpersonal behavior by the client.

The same rule is true in FAP supervision: The supervisor should prompt the therapist for an alternative response once the ineffective behavior is responded to or addressed. It is not common for an experienced FAP supervisor to fail to prompt a more effective behavior, but this process can occur in FAP supervision and will not create an opportunity for differential reinforcement of a more effective therapist response. As discussed above, in the context of group supervision the supervisor should help guide the process of feedback by supervisees to peer therapists in a constructive, empathic, and effective way.

Conclusion

FAP supervision holds many commonalities with other interpersonal and contemporary behavioral psychotherapies. The ethical and professional principles underlying FAP are not unique. However, given the paradigmatically driven mechanism of clinical change and corresponding parallel for supervision, there are some features of FAP training addressed here that are unique. Considerable work needs to be accomplished with respect to empirically documenting the hypothesized mechanism of clinical change in FAP for both client and therapist behavior. The systems of assessment described here (the FIAT and FASIT) may help in this program of research.

FAP supervision like FAP therapy is a very intense and powerful process that creates meaningful and important relationships and behavior change. Kohlenberg & Tsai (1991) stated this very well in their original text on FAP, "The supervisory relationship is difficult and challenging, and yet rewarding, for the student therapist who is required to develop intimacy skills, to be open, vulnerable, honest, aware and present." (p. 196) The relationship between therapist and supervisee is bound by ethical principles and boundaries, but it can extend beyond the termination of training in a way that psychotherapy cannot do easily or ethically. These professional supervisory relationships can be wonderfully supportive and continue to grow in ways that can be hard to convey in paper such as this. Similar to our hopes for client change as a result of psychotherapy, the therapist skills resulting from the process of FAP supervision can last well beyond termination.

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Improving Implementation of Classroom Instruction Through Teacher-Directed Behavioral Consultation: A Single-Case Demonstration

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Abstract

In an illustrative case study we describe the process and outcome of class wide behavioral consultation with a public school teacher to improve her implementation of instructional procedures. Consultation emphasized formulation of a classroom behavior support plan, selection of mutually determined intervention objectives, data-based decision making, and performance feedback. Evaluation conducted in an AB design showed that consultation was associated with improved teacher and student behaviors. Elements of effective consultation and the delivery of behavior support intervention in public schools are discussed.

Keywords: behavioral consultation, behavior support, public schools.

Public school classroom teachers frequently require technical assistance consultation from psychologists and behavior analysts (Luiselli & Diamant, 2002). One objective of consultation is to improve how teachers conduct instruction with their students. The benefit from such consultation is that more effective instruction should facilitate learning and academic achievement (Skinner, 1998). Consultants also assist teachers in developing and implementing behavior support interventions. In this regard, *Positive Behavior Support (PBS)* (Sugai & Horner, 2002) posits a three-tiered implementation approach. At the whole-school level, “universal” procedures address the entire student population in both classroom and in non-classroom (e.g., cafeteria, outdoor areas, corridors) settings. The second tier, selected “targeted” interventions, concentrates on at risk students who can benefit from group-oriented supports (e.g., social skills instruction, checking in and out with a significant adult) or class-wide programs that may be established with individual teachers. Finally, “intensive” or individualized, student-specific programs are designed for students who require more intensive support. Research demonstrates that PBS practices within this three-tiered model can reduce reliance on punitive (exclusionary) discipline methods, facilitate academic achievement, and improve school climate (Luiselli, Putnam, Hander, & Feinberg, 2005; Putnam, Luiselli, Handler, & Jefferson, 2003; Sugai, Sprague, Horner, & Walker, 2000), as well as increase task engagement and proper implementation of effective instructional practices (Luiselli, Putnam, and Handler, 2001).

In many situations, consultants and teachers produce written plans that delineate instructional and behavior support procedures (Coddling, Feinberg, Dunn, & Pace, 2005; Garrity & Luiselli, 2005). Even when an intervention plan is developed, it will only be effective if implemented accurately. Studies suggest that providing teachers with direct training and performance feedback related to intervention implementation is one approach to increase procedural integrity (Mortenson & Witt, 1998; Noell, Witt, Gilbertson, Rainer, & Freeland, 1997; Sterling-Turner, Watson, & Moore, 2002; Witt, Noell, LaFleur, & Mortenson, 1997). Specifically, it appears that integrity is compromised when teachers are not monitored during intervention implementation and do not receive corrective feedback. Conversely, when teachers set intervention objectives and are informed accordingly, procedural integrity and desirable outcomes are produced (Mortenson & Witt, 1998; Noell et al., 1997).

The following study illustrates a model of behavioral consultation that was used with a public school teacher to improve her implementation of instructional procedures in the classroom. We describe

the process of consultation and resulting effects on the teacher's performance as well as on-task behavior of her students. As a case demonstration, our findings have relevance for behavior specialists providing consultation to public schools and the type of technical assistance that may be necessary to promote evidence-based instructional practices.

Method

Participant and Setting

Consultation was conducted with Ms. Jones, a sixth-grade science teacher at a public middle school (grades 6-8) located in an urban community. The setting for the study was Ms. Jones's science classroom comprised of approximately 25 students.

During the academic year preceding the study, Ms. Jones was a member of a Behavior Support Team (BST) with other teachers and administrative staff. The BST developed and implemented a school-wide behavior support plan that was in effect at the time of the study. Following implementation of the school-wide plan, Ms. Jones volunteered to receive additional training and consultation that focused on the second level of the PBS model: targeted class-wide behavior support.

Measurement

The *Classroom Observation System* (Handler & Putnam, 2002) was used to measure teacher and student behaviors. *Teacher Instructional Activity* was recorded when Ms. Jones presented academic content or solicited academic responses from students. *Teacher Proactive Monitoring* was defined as Ms. Jones moving around the classroom and/or visually "scanning" students. *Teacher Positive Reinforcement* consisted of Ms. Jones praising students when they demonstrated expected behaviors such as completing assignments and following directives. *Teacher Behavior Correction* was Ms. Jones verbally correcting inappropriate behaviors performed by students. Finally, *Student On-Task/Off-task* was scored as engagement in an academic activity (e.g., listening to teacher instruction, reading, writing an assignment) or non-engagement in an academic activity for at least 3s respectively.

The senior author recorded data during 20-minute observation periods prior to and during consultation. Using the *Classroom Observation System*, she scored teacher and student behaviors during alternating 15-s intervals for the duration of the observation period. Students were observed systematically in random order (i.e., moving up and down rows of desks). Recording intervals were timed on a hand-held stopwatch. Observations were conducted while Ms. Jones performed individual seatwork, small group, and large group instruction with her students.

Procedures

Baseline

One baseline observation period was conducted before the introduction of teacher-directed consultation. At baseline, Ms. Jones had completed 12 hours of didactic training with several other teachers. Doctoral-degreed consultants presented the workshops, which focused on classroom behavior support and at the conclusion of training, Ms. Jones and the other teachers developed class-wide plans. The primary components of these plans were (1) establishing a maximum of five, positively stated, behavior-specific classroom expectations (e.g., "Raise your hand for help."), (2) instituting procedures to facilitate classroom routines (e.g., making transitions, collecting completed assignments), (3) teaching directly the classroom expectations and routines, (4) strategically monitoring student performance, (5) positively reinforcing exemplary behavior through praise, approval, and acknowledgement, and (6)

correcting student behavior as warranted. Once formulated, Ms. Jones and the other teachers implemented their classroom behavior support plans.

Teacher-Directed Consultation

The teacher-directed consultation evaluated in the study was introduced after Ms. Jones developed her classroom behavior support plan. The senior author provided consultation services by meeting with Ms. Jones during 6, 45-minute sessions over a 15-week span. Each consultation session followed a classroom observation period during which the teacher and student behaviors were recorded. Sessions began with the consultant reviewing the objectives of observation and previously identified intervention goals. The consultant discussed how Ms. Jones had implemented the classroom behavior support plan, provided graphs of respective observational data, and answered questions. The results of each observation also were presented through a written summary using the *Teacher Feedback Form* (Table 1) that was completed by the consultant and retained by Ms. Jones when the session concluded. In summary, the basis of consultation was to observe Ms. Jones implementing instruction, document her performance objectively, report results to her visually, set goals collaboratively, and present recommendations. The consultant had received approximately four hours of training on use of the *Teacher Feedback Form*, how to review each step, and strategies to guide Ms. Jones towards identifying goals and areas requiring improvement.

Table 1
Teacher Feedback Form

Teacher: _____ Date: _____

Consultant: _____

1. Rationale for observations.
 - a. Systematic and objective way to observe the environment
 - b. Provides a baseline and method of monitoring progress
2. Use of data/information from observations.
 - a. "Supportive" rather than "evaluative"
 - b. Information will be confidential
3. Description of observation tool.
 - a. Teacher and Student categories
 - b. Observe a different student every 15 seconds in order to be objective
 - c. Research indicates that these behaviors are essential for classroom management
4. Area(s) that are strengths:

_____ Instructional Activities	_____ Monitoring
_____ Reinforcement	_____ Behavior Correction
_____ Ratio of Instruction to Behavioral Correction	_____ On-Task
_____ Ratio of Reinforcement to Behavior Correction	_____ Off-Task
5. Area(s) that need improvement:

_____ Instructional Activities	_____ Monitoring
_____ Reinforcement	_____ Behavior Correction
_____ Ratio of Instruction to Behavioral Correction	_____ On-Task
_____ Ratio of Reinforcement to Behavior Correction	_____ Off-Task

6. Area(s) that the teacher and consultant agree to target between now and next meeting:
7. Plan for improving the targeted areas:
8. Plan for monitoring implementation of strategies:
9. Plan to determine plan effectiveness:

Results

Figure 1 displays the percentage of intervals in which teacher and student behaviors were recorded during the baseline observation period and with consultation in effect (average of 6 observation sessions). These results indicate that during consultation Ms. Jones spent more time conducting instructional activities and positively reinforcing students, while reducing her behavior correction. Compared to baseline, students were more attentive within the consultation phase.

