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Contents

Revised *Information for Authors*, p. 54
tBT **Copyright Transfer Form**, p. 56.

Clinical Forum

The Effect of Aerobic Exercise on Obsessive-Compulsive Disorder, Anxiety, and Depression: A Preliminary Investigation

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The purpose of this small-*n* study is to examine the effects that exercise might have on reducing obsessive-compulsive disorder (OCD) and related symptoms of anxiety and depression. Aerobic exercise has not been previously evaluated as an intervention for OCD. The rationale for the study is that OCD is an anxiety disorder and exercise has been found to reduce the symptoms of anxiety and depression, which often co-occur with OCD.

The prevalence of OCD in the United States is 2% to 3% of the population (Karno, Golding, Sorenson, & Burnam, 1988; Robins, Helzer, & Weissman, 1984). Weissman, Bland, and Canino (1994) conducted a cross-national collaborative study that included Canada, the United Kingdom, Puerto Rico, Germany, Taiwan, Korea, and the Netherlands, and reported prevalence rates of 1.9% to 2.5%. Zohar and Judge (1996) found that the prevalence of OCD among children and adolescents was 2.0% to 3.6%. In 2000, the National Institute of Mental Health (NIMH) reported that OCD affects more than 2% of the population, meaning that OCD is more common than severe mental illnesses such as schizophrenia, bipolar disorder, and panic dis-

{continued on p. 57}

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{continued from p. 53}

order. Antony, Downie, and Swinson (1998) found that 24% of patients with OCD had concurrent major depressive disorder, and an additional 13.8% had dysthymic disorder.

Along with depression, anxiety disorders are among the more prevalent forms of mental illness, the most frequently treated, and are frequently comorbid with OCD and depression. It has been estimated that in the United States approximately 7.3% of the adult population may require treatment for anxiety-related problems (Raglin, 1997). In various studies, 44% to 91% of patients with some form of an anxiety or panic disorder were also diagnosed with major depression (Clayton, 1990). In an investigation by the World Health Organization (i.e., Collaborative Study on Psychological Problems in General Health Care), it was found that anxiety and depressive disorders have the most common co-occurrence, or comorbidity, of psychiatric disorders (Sartorius, Ustun, Lecrubier, & Wittchen, 1996).

Treatment for OCD

One of the most common and widely used interventions for OCD involves purposeful exposure to stimuli that trigger obsessive and compulsive thoughts and behaviors and the prevention of efforts to avoid these thoughts and behaviors. Numerous studies have shown this approach to be effective in reducing symptoms of OCD, and it is often considered to be the "gold standard" of treatment.

Pharmacotherapy has also been shown to reduce OCD symptoms (e.g., McDonough & Kennedy, 2002; Montgomery et al., 1993; Perse, Greist, Jefferson, Rosenfeld, & Dar, 1987). Five drugs—clomipramine, fluoxetine, fluvoxamine, sertraline, and paroxetine—have been proven efficacious in treating OCS symptoms. While effective, medications often produce serious side effects. Sleep disturbance, weight gain, lethargy, and sexual dysfunction are commonly reported side effects of medications for OCD. Heightened anxiety and agitation have been noted when medication is discontinued.

Combined behavior therapy, such as exposure and response prevention (EX/RP) in conjunction with medication, appears to show some advantage over either treatment alone (e.g., Marks, Lelliott, & Bosoglu, 1988; Van Noppen, Pato, Marsland, & Rasmussen, 1998). However, there have also been studies that do not support the enhanced efficacy of intervention when combining behavior therapy with medication. For example, Franklin, Abramowitz, Zoellner, Bux, and Feeny (2002) conducted a study with a clinical sample of 56 participants to examine whether the use of selective serotonin reuptake inhibitors (SSRIs) combined with CBT would be more efficacious in treating OCD than CBT alone. In this study, the CBT group also employed EX/RP. Thirty-one participants (55%) were in the CBT without SSRI sample and 25 (45%) received CBT plus SSRIs. The major finding of the study was that CBT was effective whether or not the patients received pharmacotherapy. Pharmacotherapy did not enhance outcomes.

Exercise Effects on Psychological Well-Being

In 1992, the International Society of Sport Psychology endorsed position statements that were earlier issued by the American National Institute of Mental Health (Scully, Kremer, Meade, Graham, & Dudgeon, 1998) describing the link between regular exercise and psychological well-being; namely, people suffering from depression, anxiety, and stress can benefit from involvement in physical activity. Martinsen, Hoffart, and Solberg (1989a) compared 99 inpatients with major depression, dysthymia, or depression not otherwise specified to ascertain the effect of aerobic versus anaerobic exercise on depression. There was a significant reduction of symptoms in individuals with depression in both groups, whether or not their aerobic capacity had increased. In general, the longer the exercise program lasted and the greater total number of exercise sessions, the larger the decrease in depression.

One of the first meta-analyses in the area of exercise and its effects on depression was conducted by North, McCullagh, and Tran (1990). The meta-analysis included a total of 80 studies with 290 effect sizes. It concentrated on data primarily from the 1980s and included both aerobic and anaerobic exercise. Findings revealed that exercise promoted immediate and long-term reductions in depression, especially in older persons. This effect occurred with both aerobic and nonaerobic forms of exercise and with both males and females. Regarding the efficacy of exercise as an intervention for depression, Johnsgard (1989) concluded: "The magnitude of change which results from exercise therapy by itself is as great as that associated with a variety of standard group and individual psychotherapies, some of which, in turn, have been shown to be as effective as antidepressant drug therapy" (p. 135).

Like depression, anxiety symptoms also appear to be reduced by exercise. Martinsen, Hoffart, and Solberg (1989b) studied inpatients in a treatment facility meeting *DSM-III* criteria for anxiety disorders and utilized aerobic and nonaerobic exercise programs. Seventy patients were randomly assigned to either an aerobic or nonaerobic group. The regimen consisted of exercising 1 hour a day for 3 days a week. This treatment lasted for 8 weeks. The goal of the aerobic group was to achieve an increase in VO_2 Max (oxygen consumption) via intensive aerobic exercise. Participants in the nonaerobic group performed in a program consisting of muscular strength, flexibility, and relaxation. The results of the study indicated that although there was significant increase in oxygen usage during the study in the aerobic group, the increase in the physical fitness level did not have an impact on anxiety reduction. Both aerobic and nonexercise groups achieved significant reductions compared to the pretest levels. The results of the study indicate that while exercise is effective in reducing anxiety, the acquisition of aerobic fitness is not essential for achieving reductions in anxiety symptoms.

Rationale

OCD is an anxiety disorder that is often comorbid with depression. Studies examining the effects of exercise on anxiety and depression show that moderate exercise leads to significant reductions in anxiety, depression, and mental confusion, together with improved perceived coping ability (Hays, 1999). Thus, it was expected that, along with reductions in anxiety and depression, symptoms of OCD might also decrease through exercise. In the current study, aerobic walking was used as the exercise intervention. Aerobic walking is low-impact, requires minimal skill, and is convenient and safe for most adults.

Method

Participants

We selected participants who had already tried the standard medication and behavior therapy treatment and who reported that they had reached a plateau in terms of symptom improvement. By working with participants who had received standard therapies, we hoped to enhance the generalizability of the results. Exercise was presented as an adjunct to standard inter-

ventions, not as a substitute for them. Eleven participants were obtained from among members involved in Obsessive Compulsive Anonymous, from the National Obsessive Compulsive Foundation, and through ads that were developed for recruitment for the study. Sixteen individuals with OCD were initially recruited; however, only 11 completed treatment. The 5 treatment noncompleters reported that the exercise demands were burdensome and chose not to continue. Neither demographic characteristics nor Yale-Brown Obsessive Compulsive Scale (Y-BOCS; Goodman et al., 1989) scores appeared to distinguish those who dropped out from those who participated fully. Compliance was defined as exercising a minimum of 15 times over the course of 6 weeks, with a possible maximum of 18 times (see below for procedural details), and completing assessments at the start and end of baseline, at postintervention, and at a 1-month follow-up. There were 6 males (54.5%) and 5 females (45.5%). All participants were Caucasian. The mean age of the group was 34.45 (SD = 11.78). Three participants had earned terminal high school degrees (27.3%), 4 had earned college degrees (36.4%), and 4 had obtained graduate degrees (36.4%).

Ten of the 11 participants were prescribed medications, including Lexapro, Zoloft, Prozac, Paxil, and Effexor. Participants taking SSRIs reported no medication changes during the study. All participants had been taking SSRIs for more than 6 months. The average efficacy of the medicine was a reported M = 5.55 (SD = 2.91) on a 10-point scale (10 = *most effective*). In addition, 7 participants were involved in EX/RP. The data indicated that the perceived efficacy of therapy was M = 4.18 (SD = 3.71) using the same scale noted above. Therapy participants reported that they had reached their maximum benefit with this form of treatment.

Inclusion criteria for participants were that individuals: (a) meet criteria for OCD on the Y-BOCS with a score of 14 and above; (b) had not engaged in aerobic exercise more than once a week prior to the study for the past month; (c) were willing to participate in a 6-week exercise program; (d) agreed to be assigned to a baseline period of 1 or 2 weeks; (e) were between ages 16 and 75; (f) agreed not to participate in any other form of sustained exercise; (g) were not actively suicidal, experiencing psychosis, or demonstrating gross psychopathology; and (h) were not using drugs or alcohol.

Procedure

All procedures in this study were approved by the Hofstra University Institutional Review Board. The participants received $200 and their names were entered into a raffle to win a $1,000 bond. The purpose of the $200 and raffle was to help recruit individuals, minimize attrition, and increase compliance as dropout and noncompliance are common among participants in studies of OCD and exercise. Individuals read and signed a statement of purpose, which explained the reasons why the study was being conducted, and signed a consent form outlining the purpose of the research project and informing participants of their right to withdraw at any time. The primary author administered the Y-BOCS to potential participants. While a minimum score of 14 on the Y-BOCS (mild OCD) was required to participate in this study, the average score obtained from participants was 23.6 at the start of the study. Scores from 24 to 32 on the Y-BOCS are considered to be "severe." Two questionnaires were also administered to the participants. One questionnaire surveyed participants' views of the efficacy of their current treatment; the other questionnaire yielded demographic information: age, weight (there were no significant weight changes as a result of the intervention), gender, date of birth, etc.

Once participants met the initial criteria, two other dependent measures were administered: the State-Trait Anxiety Inventory (Form Y) (STAI-Y; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) and the Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996). Persons entering the study completed the dependent measures again at the end of the baseline period, at postintervention, and at 1-month follow-up. The participants exercised three times a week for 6 weeks. Exercise sessions took place in area fitness centers so that a staff member, or other witness, could verify that the exercise had taken place as prescribed. As an additional incentive to participate, participants' fitness club membership fees were paid by the study. Staff members were instructed only to record information about exercise and not to provide social support. The training consisted of walking at a pace of 60% to 70% of maximum heart rate for 30 minutes a session. For males, maximum heart rate was 220 minus age and for women, 226 minus age. Prior to aerobic walking, the participants walked progressively faster to help them reach their target heart rate. The walking was followed by a 5-minute "cool down" period that consisted of the participants walking progressively slower in order to promote gradual heart rate reduction to a resting rate. Walking was followed by a 5-minute stretch. While engaged in aerobic walking, the participants momentarily stopped walking and calculated their heart rates at 15- and 30-minute marks to ensure that they were in the "fitness zone."

Participants received directions for calculating the target heart rate, along with instruction on how to calculate heart rate during exercise using a Polar heart monitor. Each participant was required to indicate his or her heart rate on a work card at 15-minute intervals. The work card was designed for recording all the necessary data, such as heart rate during exercise and recovery heart rate after exercise. This work card also included a column for the participant to have a cohort sign that the exercise was actually performed on a specific date. This work card was used for the 6-week exercise period and to ensure treatment integrity of the exercise. It was required that participants receive medical clearance before starting the exercise program. The medical clearance required a signature from a medical doctor on a form that stated the participant was in proper physical condition for the 6-week regimen. The recommended stretches were also given to each participant.

After 6 weeks, exercise sessions were discontinued and dependent measures were readministered. Measures were obtained again 1 month later. Participants were asked to refrain from exercising during baseline and follow-up. The purpose of refraining from exercise during follow-up was to determine whether intervention effects would be maintained without continued exercise.

Measures

Yale-Brown Obsessive Compulsive Scale (Y-BOCS; Goodman et al. 1989). The Y-BOCS is a self-report measure used to assess symptoms of OCD. A 10-item scale assesses OCD on two dimensions: obsessions and compulsions. Frequency, interference, distress, resistance, and control items make up the 5-item subscales. Each of the items is rated from 0 to 4, with higher numbers associated with greater pathology. The Y-BOCS total score is is obtained by calculating the sum of items 1 to 10. Subscale scores are obtained for obsessions (sum of items 1 to 5) and compulsions (sum of items 6 to 10). The total Y-BOCS scores can range from 0 to 40 and total subscale

scores can range from 0 to 20. The Y-BOCS yields a total score representing the overall severity of OCD (0 to 7 = subclinical; 8 to 15 = mild; 16 to 23 = moderate; 24 to 32 = severe; and 33 to 40 = extreme). Goodman et al. (1989) assessed the reliability of the Y-BOCS. They found good internal consistency (alpha = .89 to .91) and high interrater reliability (r = .98).

State-Trait Anxiety Inventory–Form Y (STAI-Y; Spielberger et al., 1983). The STAI is a self-report measure of anxiety with two scales, the State Anxiety Scale (STAI-Form-Y1) and the Trait Anxiety Scale (STAI-Form-Y2). The 20-item State Scale measures how an individual is feeling at the time of the assessment and is sensitive to temporary shifts in anxiety. The 20-item Trait Scale assesses trait anxiety or how a person "generally feels." While one might not expect changes in trait measures to vary as a function of exercise, the researchers were interested in determining whether this measure would change to a degree equivalent to any measured changes in state anxiety. Items are rated on a 4-point Likert scale where 20 and 80 represent minimum and maximum scores, respectively, for both State and Trait Scales.

Spielberger et al. (1983) reported that there was a high test-retest reliability for the Trait Anxiety Scale (r = .70 to .77). Internal consistency is good, with a range of alphas from .83 to .92. The STAI has also demonstrated good divergent validity.

Beck Depression Inventory-Second edition (BDI-II; Beck et al., 1996). The BDI-II is a 21-item self-report inventory of depressive symptoms appropriate for individuals 13 and older. The BDI-II samples cognitive, affective, and somatic dimensions of depression. The BDI-II employs a 4-point rating scale where items are scored from 0 to 3, depending upon the presence or absence of symptoms. The BDI-II total score represents an estimate of the overall severity of depression (minimal depression = 0 to 13; mild depression = 14 to 19; moderate depression = 20 to 28; severe depression = 29 to 63). The internal consistency and test-retest reliability of the measure is well-established. The content validity of the BDI-II has been demonstrated through high correlations with the original BDI (r = .93) and other well-known measures of depression.

Design and Data Analysis

A small-n repeated-measures design was used with a beginning baseline, ending baseline, postintervention, and 1-month follow-up. Multiple paired t-tests were used to compare scores for all dependent measures between all four assessment periods. Five of the 11 participants completed a 2-week baseline and 6 completed a 1-week baseline. Two baselines were utilized to determine whether there were any baseline fluctuations in the target measures prior to intervention. No such variations were observed and these data were combined in subsequent analyses. After 6 weeks of exercise, postintervention data were obtained and participants ceased exercising. Thus, the design followed an ABA format. Follow-up data were collected 1 month after the exercise intervention ceased. Alpha levels for statistical significance were set at a generous $p < .05$, to reduce the likelihood of Type 2 error.

Results and Discussion

It was predicted that the participants with at least mild levels of OCD symptoms would show significant decreases in obsessive-compulsive symptoms using the Y-BOCS at postintervention and follow-up

compared to beginning baseline and ending baseline scores. Table 1 reveals nonsignificant differences between beginning and ending baseline scores on the Y-BOCS. Significant reductions in obsessive-compulsive symptoms were revealed when comparing ending baseline with postintervention and follow-up scores. There was a significant increase in scores observed in comparing postintervention and follow-up scores on the Y-BOCS. In sum, aerobic exercise significantly reduced self-reported obsessive-compulsive symptoms at postintervention and at 1-month follow-up after aerobic exercise. On average, initially severe symptom ratings at ending baseline on the Y-BOCS fell into the moderate range at postintervention.