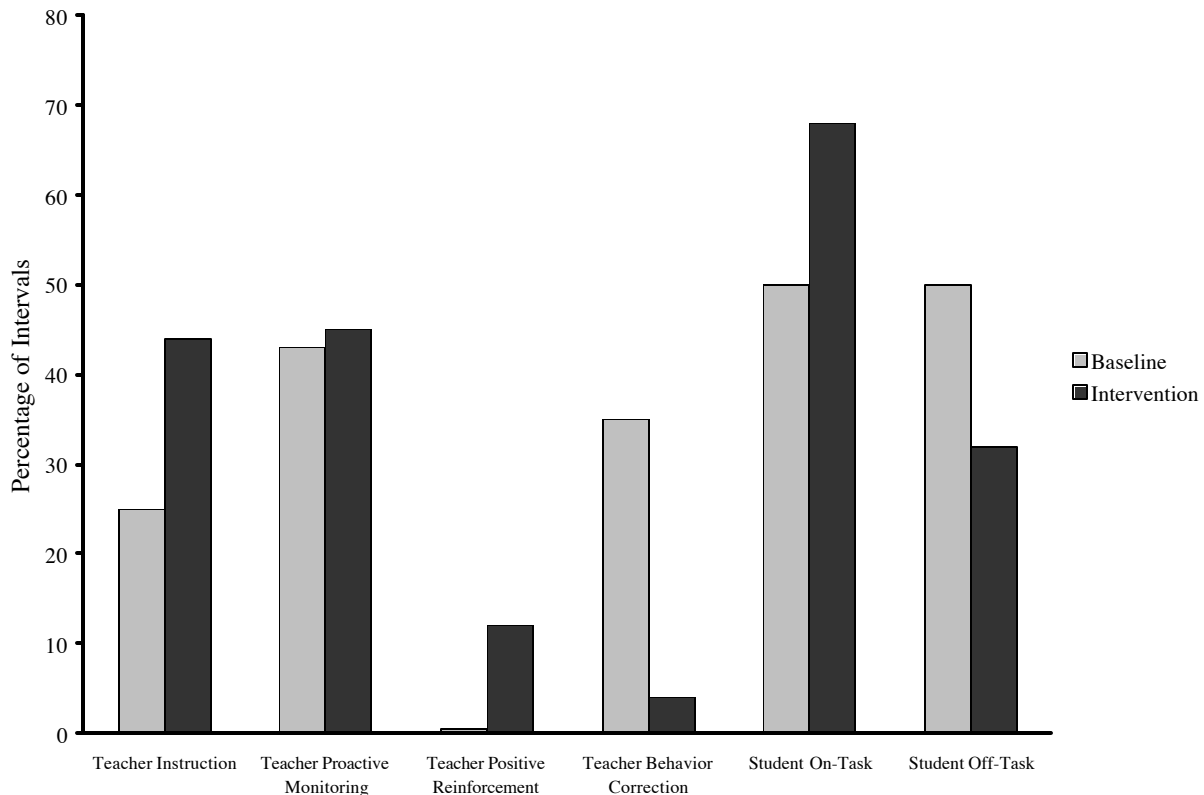


Figure 1: Teacher and student behaviors (percentage of recording intervals).

Figure 2 represents Ms. Jones's ratio of instruction-to-behavior correction and the ratio of positive reinforcement-to-behavior correction. Relative to baseline, consultation was associated with nine times more instruction-to-behavior correction and three times more positive reinforcement-to-behavior correction.

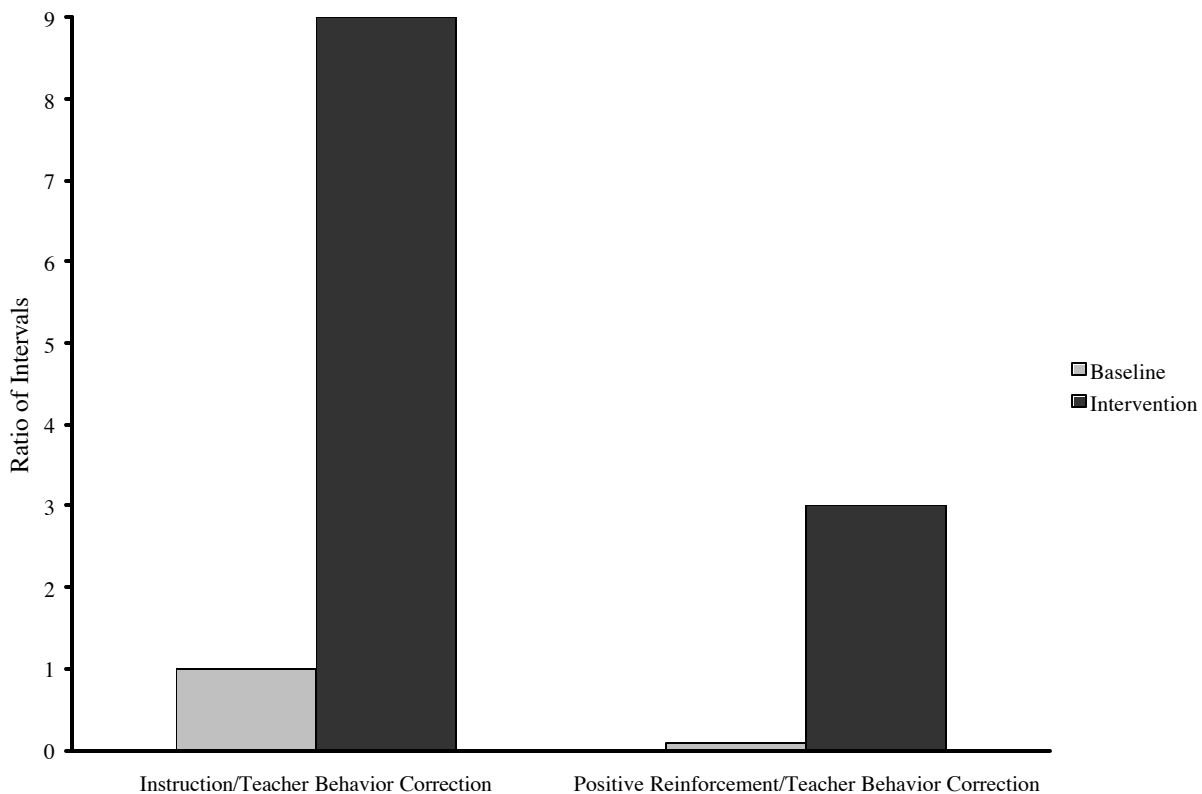


Figure 2: Teacher instruction-to-behavior correction and positive reinforcement-to-behavior correction (ratio of recording intervals).

Discussion

Our evaluation illustrates how systematic consultation emphasizing performance feedback and data-based decision making can improve teacher and student classroom behavior. The teacher and consultant entered into a collaborative problem solving relationship driven by observational outcomes and refinement of evidence supported intervention procedures. Although the teacher had received training in whole-school and classroom focused behavior support, baseline observation revealed that her instruction could be enhanced. With the exception of proactive monitoring (which did not change), Ms. Jones became a more effective teacher with consultation, as reflected in her implementation of specific procedures and associated increases in student on-task behavior.

Although Ms. Jones's satisfaction with consultation services was not assessed formally, we can report anecdotally that she was pleased with the process and results. Consultation acceptability can be influenced by several factors including a teacher's motivation to receive technical assistance from an "outside" professional, the interpersonal manner by which consultation is delivered (Luiselli, 2002), and the feasibility of recommended intervention procedures. In the present case, Ms. Jones expressed a desire to learn additional skills, the consultant was consistently supportive, and there were mutually determined intervention objectives. These features likely contributed to the positive interactions between Ms. Jones and the consultant.

The consultative relationship with Ms. Jones relied heavily on performance feedback. Although feedback alone can improve performance (Balcazar, Hopkins, & Suarez, 1985), it generally is more effective when combined with positive reinforcement (Alvero, Bucklin, & Austin, 2001). Performance

enhancement interventions also are more effective when feedback is provided graphically and frequently (Balcazar et al., 1985). Others have posited that giving people feedback about their performance may be most successful when they are highly motivated to change their behavior (Roscoe, Fisher, Glover, & Volkert, 2006). Each of these factors was adopted by the consultant in her technical assistance to Ms. Jones.

Being a case demonstration, the study had several limitations. Most obvious is that we did not perform an experimental evaluation. Second, there was only one baseline observation that was compared to multiple observations throughout the consultation process. An additional concern is that the measurement system used in the study did not include assessment of interobserver agreement (IOA), although the consultant had achieved acceptable agreement (i.e., at least 80%) during her initial training on the instrument. Finally, we did not document whether the improved teacher and student classroom behaviors were maintained when consultation was terminated. These are exacting research standards within a “natural” setting such as a public school but should be addressed in more controlled studies concerning the efficacy of behavioral consultation services (Luiselli & Diamant, 2002).

In conclusion, this case provides evidence that some teachers exposed to pre-consultation training may benefit from additional, individualized directed assistance when implementing class-wide interventions. The challenge for public schools is to retain consultation services that produce desirable results and are both time-limited and cost-effective. Because our evaluation was performed under “real world” conditions, we propose that the findings have strong external validity, endorsing a similar consultation methodology that addresses classroom instruction and behavior support.

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A Summary of Published Mode Deactivation Therapy Articles

Jack A. Apsche

Abstract

This article summarizes all of the Mode Deactivation Therapy, (*MDT*) articles published to date. MDT has shown to be more effective than Cognitive Behavior Therapy, (*CBT*), Social Skills Training, (*SST*), and Dialectical Behavior Therapy, (*DBT*), Apsche, Bass, Jennings, Murphy, Hunter, and Siv, (2005); Apsche & Bass, (2005); Apsche, Bass & Murphy, (2004). This article suggests that MDT is a viable clinical Evidenced Based Psychotherapy.

Keywords: Mode Deactivation Therapy (MDT), Cognitive Behavioral Therapy, (CBT), Dialectical Behavior Therapy, (DBT), Social Skills Training, (SST), Evidenced Based Psychotherapy, Adolescent Treatment, Child Behavior Checklist (CBCL), Devereux Scales of Mental Disorders (DSMD), Treatment as Usual (TAU)

Introduction

Mode Deactivation Therapy, (*MDT*) was developed by Apsche to address adolescents who were not successfully completing treatment. Prior to MDT, these adolescents were treated with Cognitive Behavioral Therapy, (*CBT*) and Social Skills Training, (*SST*) groups.

Many of these more difficult adolescents were unresponsive to CBT and SST. These adolescents engaged in aggressive, physical, sexual and verbal behaviors. MDT has evolved significantly since the initial article by Apsche, Ward & Evile, (2003). There now are a MDT Client Manual Apsche, (2006) and a new Clinician's Manual, Apsche, (2006), as well as a Family MDT manual, Apsche, (2006).

Apsche et. al., (2003) presented the initial article on MDT, as a theoretical article written as a case analysis of an adolescent who was non-responsive to CBT and any previous treatment(s). In the article Apsche et. al., (2003) reviewed the core foundation for MDT and introduced the aspects of MDT that were borrowed from DBT, Linhan, (1992) and CBT, A. Beck, (1994) & J. Beck, (1996).

Apsche & Ward, (2002) presented a descriptive treatment results between two groups of adolescents who were sexually and physically aggressive. The results of this study demonstrated that MDT was superior to CBT in redirecting both physical and sexual aggression. Apsche & Ward's results suggest that MDT was far superior by more than one standard deviation in reducing the internal and external distress in all categories as measured by the Child Behavior Checklist, (*CBCL*) and the Devereux Scale of Metal Disorders, (*DSMD*). MDT also reduced sexual offending in all behaviors as measured by the Juvenile Sex Offenders Adolescents Protocol (*J-SOAP*). MDT reduced the non-static portion of the J-SOAP almost two standard deviations more than CBT.

Apsche & Ward Bailey, (2003), (2004), published a three part article on the application of MDT in a Theoretical Case Analysis. These articles presented MDT in a linear step-by-step case analysis. These articles were the blue print for the clinical application of MDT.

The article attempted to outline a clinical application of MDT while presenting a case of an adolescent that had been removed from five previous treatment facilities for violent and aggressive behaviors. In this case, MDT helped reduce his aggression, physical and verbal, as well as it gave the youth a viable treatment to reduce his fears and anxieties.

Apsche, Bass & Murphy, (2004) presented a study that compared MDT to CBT on a total of forty adolescents with Conduct and Personality Disorders. Apsche, Bass and Murphy, (2004) expanded their previous study to include sexual aggression in their comparison of CBT and MDT. Apsche, et. al., (2004) demonstrated that MDT showed superior results in reducing internal and external distress, as measured by the CBCL, DSMD, and J-S0AP. MDT was superior to CBT in this study by more than one standard deviation in all categories, including internal psychological distress and sexual and physical aggression.

Apsche & Ward Bailey, (2004) presented a case study on MDT Family Therapy. This case study was a detailed theoretical case analysis. This therapy and practice in an actual case study on a 12 year old European American male adolescent and his family. Apsche, (2005) presented an article that articulated problems with Beck's, (1996) cognitive model. This article presented a theoretical framework from which MDT was developed as a clinical technology.

Apsche, Bass, Jennings & Siv, (2005) received specific results of 40 adolescent males treated with MDT and CBT. Once again MDT was far superior by nearly two standard deviations in reducing sexual and physical aggression, than CBT. MDT also reduced symptoms of Psychological distress as well.

Apsche, (2005) presented a study that examined the theoretical role of mode in relation to impulses. Apsche, (2005) concluded that hyper charged modes might often be mistaken for impulses. The article concluded that many behaviors thought to be impulses might actually be better accepted for under the "theory of modes". Apsche theorized that modes that are activated appear as impulses but is actually the youngster reacting to his perception of fear. These perceptions are "hyper-charged primal modes", Beck, (1996).

Apsche, Bass, Jennings, Murphy, Hunter & Siv, (2005) compared the efficiency of three treatment methodologies for adolescent males in residential treatment for problems with conduct, personality, sexual, and physical aggression.

Results suggest that MDT was far superior to CBT and SST in reducing both physical and sexual aggression in conduct disordered and personality disordered adolescents. This study had a clinical population of sixty male adolescents and was conducted following rigorous protocols to assure fidelity to each Treatment Methodology.

Apsche & Siv, (2005) presented MDT as a treatment methodology with a suicidal adolescent male. The adolescent had attempted suicide eight times. This case study examined the adolescent from the MDT assessment and case conceptualization process through treatment. The authors concluded that this specific case MDT showed promise in treating the adolescent's suicidal behaviors. Apsche & Siv, (2005) made no suggestions of MDT as a viable treatment methodology beyond this case study.

Apsche & Ward Bailey, (2005) presented a chapter on MDT as a Cognitive Behavior Therapy for young people who sexually abuse. The chapter was a review of the MDT methodology and a case study. The MDT methodology was detailed in both the case conceptualization process and treatment. Apsche & Ward Bailey, (2005) demonstrated the potential effectiveness of the MDT methodology as a clinical methodology.

Apsche, Siv & Matteson, (2005) presented a case study comparing the effect of Mode Deactivation Therapy, (MDT) with Dialectical Behavior Therapy, (DBT). It appears in this case study that MDT helped reduce Self Injurious Behavior, (SIB) 91.24%, physical aggression 87.56%, and physical holds 81.69%. MDT reduced all target behaviors 85-90% more than DBT. The authors' did not conclude

that BDT was a superior treatment to DBT. They did conclude that in this particular case MDT was far superior to DBT for this aggressive, self injures, 13 year old male adolescent.

Apsche, Bass, Siv & Matteson, (2005) examined the efficiency of Mode Deactivation Therapy, (MDT) as compared to Cognitive Behavioral Therapy, (CBT) on the sexual and physical aggression of adolescent males. This study included 40 adolescent males. The measures were the Child Behavioral Checklist, the DSMD, and behavioral data.

MDT was superior in reducing both physical and sexual behavior in this study. MDT also reduced both internal and external distress. In all areas of the CBCL and DSMD, MDT was nearly two standard durations superior to CBT in this particular clinical study.

Apsche, Siv & Bass, (2005) implemented MDT in a case study with a 16 year-old male with problems with conduct and personality disorder and fire setting behaviors. MDT reduced his physical and sexual aggression 70-80% in three months. Previously this adolescent had been treated with DBT. It appears in this case that MDT was more effective with this adolescent than DBT. He had DBT in group and individual therapy for nearly one year with no change in his behavior, prior to the implementation of MDT.

Apsche, Bass & Siv, (2005) presented a study comparing MDT, CBT and SST on a group of 60 adolescents. The study examines the levels of internal distress and external distress, as measured by the CBCL and DSMD. In this study MDT was superior to CBT in all categories by at least two standard deviations and MDT was superior to SST by 4 standard deviations.

This study clearly demonstrated the superior affects of MDT to standard CBT and SST. Although, this study was again a “real world” descriptive study, it affected two control groups and as random assignments as possible in the real clinical world. All Clinicians in each condition were equally trained and supported by supervisors of a doctoral level Psychologist.

Apsche, Bass & Siv, (2005) presented a summary of results of MDT and included two year post-treatment results. Most significant in this study were the reported recidivism results.

The recidivism rates for the study are as follows:

- 1) MDT- 7%
No sexual offenses.
- 2) CBT- 20%
Includes sexual offenses and aggravated assault.
- 3) SST- 49.5%
Includes sexual offense, murder, aggravated assault, etc.