It was also predicted that participants would show significant decreases in depression at postintervention and follow-up compared to beginning baseline and ending baseline scores on the BDI-II. As shown in Table 2, there were no significant differences between beginning BDI-II baseline and ending baseline scores. However, the ending baseline score was significantly higher than the score at postintervention. In addition, the ending baseline score was significantly higher than the follow-up score. Postintervention and follow-up scores were not significantly different from each other. Thus, results indicated that aerobic exercise significantly reduced depression at postintervention and 1-month follow-up. Initial mild severity ratings of depression fell into the minimal range postintervention.

It was predicted that participants with at least mild levels of obsessive-compulsive symptoms would show significant reductions in self-reported anxiety as assessed by the STAI-Y at postintervention and follow-up. As before, Table 3 shows no significant differences in trait anxiety comparing beginning baseline and ending baseline scores. However, significant reductions in trait anxiety were observed when comparing ending baseline scores with postintervention and follow-up scores. There was a significant increase when comparing postintervention and follow-up scores for trait anxiety. A similar pattern of results was noted for state anxiety (see Table 4). In summary, the results indicated that aerobic exercise significantly reduced both state and trait anxiety at postintervention. However, there were significant increases in both state and trait anxiety at 1-month follow-up when compared to postintervention scores.

Further Analyses

Additional analyses were conducted to examine patterns of individual change in self-reported symptom severity for each of the 11 participants, using the Y-BOCS for OCD, the BDI-II for depression, and STAI-Y for state and trait anxiety. Using a strategy developed by Goodman et al. (1989), we separated Y-BOCS scores into five categories of symptom severity (0 to 7 = subclinical; 8 to 15 = mild; 16 to 23 = moderate; 24 to 32 = severe; 33 to 40 = extreme). Ending baseline scores were compared to postintervention and revealed reductions in symptom severity of at least one category for 4 of the 11 participants. When combined at the group level, the ending baseline mean score for the Y-BOCS (M = 24.27, SD = 5.23) indicated a severe level of obsessive-compulsive symptoms, whereas scores at postintervention (M = 18.27, SD = 5.19) and at 1-month follow-up (M = 19.81, SD = 9.79) indicated only moderate levels of obsessive-compulsive symptoms.

To establish whether reductions in depression might be "clinically significant," the means for the BDI-II were converted into a level of depression specified by Beck, Steer, and Brown (1996; i.e., 0 to 13 indicating minimal depression, 14 to 19 indicating mild depression, 20 to 28 indicating moderate depression, and 29 to 63 indicating severe depression). The ending baseline mean for the BDI-II (M = 17.36, SD = 9.83) indicated a mild level of depression, whereas at postintervention (M = 9.18, SD = 6.97) and 1-month follow-up (M = 12.55, SD = 9.79) only minimal depressive symptoms were observed. On the BDI-II, 6 of the 11 participants exhibited decreases in categorical depression levels at postintervention and follow-up (or both) compared to preintervention. However, 4 out of the remaining 5 participants demonstrated only minimal depression, thus limiting the possibility of "improvements" in depression. STAI state and trait anxiety scores were converted into standard scores and percentile ranks as suggested in the STAI-Y manual (see Spielberger et al., 1983). At ending baseline, 10 of the 11 participants scored in the upper 75th percentile, indicating high levels of trait anxiety. By postintervention, 4 of the 11 participants' scores fell into the average range for trait anxiety. In addition, there was a percentile rank decrease for 5 of the other participants, indicating a relative decrease in trait anxiety. The means in trait anxiety were M = 73.00 (SD= 15.95) at baseline to M = 62.91 (SD = 14.08) at postintervention, indicating a statistically significant decrease in trait anxiety. Analysis of state anxiety percentile ranks and scores revealed that 8 of the 11 participants began with high levels of state anxiety. Although postintervention standard scores and percentile ranks remained

Table 1. Paired Comparisons for Y-BOCS Scores (n=11)

Comparison	Mean (*SD*)	Mean (*SD*)	*t* value
Beginning v. ending baseline	23.55 (5.71)	24.28 (5.23)	-1.62
Ending baseline v. postintervention	24.28 (5.23)	18.28 (5.19)	5.04*
Ending baseline v. follow-up	24.28 (5.23)	19.81 (4.69)	3.13*
Postintervention v. follow-up	18.28 (5.19)	19.81 (4.69)	-2.54

*p < .05. Goodman et al. (1989) categorize Y-BOCS scores as (0–7 = subclinical; 8–15 = mild; 16–23 = moderate; 24–32 = severe; 32–40 = extreme).

Table 2. Paired Comparisons for BDI-II Scores (n=11)

Comparison	Mean (*SD*)	Mean (*SD*)	*t* value
Beginning v. ending baseline	18.00 (12.47)	17.37 (9.83)	0.50
Ending baseline v. postintervention	17.37 (9.83)	9.18 (6.97)	3.87*
Ending baseline v. follow-up	17.37 (9.83)	12.55 (9.79)	3.11*
Postintervention v. follow-up	9.18 (6.97)	12.55 (9.79)	-1.41

*p < .05. Beck et al. (1996) categorize BDI-II as (0–13 = minimal depression); 14–19 = mild depression; 20–28 = moderate depression; 29–63 = severe depression).

relatively stable, there was a significant reduction in state anxiety as compared to ending baseline scores.

Limitations

There are a number of limitations to this study. One, common to all small-*n* studies, involves limitations on generalizability. Future research might involve larger samples and the use of control groups that do not receive an exercise intervention. Based on the current design, one cannot unambiguously conclude that the exercise intervention, in and of itself, led to the observed changes in the dependent variables. Studies involving multiple baselines and complete reversals would enhance the present study and more clearly establish the connection between exercise and wellness suggested by the present work. Another important limitation is that the current study does not address possible underlying mechanisms of change. Questions concerning how exercise might facilitate reductions in OCD symptoms, anxiety, and depression can not be answered by the present investigation. To date, we are aware of no definitive studies that address this issue. Finally, one might argue that another potential limitation of the study was that a majority of the participants were receiving medication and/or behavior therapy. While it is possible that any shifts in medication or therapy could have affected the ratings on the dependent measures, the participants did not indicate that such shifts had taken place. Because many individuals do receive combined treatments for OCD, the current sample might be considered to be representative of this population. The addition of an exercise component to existing combined treatments may thus enhance, rather than detract from, the generalizability of findings.

Implications

A number of studies have suggested that exercise can function as a low-cost alternative to psychotherapy and pharmacology for individuals who fear treatment stigmatization and/or lack the resources to obtain appropriate health care (e.g., Simon, VonKorff, & Barlow, 1995). Several studies have demonstrated that exercise can reduce symptoms of clinical depression and anxiety (e.g., Hale & Raglin, 2002; Martinson, Hoffart, & Solberg, 1989). Similarly, Johnsgard (1989) concluded that exercise can have effects comparable to individual, group, and medication interventions. The present study is supportive of emerging research on the role of exercise in promoting

mental health. Aerobic exercise appeared to reduce self-reports of depression and both general anxiety and more specific (OCD) symptoms of anxiety. Interestingly, when exercise ceased, treatment gains appeared to erode. Overall, it appears that in addition to its well-established physical health benefits, exercise may also have a number of psychological/emotional benefits. At the very least, the available research strongly points to the value of exercise as an adjunct to other empirically supported interventions for affective disorders.

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Table 3. Paired Comparisons for the STAI-T (n = 11)

Comparison	Mean (*SD*)	Mean (*SD*)	*t* value
Beginning v. ending baseline	73.00 (15.79)	73.66 (15.95)	-.19
Ending baseline v. postintervention	73.36 (15.95)	62.91 (14.81)	3.82*
Ending baseline v. follow-up	73.36 (15.95)	67.55 (16.40)	2.51*
Postintervention v. follow-up	62.91 (14.81)	67.55 (16.40)	-2.68*

*$p < .05$

Table 4. Paired Comparisons for the STAI-S (n = 11)

Comparison	Mean (*SD*)	Mean (*SD*)	*t* value
Beginning v. ending baseline	63.64 (12.58)	66.27 (13.99)	-1.62
Ending baseline v. postintervention	66.27 (13.99)	59.00 (11.00)	5.04*
Ending baseline v. follow-up	66.27 (13.99)	63.55 (14.79)	3.13*
Postintervention v. follow-up	59.00 (11.00)	63.55 (14.79)	-2.54*

*$p < .05$

Training Paraprofessional Staff to Implement Discrete Trial Instruction: Evaluation of a Practical Performance Feedback Intervention

Katherine T. Gilligan, *Northeastern University* and *May Institute*, James K. Luiselli, *May Institute* and *May Center for Applied Research*, and Gary M. Pace, *May Institute*

Behavioral staff training is a critical concern for human service organizations working with people who have developmental disabilities (Reid, 2005). Staff training research initially focused on improving habilitative care within institutional settings, for example, by teaching direct-care staff to maintain consumer safety (Alavosius & Sulzer-Azaroff, 1986), provide assistance during self-help routines (Iwata, Bailey, Brown, Foshee, & Alpern, 1975), and increase the frequency and quality of purposeful interactions (Burgio, Whitman, & Reid, 1983; Ivancic, Reid, Iwata, Faw, & Page, 1981). More recently, behavioral training procedures have addressed the skills of teachers and paraprofessional staff within schools. Examples include learning how to "embed" instruction during activities (Schepis, Reid, Ownbey, & Parsons, 2001), conduct a functional behavior analysis (Moore et al., 2002), perform preference assessment (Lavie & Sturmey, 2002), and implement discrete trial instruction (LeBlanc, Ricciardi, & Luiselli, 2005; Sarokoff & Sturmey, 2004). These applications have increased the breadth and diversity of training objectives and settings.