The significance of this study is that in an applied Clinical setting, MDT is superior to CBT and SST in reducing sexual aggression, physical aggression, internal and external Psychological distress, and MDT demonstrates the lowest recidivism results by 15% over CBT and 42.5% over SST two years post treatment.

The two year post treatment results for MDT strongly suggest that MDT has generalized effects to the community, post treatment. It was also significant that in the 7% recidivism, there are no felony arrests or seriously harmful behavior toward others as victims.

Apsche & Bass, (2006) presented a study of MDT vs. TAU, 7 adolescents per group, in community out patient setting for adolescent males. MDT was superior in reducing behaviors including physical and verbal aggression, school suspension and psychological distress, as measured by the CBCL. MDT was superior by more than two standard deviations in all categories. This study also included parent behavior reports that showed superior results on the MDT group.

Apsche & Bass, (2006) presented a study using MDT vs. TAU with 40 suicidal adolescent males. The suicidal ideations and thoughts were measured by the Beck Depression Inventory II, (*BDI-II*), and the Reynolds Suicidal Ideation Questionnaire High School Form (*SIQ-HS*).

The results demonstrated that MDT was superior to TAU by 6 standard deviations reducing suicidal ideations as measured by the BDI-II and the SIQ-HS.

The overall results in this study suggest that MDT might be an effective treatment methodology for this typology of adolescent males. These results are significant since there are few effective treatments for adolescent males with problems with conduct, personality traits and suicidal beliefs and behaviors.

Apsche & Bass, (2006) presented the follow-up recidivism data for MDT in a community treatment setting. A total of 13 males participated in this study and follow-up results. Results indicated that the MDT had significantly lower recidivism rates.

The MDT group had no referrals, 40 residential programs, while TAU had a 50% referral rate. MDT had a better than 4 standard deviation superior results in school suspensions and school explosions.

The MDT group had no sexually aggressive behaviors, as well as 75% better acting out, and 85% disobedience rate as reports by parents and school authorities.

This study suggest and supports the Apsche, Bass & Siv, (2005) results, indicating that MDT treatment effects are generalized to settings, including multiple group, residential, home, and community settings.

MDT appears to have demonstrated in applied clinical settings that it has great potential as an evidenced based psychotherapy.

MDT has shown treatment effects are generalizable to settings, including, multiple group, residential, home, and community settings.

MDT appears to have demonstrated in applied clinical settings that it has great potential as an evidenced based psychotherapy.

Demographics

Underwood, Von Dresner & Phillips, (2006) discuss and review evidenced based treatments for juveniles. Underwood, et. al., (2006) states that most evidenced based psychotherapists do not focus on African American youth. Underwood states, "more studies are needed to examine the effectiveness that they may have on youth with special needs. Including

youth of color, ethnic minorities, violent adolescents and those with mental health issues,” (p.295).

MDT research appears to address the concern that Underwood and his colleagues raised. The sample size of MDT suggests that 77.8% of the youth were African American, while 20.9% were European American and only 5% were Hispanic.

It appears that MDT might be an evidenced based psychotherapy that has some significant positive effects on African American youths with the typology described in the MDT literature.

MDT also has shown in numerous studies, Apsche, Bass, Jennings & Siv, (2005), Apsche, Bass, Siv, (2005), Apsche, Bass, (2006), to have reduced aggressive behaviors as well as mental health issues, Apsche, Bass, Jennings, Murphy, Hunter & Siv, (2005).

The demographic of the MDT appear to describe a typology of adolescents that MDT demonstrates a positive effect within treatment. This typology in adolescents from 14^{1/2} to 18 year olds including the following diagnosis:

- | | |
|--------|--------------------------------------|
| AXIS I | 1) Conduct Disorder |
| | 2) Oppositional Defiant Disorder |
| | 3) Post Traumatic Stress Disorder |
| | 4) Major Depression |
| AXISII | 1) Mixed Personality Disorder |
| | 2) Borderline Personality Disorder |
| | 3) Narcissistic Personality Disorder |
| | 4) Dependent Personality Traits |
| | 5) Avoidant Personality Traits |

A review of the MDT treatment research suggests that MDT might be a promising evidenced based psychotherapy for adolescents who fit the typology, regardless of their race or ethnicity.

Hopefully, further research will validate these current MDT findings.

METHOD

Sample Characteristics

A total of 143 male adolescents participated in MDT studies. All participants were clients in residential treatment centers, except for 7 who were treated in an outpatient center. All referrals were from County Juvenile Justice and the Department of Youth and Family Services. In this review, we examined the results of numerous publications of MDT and will compare them to the other treatment conditions. The case the two treatment conditions showed similarity in terms of the frequency of Axis I and Axis II diagnoses, age, and racial background. To ensure consistency in the delivery of the two respective treatments, therapists were specifically trained in the one of the two treatment curriculums/methods. For this review due to the range of clinical research the other condition in this case could composed of CBT, SST or DBT but will be referred to as the Treatment As Usual (TAU) group.

Mode Deactivation Therapy (MDT): A total of one hundred forty three adolescents were assigned to the MDT condition. The group was comprised of 97-77.8% African Americans, (20.9%) European Americans, 8 (5.6%) Hispanic/Latino Americans and 2 other races, with an average age of 16.2.

The principal Axis I diagnoses for this group included 39 (40.2%) Conduct Disorder, 10 (10.3%) Oppositional Defiant Disorder, 25 (25.8%) Post Traumatic Stress Disorder, and 17 (17.5%) Major Depressive Disorder, primary or secondary. Axis II diagnoses for the group included Mixed Personality Disorder (22), Borderline Personality Traits (3).

Table 1.

Axis I	MDT	Percentile
Conduct Disorder	39	40.2%
Oppositional Defiant Disorder	10	10.3%
Post Traumatic Stress Disorder	25	25.8%
Major Depression	17	17.5%
Other Axis I Disorder	6	6.2%
Axis II		
Mixed Personality Disorder	22	55%
Borderline Personality Traits	12	30%
Narcissistic Personality Traits	6	15%
Dependent Personality Traits	0	0
Avoidant Personality Traits	0	0
Race		
African American	97	77.8
European American	38	20.9
Hispanic/Latino American	6	.05
Other	2	
Total	142	
Average Age	16.2	

Measures

Two assessments were used to measure the behavior of the residents, which included the Child Behavior Checklist (CBCL; Achenbach, 1991) and the Devereux Scales of Mental Disorders (DSMD; The Devereux Foundation, 1994).

The CBCL is a multi-axial assessment designed to obtain reports regarding the behaviors and competencies of 11 – to – 18 year olds. The means and standards are divided into three categories: internalizing (which measures withdrawn behaviors, somatic complaints, anxiety and depression), externalizing (which measures delinquent behavior and aggressive behavior), and total problems (which represent the conglomerate of total problems and symptoms, both internal and external).

To better elucidate between-group differences in magnitude of effect, independent factorial analyses on treatment model and variable were conducted.

Table 2
Post-Treatment Scores and Percent Reduction in Types of Aggression Across Treatments

	MDT		TAU	
	Post-Treatment Score	Percent reduction	Post-Treatment Score	Percent reduction
Physical Aggression	.30	80.7%	.425	70.7%
Sexual Aggression	.25	84.5%	.485	71.3%

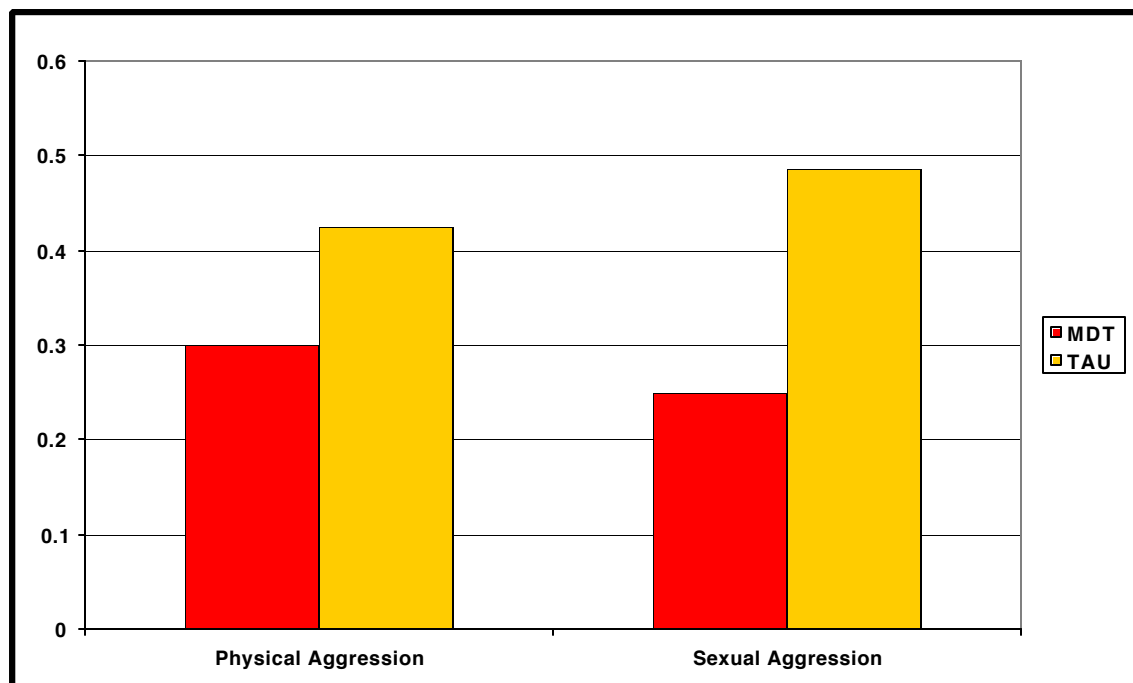


Figure 1: Physical Aggression and Sexual Aggression Percent reduction for both groups

Table 3
Means and Standard Deviations on Assessment Measures at Three Time Points By Treatment Groups

	MDT						TAU					
	Baseline		3 Months		6 Months		Baseline		3 Months		6 Months	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
BDI-II	34.2	14.65	14.6	9.54	9.9	6.18	26.8	20.62	17.5	14.37	12.7	12.91
SIQ-HS	57.2	29.29	10.9	14.43	7.2	7.37	55.4	49.34	18.6	18.90	12.9	13.66

Note: All baseline comparisons between groups were non-significant ($p > .05$)

BDI-II = Beck Depression Inventory 2nd Edition; SIQ-HS= Suicidal Ideation Questionnaire High School Form; MDT= Mode Deactivation Therapy; TAU= Treatment as usual

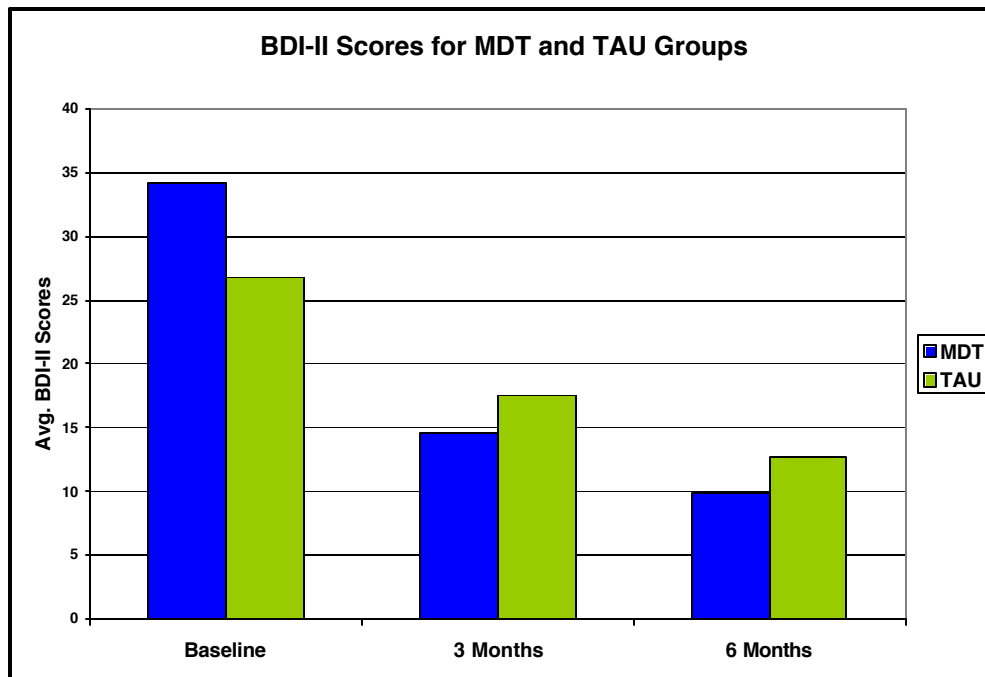


Figure 2: Means scores for BDI- II at three time points. Note: All baseline comparisons between groups were non-significant ($p > .05$) BDI-II = Beck Depression Inventory 2nd Edition; MDT= Mode Deactivation Therapy; TAU= Treatment as usual

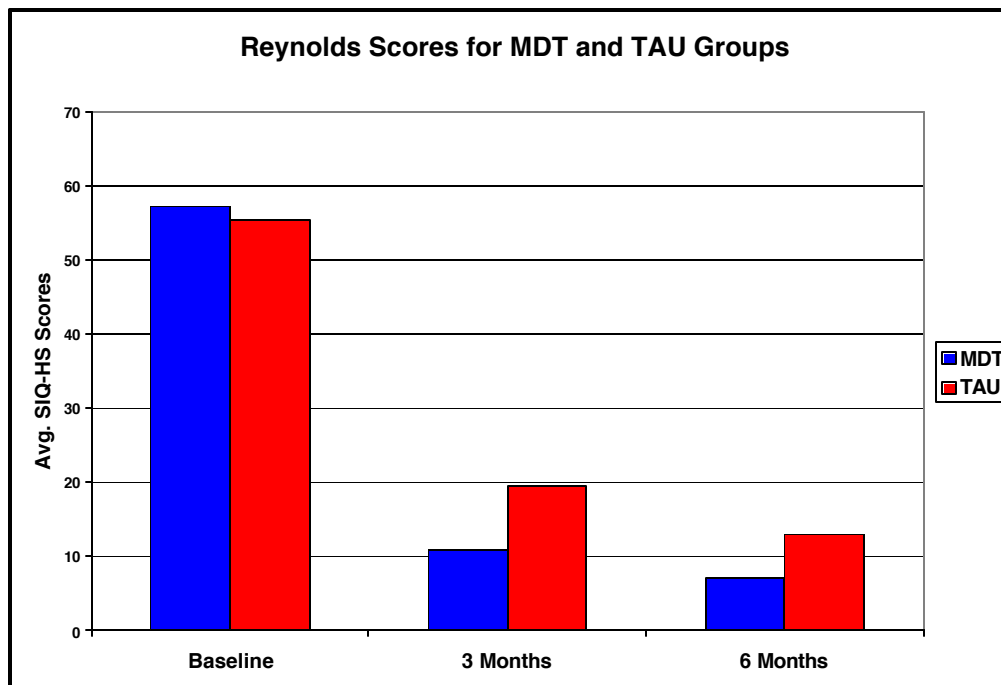


Figure 3: Mean Scores for SIQ-HS at three time points. Note: All baseline comparisons between groups were non-significant ($p > .05$) SIQ-HS= Suicidal Ideation Questionnaire High School Form; MDT= Mode Deactivation Therapy; TAU= Treatment as usual.

Follow-up Data

Table 3

18 Month Follow-up Parent Reports Received		
	MDT	TAU
Sexual Aggression (SA)	0	10
Acting Out (AO)	3	12
Direct intentional disobedience (DIB)	6	18
Table 2: 18 Month Follow-up School Data Received		
	MDT	TAU
Residential Placements (RP)	0	3
School Suspensions (SS)	3	20
School Expulsions (SE)	1	5

The CBCL means and standards are divided into three categories: internalizing, externalizing, and total problems. There was no significant difference in the pretest means between MDT (Internalization = 73.0, Externalization = 74.22 and Total = 73.62) and TAU (Internalization = 72.75, Externalization = 73.47 and Total = 73.13).