Most behavioral staff training programs combine several procedures, such as written or verbal performance feedback (Alavosius & Sulzer-Azaroff, 1986; Lavie & Sturmey, 2002; LeBlanc et al., 2005), individual or group meetings (Ivancic et al., 1981; Wallace, Doney, Mintz-Resudek, & Tarbox, 2004), and reading assignments with written instructions (Iwata et al., 2000; Moore et al., 2002). Training "packages" also have included video modeling (Iwata et al.; Lavie & Sturmey), role-playing (Moore et al.), rehearsal (Iwata et al.), quizzes (Moore et al.), self-monitoring (Burgio et al., 1983), and behavior-specific checklists (LeBlanc et al., 2005). Although effective, multiprocedural programs can be time intensive for those implementing and receiving training. Furthermore, having to implement several training procedures may hinder treatment integrity (Codding, Feinberg, Dunn, & Pace, 2005). Accordingly, a goal for future research is to evaluate the effects from "simplified" training programs that are easily administered, do not require a large investment of time, and can be adopted practically by human service personnel.

The present study describes the rapid training of educational staff in discrete trial instructional (DTI) skills at a school for children with developmental disabilities. DTI is an evidence-based teaching methodology that is highly effective and a component of many programs with an applied behavior analysis orientation (Harris & Weiss, 1998; Lovaas, 1987; Maurice, 1996; New York State Department of Health, 1999). However, DTI has only infrequently been the topic of extensive staff training research (LeBlanc et al., 2005; Sarokoff & Sturmey, 2004). With DTI, children receive frequent opportunities (trials) to learn skills through systematic presentation of instructional requests (mands), prompts to initiate accurate responding, prompt-fading, error correction, and positive reinforcement. Other features of DTI include establishing behavior-specific learning objectives, setting criteria that define skill mastery, and measuring progress through continuous data collection. In this study, we selected several DTI component behaviors that were measured during staff-to-student teaching sessions. Training consisted of a performance feedback intervention (Balcazar, Hopkins, & Suarez, 1985), implemented as the sole procedure, and evaluated in a multiple baseline design across educational staff.

Method

Participants and Setting

The participants were three female staff members (ages 21 to 23 years old) at a school for children with developmental disabilities. Each participant was hired as an instructional assistant in separate classrooms at the school. Participant 1 was a third-year college student without prior experience teaching children with developmental disabilities. Participant 2 was a college graduate (psychology major) who had worked in an integrated preschool classroom for children with "special needs." Participant 3 was a college graduate (elementary education and communication majors) who had experience in a public school classroom for children with developmental disabilities. None of the participants had received applied behavior analysis training or had implemented DTI. Involvement in the study was voluntary and each participant gave informed consent.

Each participant was assigned a single student for the duration of the study. The students were male (4 to 12 years), had a diagnosed developmental disability (Autistic Disorder, PDD-NOS), attended the school for a minimum of 1 year, and had been taught primarily through discrete trial instruction. Student 1 had verbal language, was able to complete basic academic tasks such as one-digit and two-digit addition problems, and could read many sight-words. He could complete most self-care routines with minimal assistance. Student 2 communicated verbally and, additionally, used a picture-point communication system. He was able to match letters and numbers, and could complete most self-care routines with minimal assistance. Student 3 used verbal speech effectively and had basic academic skills such as letter and number identification. None of the students posed problem behavior that interfered with instruction.

To be selected for the study the students had to demonstrate a skill that had been "mastered" at 80% or greater accuracy during several pre-study testing sessions. For the Participant 1–Student 1 dyad the skill was matching-to-sample with colored stimuli. For the Participant 2–Student 2 dyad the skill was imitating gross-motor movements. For the Participant 3–Student 3 dyad the skill was identifying letters. Parent consent was obtained for each student included in the study.

Measurement

A discrete trial was task analyzed into 5 skill categories and 10 component behaviors. These component behaviors were measured during instructional sessions each participant conducted with her assigned student.

Skill 1: *Delivering the Discriminative Stimulus* (Sd) was defined as the participant verbalizing the exact phrase prescribed by a written teaching protocol (Component 1a), with body oriented toward the student using a clearly audible voice volume (Component 1b).

Skill 2: *Delivering Reinforcement* was defined as the participant presenting praise and a selected tangible item to the student with appropriate body orientation (Component 2a), contingent on a correct response (Component 2b), that was demonstrated within 3 to 5 seconds after the presenting the discriminative stimulus (Component 2c).

Skill 3: *Response Correction* was defined as the participant physically guiding the student to perform the correct response contingent on an error response that was demonstrated within 3 to 5 seconds after presenting the discriminative stimulus (Component 3).

Skill 4: *Recording Data* was defined as the participant writing a plus sign (correct response), minus sign (incorrect response), or "NR" (no response) for each trial presented to the student (Component 4a) and during the intertrial interval (Component 4b).

Skill 5: *Intertrial Interval* was defined as the participant pausing a minimum of 3 seconds between trial presentations (Component 5a) and giving the student a verbal warning such as, "Okay, playing with the toy is done," before removing the tangible item and presenting the next trial (Component 5b).

Discrete trial sessions with each participant-student dyad were conducted at a small table in the student's classroom. The participant and student sat opposite each other at the table. All instructional materials, a data recording form, and a copy of the written teaching protocol (described below) were present during each session. The senior author, who functioned as trainer in the study, sat approximately 10 feet from the table and recorded the participant's implementation of DTI, using a form that specified each skill and component behaviors. The trainer recorded whether the participant did or did not perform component behaviors correctly during the initial 10 trials of the session. If a student did not respond correctly on a trial, all component behaviors for delivering reinforcement were not considered for that trial. Session data were summarized as the percentage of component behaviors performed correctly across the 10 trials.

Interobserver agreement. Interobserver agreement was assessed during 35% of DTI sessions by having a second individual record data simultaneously and independently with the primary observer. An agreement was scored if each person recorded correct performance of the component behaviors during the same discrete trial. Agreement (total agreements/agreements + disagreements × 100) averaged 92% (range: 72% to 100%).

Design and Procedures

Procedures were evaluated in a multiple-baseline-across-participants design. The first baseline session with each participant occurred on her initial day of employment at the school.

Baseline. Approximately 1 hour preceding the first DTI session during the baseline phase, the participant was given a written protocol of teaching procedures to be implemented with the assigned student. The protocol described: (a) the exact phrase when presenting the discriminative stimulus (e.g., "Give me letter 'D'"); (b) all materials necessary for instruction; (c) the number of stimuli displayed during a trial; (d) the tangible item to be presented as reinforcement; (e) student attending behaviors expected before presenting a trial; (f) correct, incorrect, and "no response" definitions; and (g) the correction procedure. Prompting procedures were not included in the written protocol because each student had "mastered" (acquired) the target skill and was able to perform it independently.

The participant was allowed to read the protocol and then the trainer (senior author) reviewed it with her during a 15-minute session. The trainer also answered any questions posed by the participant. We provided participants with a written protocol to control for an artificially low baseline performance that could be expected with individuals who did not have experience with DTI.

During baseline, the participant was told when to start the DTI session but otherwise did not receive additional direction or information about her performance. As noted, the session was conducted in each student's classroom. This session was the only interaction the participant had with the student during the study. Outside of the study, the participant observed in another classroom but was not trained to implement DTI and never saw it being implemented with her assigned student.

Each baseline session consisted of 11 trials. Eleven trials were conducted to allow for scoring the intertrial interval after the 10th trial, but the 11th trial itself was not included.

Intervention. We selected performance feedback as the primary intervention because it is a well-documented staff training procedure (Alavosius & Sulzer-Azaroff, 1986; Babcock, Sulzer-Azaroff, Sanderson, & Scibak, 1992; Garrity & Luiselli, 2005; Lavie & Sturmey, 2002; Reedy, Thibadeau, & Luiselli, 2001), is relatively easy to implement, and is recognized as a critical strategy toward job-related personnel management (Alvero, Bucklin, & Austin, 2001; Geller, 2005). Although there are different ways to implement performance feedback (Ricciardi, 2005), it typically consists of (a) giving staff written skill objectives, (b) observing staff perform the specified skills, (c) meeting with staff to review the observation, (d) positively reinforcing skills that meet acceptable criteria, (e) correcting skill deficiencies, and (f) practicing selected behaviors.

During intervention, the trainer implemented performance feedback with the participant following the final baseline DTI session and, thereafter, preceding each session during intervention. For any component behavior that the participant did not demonstrate correctly on 90% of trials in the session, the trainer (a) identified the error, (b) explained how the component behavior should be performed, and (c) rehearsed proper implementation of the component behavior. The trainer praised the participant for each component behavior demonstrated correctly on 90% of trials in the session using a descriptive statement such as, "Very good, you recorded the data correctly between trials!" The duration of time presenting postsession performance feedback was kept brief, lasting 5 to 8 minutes. Similar to baseline, participants interacted with the students only during the DTI session and did not observe instruction with them at any other time. As described previously, each intervention session included 11 trials.

Follow-up. Three months after conclusion of the study, one participant was observed conducting a discrete trial instructional session with her assigned student. The other two participants were not available for follow-up evaluation because they no

longer worked at the school. The conditions in effect at follow-up were identical to the baseline phase.

Results

Figure 1 shows the percentage of discrete trial component behaviors implemented correctly by the participants. All participants improved during intervention, achieving near-100% correct performance by conclusion of the study. In summary, the average correct performance was 61% during baseline and 97% during intervention for Participant 1, 85% during baseline and 97% during intervention for Participant 2, and 52% during baseline and 98% during intervention for Participant 3. The result at follow-up for Participant 2 was 94%.

Discussion

Paraprofessional staff demonstrated DTI skills at near-100% accuracy following a simplified training intervention. We focused on several components of DTI, implemented by the participants during classroom sessions with each student. Training included brief, postsession performance feedback comprised of correction and positive reinforcement. Results were achieved rapidly and, for the one participant available at follow-up, were maintained at 3-month postintervention.

As noted, we selected students who had previously acquired the skills that were taught by the participants and did not demonstrate problem behavior. Our concern was that variability among students could have negatively affected outcomes with participants who had no experience with DTI. In effect, these selection criteria made it "easier" for the participants to implement procedures. Accordingly, our findings may have been different with students who were learning skills for the first time or those displaying behaviors that might interfere with instruction. However, this strategy may be an effective way for staff to perfect DTI skills quickly before teaching more "challenging" students.

Discrete trial implementation during the baseline phase differed among the participants. Both Participant 2 and Participant 3 demonstrated relatively stable responding, albeit with different correct percentages. Participant 1, on the other hand, had a decreasing data trend. The initial baseline session for Participant 1 notwithstanding, an analysis of within-session data for the participants revealed that their baseline results were due to incorrect performance of particular component behaviors. Their errors were resolved quickly with intervention.

Each performance feedback interaction with the participants lasted 5 to 8 minutes. The reduced time needed for training rendered the intervention practical and easy to administer. Consistent with previous research on performance feedback (Balcazar et al., 1985), our training intervention included both correction and positive reinforcement. Of further practical significance is a recent finding that delivering information about performance without accompanying positive reinforcement can improve staff competencies (Roscoe, Fisher, Glover, & Volkert, 2006). Of course, achieving rapid and durable outcomes with economical training procedures will appeal to most human service organizations.

Among the shortcomings of the present study was that only one "mastered" skill was targeted with each student. It would have been informative, for example, to evaluate whether improved performance of participants generalized to student skill targets not specifically trained. Also, although the follow-up data were encouraging, they are based on only one participant. More extensive maintenance evaluation is required to determine whether skill acquisition persists after training. Finally, the relatively high baseline performance by the participants may have resulted from the written teaching protocol they were provided or their observations of other students receiving DTI. The ability of participants conducting DTI without the written protocol was not assessed because we hypothesized that their pretraining accuracy would have been unrealistically low. One alternative to the written protocol would have been giving the participants general information about contingency management or a similar nonspecific training topic.

Training staff to implement DTI remains a priority for educational programs serving children with developmental disabilities. The present study demonstrated rapid training effects with paraprofessional staff unfamiliar with DTI. Moreover, the performance feedback intervention was easily administered and took only minimal time to implement. We recommend that future research continue to evaluate practical training methods that can be integrated with the many administrative and supervisory demands of real-world clinical service settings.

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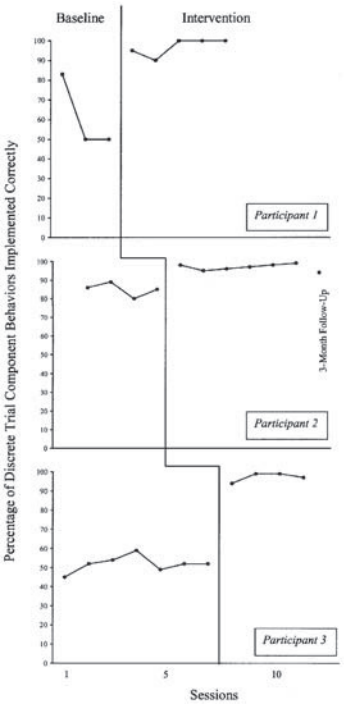

Figure 1. Percentage of discrete trial component behaviors implemented correctly

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This study was based on a thesis submitted by the senior author to Northeastern University, Department of Counseling and Applied Educational Psychology, in partial fulfillment of the requirements for the degree of Master of Science in Applied Behavior Analysis.

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Training Program Update

Clinical Psychology at the University of Wisconsin-Milwaukee

Michael T. Hynan, *University of Wisconsin–Milwaukee*

The Clinical Psychology Ph.D. Program at the University of Wisconsin–Milwaukee (UWM) is a 6-year program (5 years on campus, 1 year internship) that has been fully accredited by the American Psychological Association since 1980. The clinical program at UWM has long advocated the Boulder Model of training and has strong roots in the behavior therapies. For example, UWM was the birthplace of implosive therapy (Stampfl & Levis, 1967). Currently under the direction of Dr. Doug Woods (Director of Clinical Training), our program has sought to enhance scientist-practitioner training. To us, the scientist-practitioner role does not consist of separate research and clinical repertoires. Rather, we seek to wholly integrate practice and research. Recently at UWM, we have begun to systematically integrate our research programs into our Psychology Training Clinic. The purpose of this paper is to describe this integration, but before doing so, it is necessary to provide a brief description of the program structure and relevant features of our training experience.

Each student is admitted into the program under the supervision of a mentor who matches his or her specific interests. The program has 10 clinical faculty members (Drs.Vincent Adesso, W. Hobart Davies, Michael Hynan, Jonathan Kanter, Bonita Klein-Tasman, David Osmon, Richard Passman, Robyn Ridley, Nicole Roberts, and Doug Woods), with 12 additional faculty in the department's General Experimental Program (Drs. Marshall Dermer, Ray Fleming, Tony Greene, Fred Helmstetter, Bob Hessling, Sue Lima, Marcellus Merritt, Jay Moore, Katie Mosack, Jim Moyer, Diane Reddy, and Rodney Swain). The UWM Clinical Psychology Program is designed to train psychologists as generalists, but our faculty research/clinical interests cluster in primary areas: behavior analysis, clinical child, health, neuroscience/neuropsychology, and psychotherapy.

Students receive a substantial proportion of their practicum training within a "vertical team" structure. Each team consists of a first-year student, a second-year assessment student, two third-year student therapists, and a supervising psychologist. All team activities take place in the in-house training clinic, which consists of a general

{continued on p. 68}

Obituary

Michael J. Mahoney (1946–2006)

Albert Bandura, *Stanford University*

Michael Mahoney, a proponent of a constructivist theory of personal development and change, died with tragic suddenness in his home in Portsmouth, RI. He was age 60.