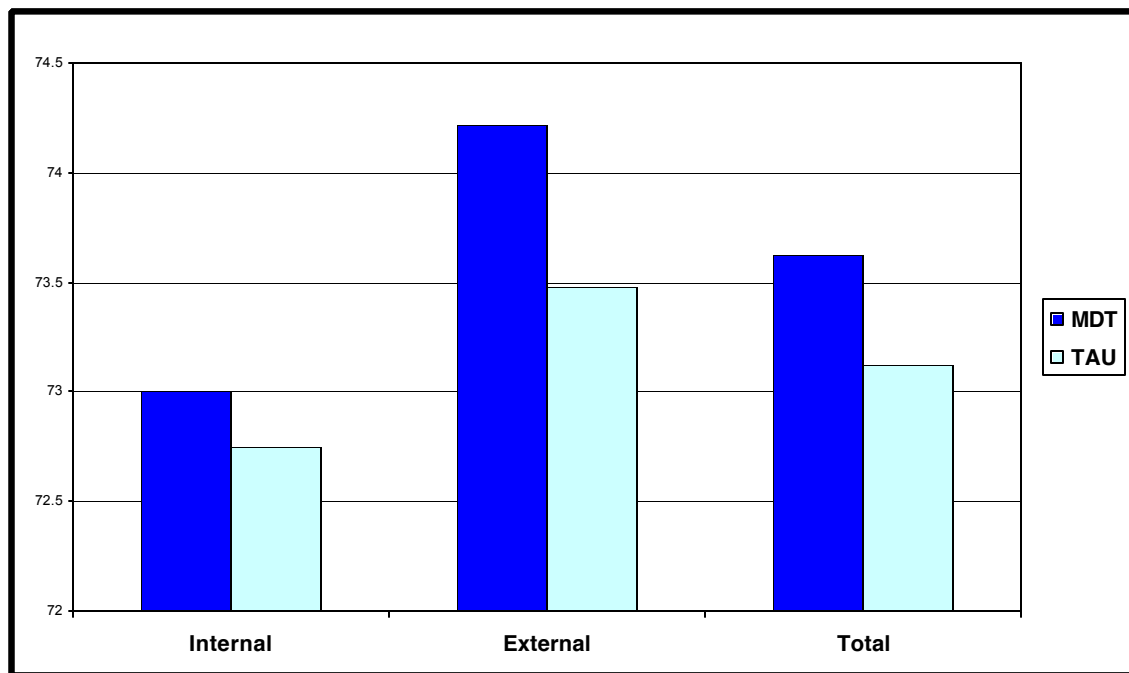


Figure 4: CBCL; Pre treatment mean scores for TAU and MDT groups

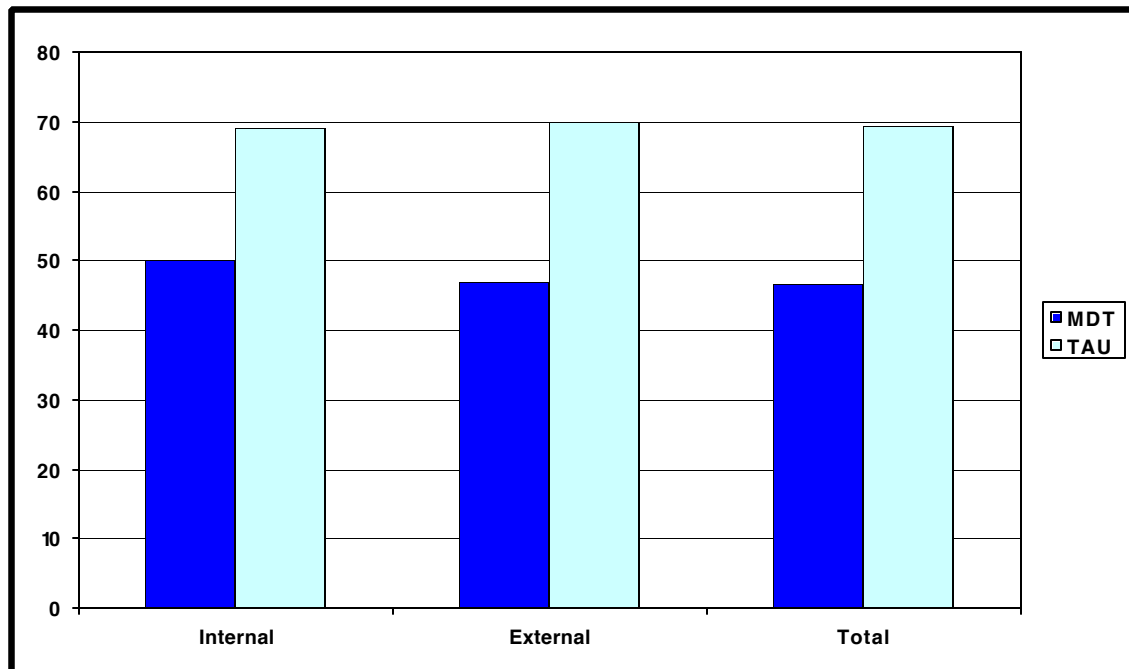


Figure 5: CBCL; Post treatment mean scores for TAU and MDT groups

The post test means showed a statistically significant difference in mean scores. In comparison to the TAU group, the MDT group was superior in reducing all three categories MDT (Internalization= 50.13, Externalization= 46.77 and Total= 46.50); TAU (Internalization= 69.17, Externalization= 69.82 and Total= 69.49)

The DSMD means and standards are divided into three categories: internalizing, externalizing, and total problems. There was no significant difference in the pretest means between MDT (Internal =71.3, External = 72.5, Critical Pathology = 70.5 and Total= 71.50) and TAU (Internal =70.5, External = 73.1, Critical Pathology = 68.7 and Total= 70.77).

FIGURE 6, NEXT PAGE!

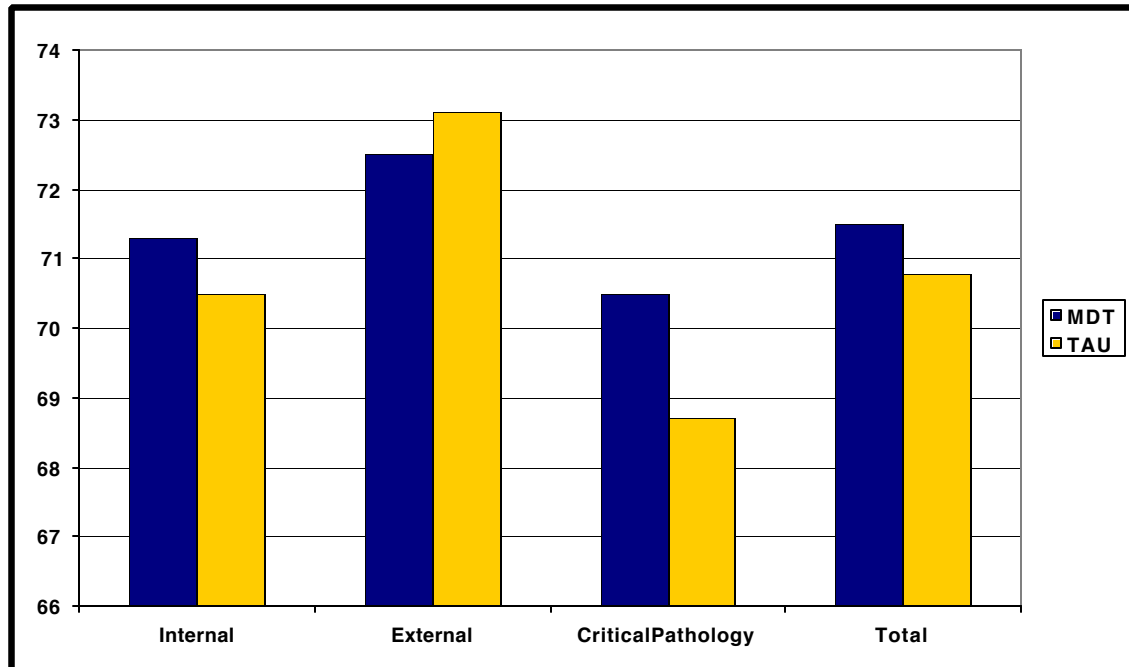


Figure 6: DSMD; Pre-treatment mean scores for TAU and MDT groups

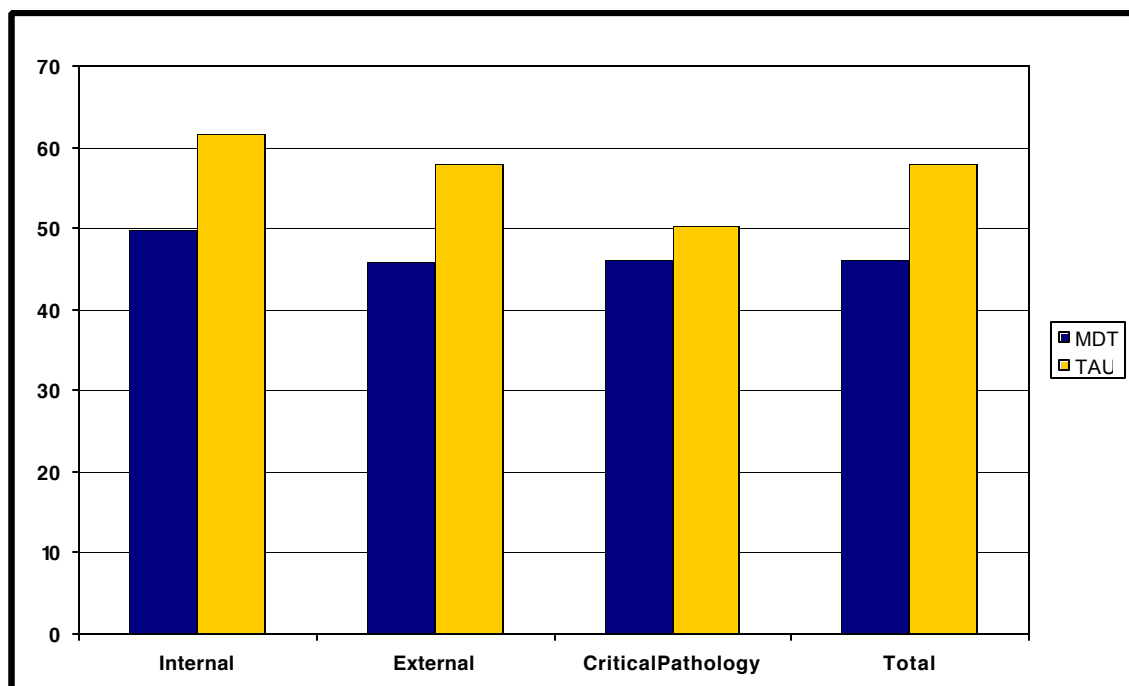


Figure 7: DSMD; Post-treatment mean scores for TAU and MDT groups

The Parent Report Record

The post test means showed a statistically significant difference in mean scores. In comparison to the TAU group, the MDT group was superior in reducing all three categories MDT (Internal = 70.5, External = 73.1, Critical Pathology = 68.7 and Total = 70.77); TAU (Internal = 70.5, External = 73.1, Critical Pathology = 68.7 and Total = 70.77)

Results on the Parent Report Measure showed no significant difference in the pretreatment recordings of Sibling altercations (SA), Anger outbursts (AO), and direct intentional disobedience (DIB) (MDT: SA=5 per week, AO= 21 per week, DIB= 10; TAU: SA= 4 per week, AO= 22 per week and DIB= 11).