Michael was initiated into the field of psychology as an undergraduate at Arizona State University. He often referred to ASU as "Fort Skinner," an operant outpost fending off pesky cognitivists on the Western frontier. At the end of an address I delivered at ASU, Michael came to the podium expressing inquiring surprise about this forbidden domain of cognition and self-regulation. A couple of weeks later, his application arrived for doctoral study at Stanford University.

As a graduate student at Stanford, Michael exhibited extraordinary productivity in the 3 years he took to complete his doctoral degree. He was the personification of creative multitasking long before this notion came into vogue. In addition to pursuing a demanding course of study, he conducted a program of research on mechanisms of self-regulation, served as the resident therapist in a home for delinquent children, and began collaborative work with Carl Thorensen on their widely cited book, *Behavioral Self-Control* (1974). Michael also added a refreshingly innovative facet to his other research on self-regulation, which focused mainly on self-management of health behavior. He got animals to control their own performances by contingent self-reward, to transfer conditional standards across activities, and even to register their preference for a self-administered or externally controlled incentive system! This set of studies showcased his experimental ingenuity.

After receiving his doctoral degree, Michael joined the faculty at Pennsylvania State University, where he continued his prolific scholarship. He contributed importantly to the furtherance of cognitive behavior therapy during the transformational changes that the field of psychotherapy was undergoing at the time. His landmark book, *Cognitive and Behavior Modification* (1974) helped to redirect the field of behavior therapy from a predominantly peripheralistic orientation to one in which cognitive processes played a paramount role. To give further impetus to this change in theoretical perspective and experimentation, he inaugurated the *Journal of Cognitive Therapy and Research*, which is recognized by researchers in this field as a periodical of major significance.

Michael's provocative research and book, *Scientist as Subject: The Psychological Imperative* (1976), is further testimony to the breadth of his scholarship. This work, which is broad in scope and conceptually sophisticated, has far-reaching implications for the understanding of how researchers' belief systems affect the scientific inquiry itself.

Walter Weimer, Michael's colleague at Penn State, argued that the brain is a constructor of reality rather than merely a repository of sensations and associations. This would become a central theme in Michael's scholarly evolution and interest in philosophical issues bearing on psychotherapeutic practices. In his edited volume *Psychotherapy Process* (1980), Michael presented his initial formulation of a constructivist theory of psychotherapy.

After a brief relocation to UC–Santa Barbara, Michael accepted the directorship of the clinical program at North Texas State University. This phase of Michael's illustrious career was devoted mainly to further exposition of constructivism, with special emphasis on self-organizing processes in personal change. In two edited volumes, *Constructivism in Psychotherapy* (1995) and *Cognitive and Constructive Psychotherapies* (1996), he brought together the leading proponents of constructivist theory.

In 2003, Michael published *Constructivism in Psychotherapy: A Practical Guide*. This volume provided an in-depth exposition of the theoretical foundation, relevant research, and applications of a constructivist therapeutic approach. It is a treasure trove of insights that are both theoretically provocative and clinically illuminating. As in his other scholarly publications, this work is thought provoking and encyclopedic in scope.

Michael left behind a rich and varied legacy of scholarship and the cherished memories he has given us. He was a warm and caring person with a generous spirit, infectious humor, and a renowned mischievousness. He will be greatly missed, not only by his friends and colleagues, but by the countless people whose lives he enriched through his work. ✍

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In Memoriam

JOHN PAUL BRADY, M.D., ABCT's fifth president (1970–71), died in June 2006. A researcher at the University of Indiana School of Medicine's Institute of Psychiatric Research in the 1960s, Dr. Brady was a major contributor to behavioral investigations in the areas of anxiety, pain, OCD, and depression; he was later designated, in 1974, the University of Pennsylvania's Kenneth E. Appel Professor of Psychiatry (and remained in this position for many decades). Prolific author, editor, reviewer, Dr. Brady devoted his life to investigating behavioral and pharmacological approaches to stuttering.

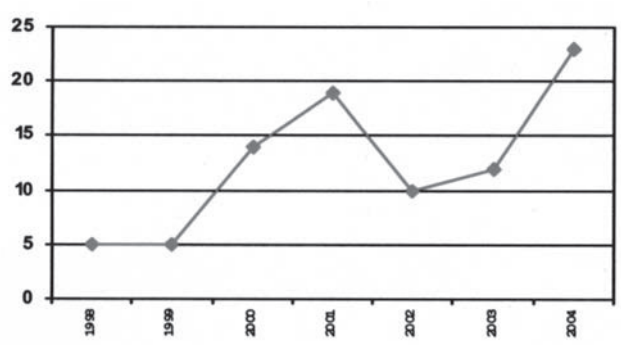

Figure 1. Publications by Clinical Program Faculty from 1998–2004

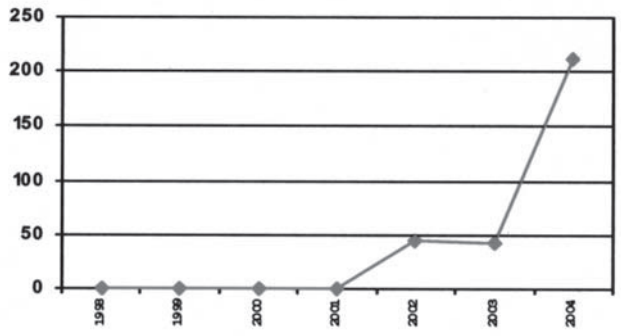

Figure 2. Total Extramural Funds Generated by Clinical Program Faculty from 1998–2004 (in thousands of dollars)

{continued from p. 66}

clinic and specialty clinics. In all clinics, we have attempted to integrate science and practice. Treatment is guided by systematic data collection using outcomes management (Lambert, Hansen, & Fitch, 2001). Each client completes the Outcome Questionnaire–45 (OQ; Lambert et al., 1996) prior to each psychotherapy session along with a short measure of subjective well-being. We also monitor the therapist's activities by videotape and also by periodically evaluating the therapeutic alliance. After Sessions 3, 4, 10, 11, and the final session, each client completes a measure of therapist empathy and the Combined Alliance Short Form (CAS; Hatcher & Barends, 1996). Science informs practice when these data are passed onto the vertical teams and the Clinic Research Team (CRT).

The CRT is a group of clinical faculty and graduate students that operate independently of any individual faculty member's research lab. The CRT has constructed a clinic database using Microsoft Access. Each therapist maintains a database for each client. Information recorded in the database includes demographics, diagnosis, OQ, CAS, progress notes, and other information deemed important by the supervision team. The research team has two general functions. First, we evaluate clinic procedures regarding the reliability of data collection and professional standards of practice. Second, we work in teams on research projects that are generally initiated by students. Thus, our practice has also informed science through publications reflecting the applicability of both the Dose-Effect and Phase Models of therapy (Howard, Lueger, Maling, & Martinovich, 1993) in training clinics (Callahan & Hynan, 1995; Callahan, Swift, & Hynan, in press).

One current project of the CRT has involved the development of a Therapy Expectations Questionnaire. Noting that current therapy expectations questionnaires are both short (generally 1 to 3 questions) and limited to expectancy of well-being after therapy (Devilly & Borkovec, 2000), one research team collaborated in developing additional questions related to the client's expectations of (a) the therapist's interpersonal qualities, (b) themselves and their commitment to therapy, and (c) what would happen in therapy sessions. Multiple reliability and validity studies are in progress.

Within the past year we have added to our data collection by incorporating software from Polaris Health Directions, Inc. The client's first contact with the software produces an intake report that provides scores on all three parts of the Phase Model of psychotherapy (subjective well-being, symptom intensity, and life functioning; Howard et al., 1993); alerts for validity of response, drug/alcohol abuse and dangerousness; a history of previous treatment; and indicators of motivation for therapy. De-identified data are then sent to the Polaris Health Directions clearinghouse, and Polaris provides an expected treatment recovery curve for each client. Prior to each subsequent session, the client spends about 4 minutes with a component of the Polaris software that provides a progress report according to the Phase Model; before every fourth session the client completes a longer version of the progress report that takes 7 to 8 minutes. The client progress software also provides for ratings of the therapeutic alliance. On a monthly basis, therapists also answer questions on Polaris software that provide information about diagnosis (and any changes), the therapeutic alliance, and judgments of improvement. We are very excited that use of the Polaris Health Directions software and participation in the clearinghouse has enabled us to participate in a Polaris practice research network (PRN). PRNs have the ability to greatly facilitate the gathering of data.

The UWM Psychology Clinic also houses a number of specialty clinics, whose clients contribute to a number of funded and unfunded research investigations. Dr. Doug Woods directs the Tic Disorders and Trichotillomania Clinic. This specialty clinic is evaluating a comprehensive behavioral intervention for tics in children along with researchers from UCLA–Neuropsychiatric Institute, Johns Hopkins School of Medicine, Yale Child Study Center, Wilford Hall Medical Center, and Massachusetts General Hospital–Harvard School of Medicine. Research in the Tic Disorders and Trichotillomania Clinic is funded by the National Institutes of Health, Tourette Syndrome Association, and the Trichotillomania Learning Center, Inc. Dr. Jonathan Kanter directs the Depression Treatment Specialty Clinic. The Depression Clinic focuses on behavioral treatments including Functional Analytic Psychotherapy, Acceptance and Commitment Therapy,

Behavioral Activation, and Dialectical Behavior Therapy.

Dr. W. Hobart Davies and community supervisor Dr. Gwynne Kohl direct the Project Ujima Behavioral Services, which provides integrated medical, psychological, and social services to the families of adolescent assault victims. Dr. David Osmon directs the Learning Disability (LD) Specialty Clinic. The LD clinic is devoted to providing diagnostic services for those university students seeking protection under the Americans with Disabilities Act for learning problems. Finally, Dr. Bonnie Klein-Tasman directs the Child Neuropsychology Clinic. This clinic provides comprehensive neuropsychological evaluations to children with a wide variety of neurological conditions and developmental disorders and delays.

The purpose of more cohesively integrating our science and practice was to improve our training in the integrated scientist-practitioner model. Indeed, since this commitment to a truly integrated scientist-practitioner model was made in 1999, both our research productivity (see Figure 1) and grant-funding (see Figure 2) have increased significantly. In addition, it should be noted that this was not done at the expense of clinical experience, or at the expense of fewer courses.

Our students have also benefited from this increased faculty productivity. Across all 5 years of our on-campus program, our students have published an average of two articles or chapters and presented an average of nine presentations at national or regional conferences.

In addition, our students typically seek and obtain internship sites that emphasize the integration of science and practice. In the past 4 years, students from the clinical program have accepted internships at the following institutions:

- VA Medical Center, Minneapolis
- VA Medical Center, Seattle
- University of Washington, Department of Psychiatry
- University of Chicago Medical School
- University of Minnesota Medical School
- Medical University of South Carolina/Dept. of VA Consortium
- University of Mississippi Medical Center/Jackson VA
- Long Island Jewish Medical Center
- La Rabida Children's Hospital
- Yale University
- Columbus Children's Hospital
- University of Florida
- Baylor College of Medicine
- Brown University Medical School
- Maryland Health Care System VA
- University of Illinois-Chicago, Dept. of Psychiatry
- Mendota Mental Health Institute

Borkovec (2004) envisioned a training program concerned with the integration of science and practice. His dream included: (a) diagnostic assessments conducted by advanced graduate students and reliability checked by independent clinicians, (b) routine assessment of client progress at intake, Sessions 5, 7, 15, and every 15th session thereafter, (c) case notes reliably entered in a database, (d) evaluating therapy tapes for the implementation of therapeutic interventions, (e) a library containing manuals for empirically supported treatments, (f) members of practicum teams doing literature searches, (g) opportunities to conduct research studies in the clinic, (h) a central data management system for storing information, and (i) participation in PRNs. We are most proud to say that most of "the dream" is life as usual in UWM's Psychology Training Clinic.

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Training Program Update

Florida State University at Panama City: Master's Program in Psychology With a Specialty in Applied Behavior Analysis

H. Allen Murphy, *Florida State University–Panama City*

The program is a nonthesis program approved by the Behavior Analyst Certification Board. FSU-Panama City intends to train effective behavior analysts at the master's level. Typically, students complete the program in five semesters and take the following sequence of courses:

Fall of first year
- Principles of Applied Behavior Analysis (ABA)
- Research Methods in ABA
- Developmental Psychology

Spring of first year
- Methods of ABA
- ABA in Education and Performance Management
- Biological Psychology

Summer of first year
- Professional and Ethical Issues in ABA
- ABA in Developmental Disabilities and Autism
- First Practicum

Fall of second year
- ABA in Mental Health and Aging
- Second Practicum

Spring of second year
- Skinner's Theory
- Third Practicum

The program's specialties are in developmental disabilities, autism, and school applications; however, we have remarkable community support, allowing students to gain practical experience with a variety of populations and settings. Practica include child foster care, fitness facilities, juvenile detention, daycare centers, and nursing homes.

The missions of the program are to (a) provide students with thorough understanding of the principles and applications of behavior analysis; (b) afford students opportunities to gain experience across a variety of settings; and (c) prepare them to become Board Certified Behavior Analysts.

Training Model

The program is designed to produce well-rounded professional behavior analysts with an emphasis on the development of thorough knowledge of behavior analytic principles, practical experiences, and the ability to communicate to consumers and professionals. Students work individually or collaboratively in practica closely supervised by faculty or Board Certified Behavior Analysts working in the community. Ethical practice is emphasized in all course work and practica.

Unique Aspects of the Program

Currently, all classes are offered via interactive television between the Tallahassee and Panama City campuses with the ABA faculty alternating between the locations to ensure consistent faculty–student contact. Students have the option of living in either of these cities, which has resulted in a roughly equal distribution of students in each cohort. The emphasis on practical applications and presentation skills has resulted in 44 students contributing to 41 presentations at professional conferences over the past 4 years. Assistantships have been provided for all current students who have sought them, with the remainder employed in other behavior analytic positions.

Student Placement

Behavior analytic positions have been offered to all graduates who have sought them. Former students are currently employed throughout the country. In each of the past 4 years, a student applied for and was accepted into a doctoral program. All graduates who have taken the examination have achieved Board Certified Behavior Analyst status on their initial attempt.

Prospective students may contact faculty directly at:

Jon Bailey: bailey@psy.fsu,edu
Ellen Berler: berler@psy.fsu.edu
Al Murphy: amurphy@pc.fsu.edu
Tim Weil: tweil@pc.fsu.edu

Or, visit: http://www.psy.fsu.edu/~pc ✍

Lighter Side

Alarm Clock

Elizabeth Moore, *Mayo Clinic*

I was shopping for an alarm clock a few weeks ago and happened upon one with a projection feature. Yes, this miracle of modern technology actually projects the time onto the ceiling in case you awaken in the middle of the night and are too tired to turn your head the 45 degrees necessary to view the nightstand. Gratuitous facilitation of laziness aside, it struck me that this invention has probably maintained and exacerbated many a sleep disorder. How much harder will it be to discourage those anxious clock-checking clients when the time is practically visible through their eyelids? All that's missing is a label on the box noting: "PSYCHOLOGIST GENERAL'S WARNING: Extended use has been shown to cause a 30-point increase in nightly SUDS ratings." It made me think, How far can this go? Is it only a matter of time before our shelves are rife with items designed to make the pesky work of maintaining a mental health disorder easier? Are we to have doorknobs covered with wrappers similar to the disposable toilet-seat covers found in airports for those with OCD? Klonopin-laced popcorn at exciting movies for the panic-inclined? Underwear that plays white noise at the touch of a button on the waistband for those with bashful bladders? What's a psychologist to do? It's enough to compete with our usual disorder-associated foes—booze, gambling, in-laws—but must we now steel ourselves against the evil that is The Sharper Image? Should the *DSM* include rule-out criteria for disorders caused by the new GMCs (general modern conveniences)?

Last week, on my flight back from ABCT, I spotted the nefarious projection alarm clock advertised in *Sky Mall*, poised to release a pandemic of intractable sleep anxiety across the full flight-coverage area of Northwest Airlines. Nothing can stop it now. I feel inclined to warn someone—an impulse almost strong enough for me to call someone and complain. I believe, however, that I will send an e-mail, as talking on the phone makes me nervous.

ADDRESS CORRESPONDENCE to Elizabeth Moore, Mayo Clinic, 911 41st. St. NW, Rochester, MN 55901. ✍

Minutes of the Annual Meeting of Members

Saturday, November 18, 2006—Chicago

I. Call to Order

President Otto welcomed members to the 40th Annual Meeting of Members and called the meeting to order at 12:18 P.M. Written notice of the meeting had been sent to all members in August.