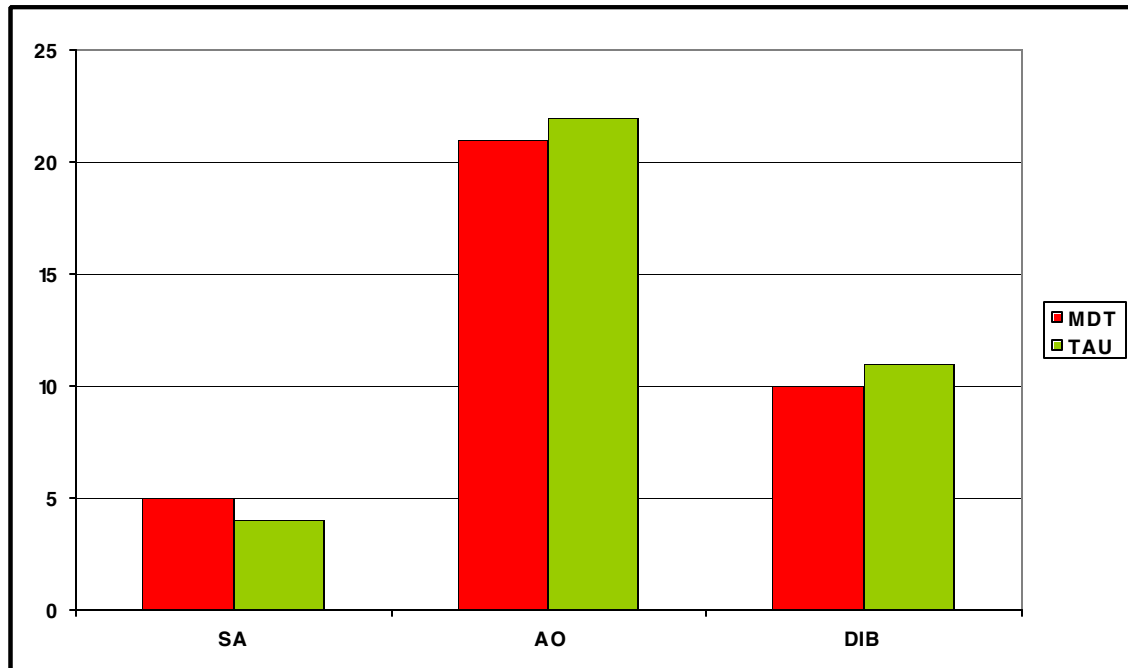


Figure 8: The Parent Report Record: Pre treatment mean scores for TAU and MDT groups

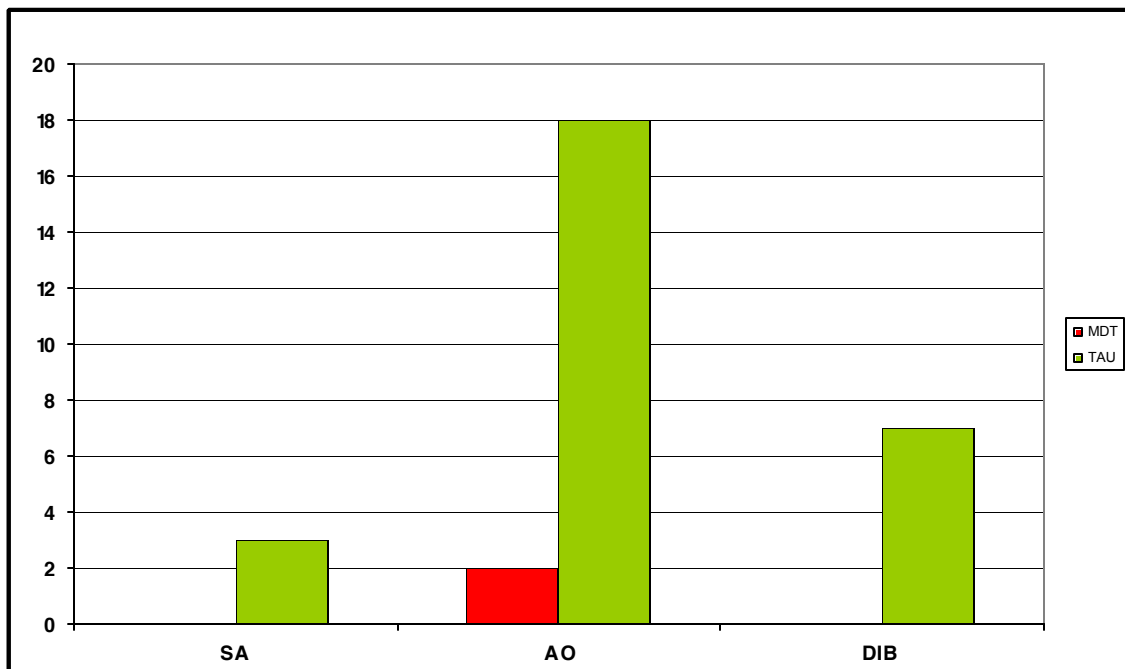


Figure 9: The Parent Report Record: Post treatment mean scores for TAU and MDT groups

Post treatment results on the Parent Report Measure showed a significant difference in the recordings of Sibling altercations (SA), Anger outbursts (AO), and Direct intentional disobedience (DIB) (MDT: SA=5 per week, AO= 21 per week, DIB= 10; TAU: SA= 4 per week, AO= 22 per week and DIB= 11).

School Records

School records were kept by the school's Principal Discussion Office. The forms tracked aggression and school suspensions.

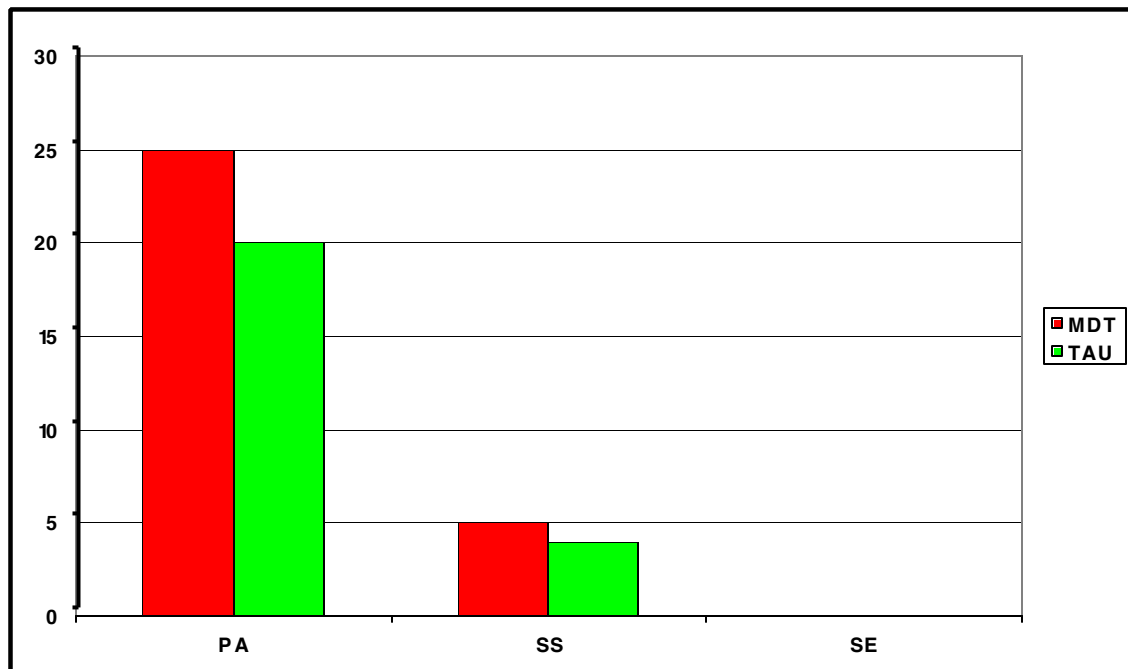


Figure 10: SS = School Suspension (Pre treatment MDT= 5, TAU=4); PA= Physical Aggression (Pre Treatment, MDT= 25, TAU= 20)

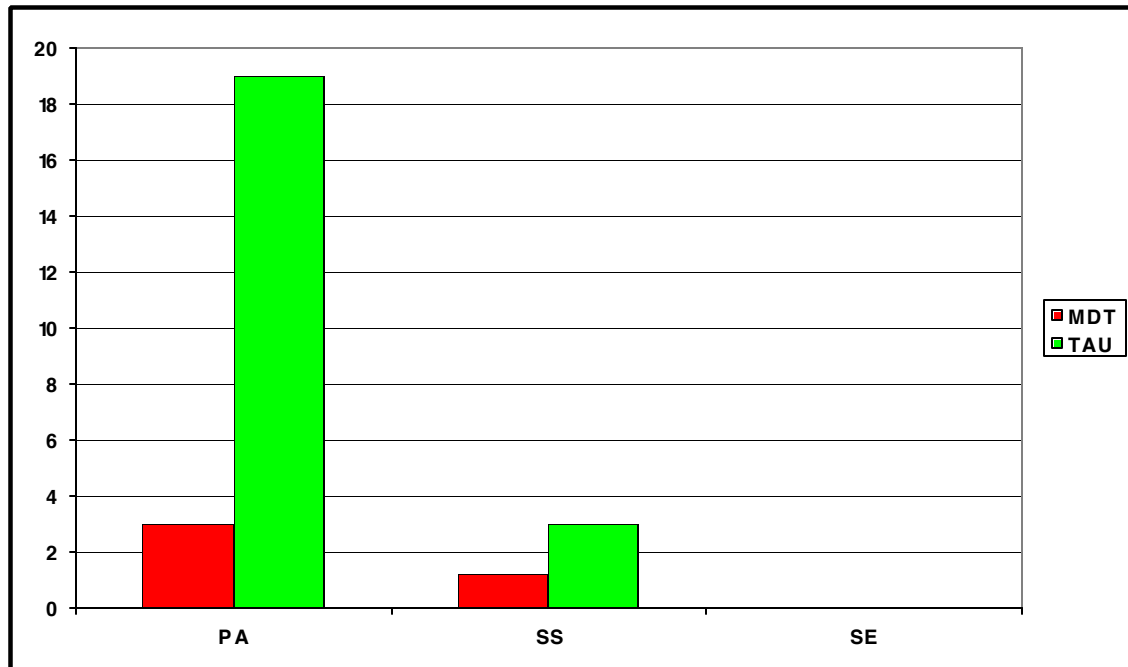


Figure 11: SS = School Suspension (Post treatment MDT= 1.2, TAU=3); PA= Physical Aggression (Post Treatment, MDT=3, TAU= 19)

18 Month Follow Results

Parent Reports Received

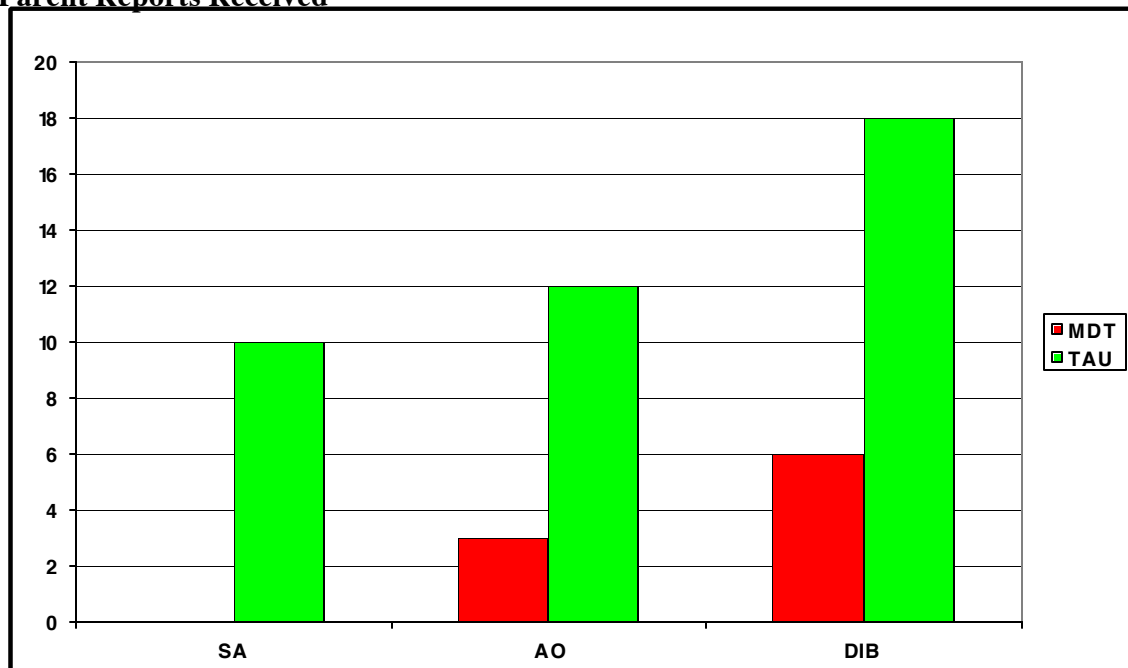
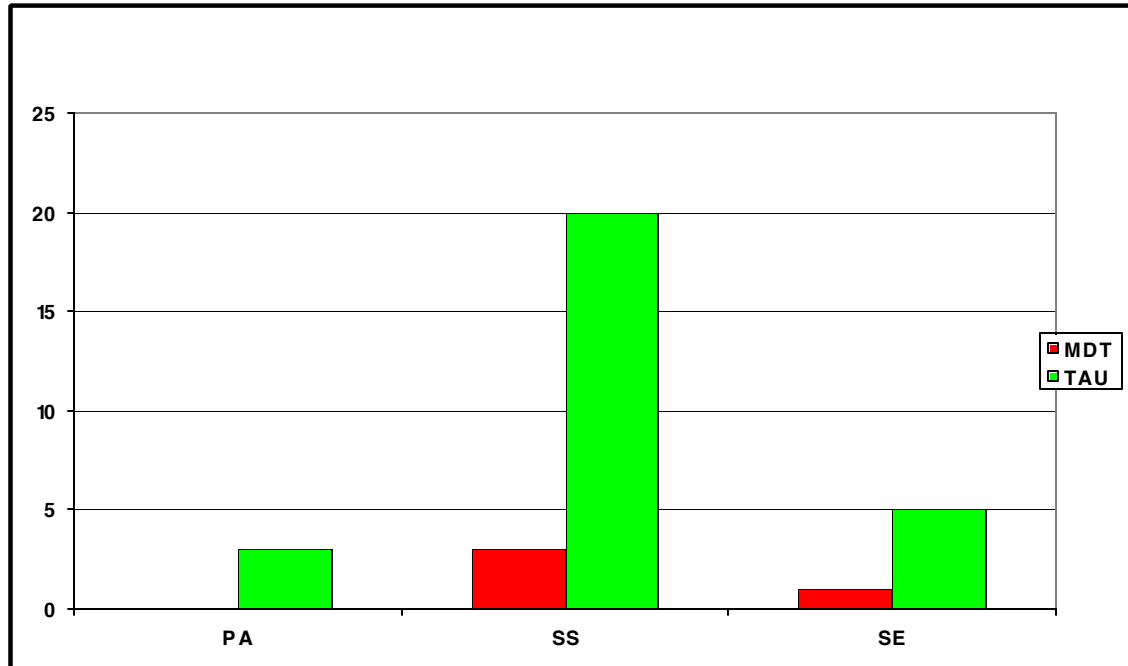


Figure 12: SA = Sexual aggression (18 Month Follow-up, MDT= 0, TAU=10); AO= Acting Out (18 Month Follow-up, MDT=3, TAU= 12); DIB= Direct intentional disobedience (18 Month Follow-up, MDT=6, TAU= 18)

School Records



RP =

Figure 13: Residential Placement (18 Month Follow-up, MDT= 0, TAU=3); SS= School Suspension (18 Month Follow-up, MDT=3, TAU= 20); SE= School Expulsion (18 Month Follow-up, MDT=1, TAU= 5)

Discussion

Over several years and multiple studies in applied clinical settings MDT has shown that MDT is more effective in these studies than CBT, SST and DBT, Apsche & Bass, (2006); Apsche, Bass, Murphy, Hunter & Siv, (2005).

MDT is effective as a well defined treatment of this particular typology of adolescents, between the ages of 14.5 to 18, who have problems with their conduct, personality, aggression, sexual and physical and anxieties and fears.

The summary data presented in this article provides support for MDT as an evidenced based psychotherapy. Underwood, Phillips, Van Dresner & Knight, (2006) reviewed evidenced based treatment for juvenile and included MDT as an effective treatment. Underwood, et. al., (2006) reviewed evidenced based treatments for juveniles and reported that MDT was the most promising for such underserved populations such as African Americans in correctional and secure treatment settings. Underwood et.al., (2006) also suggests that MDT might be an effective treatment for aggressive and violent adolescents with co-occurring mental health disorders.

Summary

Developing MDT has been both a difficult and dichotomous task and the most rewarding activity that one could be engaged. The actual clinical work with the adolescent clients has taught me how important and exiting this world can be. It has been a wondrous journey to be a small positive part of a troubled young man's life.

MDT has survived some academic criticism in some circles as the task of developing an evidenced based methodology outside of the federal grant mechanism is a monumental one.

Ethics dictate as a Psychologist that we must provide ethical clinical care. Ethical clinical care and random assignment of clinician's to needy clients often are not congruent.

In the MDT literature, both ethical issues and the demands of research protocol were both addressed to in that order.

MDT suggests that evidenced based psychotherapies might come from the applied clinical setting, as well as, "carefully controlled" grant founded university settings.

MDT needs to be tested in other settings with full fidelity to the research design. Most importantly, MDT is an effective clinical methodology if the clinician assures fidelity to the clinical application of MDT. There is a level of adolescent that Underwood, et.al., (2006) carefully delineated. African Americans, Hispanic, and European Americans who engage in violent behavior and have co-occurring mental health disorders, are in desperation need of evidenced based psychotherapies. It is suggested that MDT might be an effective intervention for this population.

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