II. Minutes

Secretary-Treasurer Andrasik asked for any comments or corrections on the minutes from last year's meeting; hearing none, he asked for a motion to accept.

M/S/U: The November 19, 2005, minutes were unanimously accepted as distributed.

III. Service to the Organization

President Otto thanked the Board members for their hard work this year. He noted that the Board meets monthly by conference call, where they look closely at issues confronting the Association. He thanked the members of the Board, Gayle Beck, Ray DiGiuseppe, Jon Abramowitz, Deb Hope, Anne Marie Albano, and Frank Andrasik along with the coordinators, Cheryl Carmin, Judy Favell, Gayle Iwamasa, and Sue Orsillo. He also thanked the staff, especially the Association's Executive Director, Mary Jane Eimer.

President Otto also thanked J. Gayle Beck, who is rotating off as Immediate Past President, and Anne Marie Albano, who will be transitioning from Representative-at-Large to President-Elect.

President Otto noted, "Before I begin thanking our outgoing committee chairs, I would like to say a special thank you to several members who spent untold hours reviewing practice guidelines generated by the American Psychiatric Association. Ann Steffen and Antonette Zeiss reviewed the guidelines on Alzheimer's and Other Dementia Guidelines. I am very pleased that APA has ABCT on its list of essential reviewers."

President Otto also thanked those members who have completed their term of office: Gayle Iwamasa, Membership Issues Coordinator, 2003-2006; Curtis C. Hsia, Committee on Student Members Chair, 2003-2006; Doreen M. DiDomenico, Committee on Clinical Directory and Referral Issues Chair, 2003-2006; John Eustis Williams, ABCT's 2006 Top Membership Recruiter; Lizabeth Roemer, Workshop Committee Chair, 2003-2006; Christopher J. Correia, AMASS Committee Chair, 2003-2006; Simon A. Rego, Committee on Professional Issues Chair, 2003-2006; Judith Favell, Publications Coordinator, 2003-2006; Kenneth J. Ruggiero, Committee on Public Education & Media Dissemination Chair, 2002-2006; Eric Wagner, Archives Series Editor, 2003-2006; and Maureen Whittal, 2006 Program Committee Chair.

President Otto thanked members of the Program Committee for the time and dedication it required to put together a program of incredible size and importance. The Program Committee consists of the Program Chair, Maureen Whittal; Associate Program Chair, Dean McKay; Assistant Program Chair, Melisa Robichaud; Institutes Committee Chair, Joseph Scardapane; Workshop Committee Chair, Lizabeth Roemer; Advanced Methodology and Statistics Seminars Chair, Christopher J. Correia; Master Clinician Seminars Chair, Patricia Averill; Continuing Education Committee Chair, John W. Klocek; Local Arrangements Committee Chair, Pamela S. Weigartz; and Program Committee members Wesley D. Allan, Drew Anderson, Karla Anhalt, David C. Atkins, Alisa Bahl-Long, Sonja V. Batten, Carolyn Black Becker, Deborah J. Bell, Michele Boivin, Joaquin Borrego, Carolyn E. Brodbeck, Elissa J. Brown, Steven E. Bruce, Andrea Seidner Burling, Rebecca J. Cobb, Annmarie Cano, Cheryl N. Carmin, Corinne Cather, Alexander L. Chapman, Brian C. Chu, Mari L. Clements, Marlene J. Cohen, Dennis R. Combs, James V. Cordova, Lisa W. Coyne, Ronda L. Dearing, Thilo Deckersbach, Patty DiBartolo, David DiLillo, Linda A. Dimeff, Brian D. Doss, Laura Dreer, Greg M. Dubord, Jillian T. Ehrenreich, Frank D. Fincham, Victoria M. Follett, Martin E. Franklin, Wendy S. Freeman, David M. Fresco, Alan E. Fruzzetti, Scott T. Gaynor, Kim L. Gratz, Amie E. Grills-Taquechel, Kristina Coop Gordon, Melanie Harned, Trevor Hart, Joseph A. Himle, Debra A. Hope, Jennifer L. Hudson, Sue C. Jacobs, Matthew D. Johnson, Maria Karekla, Shalonda Kelly, Robert S. Kern, John W. Klocek, Brett R. Kuhn, Jennifer Langhinrichsen-Rohling, Robert H. LaRue, Jaslean LaTaillade, Jean-Phillippe Laurenceau, Erika Lawrence, Steven R. Lawyer, Penny Leisring, Jennifer Block Lerner, Patricia J. Long, David J. Martin, Gerald F. McKeegan, Robert J. McMahon, Daniel W. McNeil, John R. McQuaid, Elizabeth Meadows, Catherine R. Michas, Lynn D. Miller, Candice M. Monson, Terri Messman-Moore, Todd M. Moore, Tracy L. Morris, Doug Nangle, Amy E. Naugle, Tara M. Neavins, Larissa N. Niec, Conall O'Cleirigh, Holly K. Orcutt, Carolyn M. Pepper, Michael R. Petronko, Melissa A. Polusny, Sheila A. Rauch, Jennifer P. Read, David Reitman, Melisa Rempfer, Deborah L. Rhatigan, Shireen L. Rizvi, Dana Rofey, Kelly Rohan, George R. Ronan, Fredrick Rotgers, Steven A. Safren, Kristalyn Salters-Pedneault, Steven L. Sayers, Julie A. Schumacher, Kathleen J. Sexton-Radek, Tamara Goldman Sher, Jillian C. Shipherd, Sandra Sigmon, Jasper Smits, Jennifer A. Snyder, William D. Spaulding, Amy E. Street, Gregory L. Stuart, Maureen A. Sullivan, Daniel J. Taylor, Kimberli R. H. Treadwell, George C. Tremblay, Matthew Tull, Cynthia L. Turk, David P. Valentiner, Robyn D. Walser, Robert L. Weiss, Mark A. Whisman, Kamila S. White, Pam Wiegartz, Nathan L. Williams, Carrie L. Winterowd, Deborah C. Wise, Katie Witkiewicz, Claudia Zayfert, and Michael J. Zvolensky.

President Otto also thanked Melisa Robichaud, Assistant Program Chair; Pamela S. Weigartz, Local Arrangements Committee Chair; Stew Shankman, Assistant Local Arrangements Committee Chair; and Michael Messina and Bari Goldman, Local Arrangements Committee Members.

President Otto observed that Cheryl Carmin, our Convention and Education Issues Coordinator, was also a very active participant in this year's local arrangements, as Chicago is her home town. We appreciate all the local talent and expertise. "Thank you again for doing such a wonderful job for us in Chicago!"

President Otto asked each of the Coordinators to report on the status of their committees.

IV. Coordinators' Reports

Academic and Professional Issues

Coordinator Sue Orsillo noted that Jennifer Block Lerner and the members of the

Academic Training Committee were securing graduate and undergraduate syllabi, which are being posted on our Web site under the Educators and Trainers section. The Academic Training Committee is also investigating the feasibility of producing on-line directories of CBT-oriented internship and postdoctoral programs. Simon Rego, the outgoing Chair of the Professional Issues committee, has headed up Web-based material on article summaries and treatment manuals. Steve Bruce, Chair of the Committee on Research Agenda, has been keeping tabs on exciting new research-based findings and funneling them to the Web. The International Associates Committee, chaired by Christine Maguth Nezu, has been busy working toward the 2007 World Congress in Barcelona. The Awards and Recognition Committee's hard work was on display yesterday as the Association honored Edward Blanchard with ABCT's Lifetime Achievement Award; Marvin Goldfried with the Outstanding Educator Award; Richard G. Heimberg as ABCT's First Outstanding Mentor; Jack Gorman as the Distinguished Friend to Behavior Therapy; and, for their devoted work as the gatekeepers of the Association's finances over 40 years, ABCT's Secretary-Treasurers: Dorothy Susskind, John Henderson, Jeanne Phillips, Stephanie Stolz, Rosemery O. Nelson-Gray, Michael Cataldo, Dennis Russo, Richard Suinn, Linda Carter Sobell, Andrew Meyers, Barbara McCrady, Ronald Drabman, Alan Gross, and Frank Andrasik. Joann Wright, the chair of the Awards Committee, also announced the winner of the 6th Annual Virginia Roswell Dissertation Award, Michael P. Twohig, for his paper entitled "Acceptance and Commitment Therapy as a Treatment for Obsessive Compulsive Disorder." Christopher G. Beevers received the President's New Researcher Award and Angela W. Chiu, June L. Gruber, and Brian Iacoviello received the Elsie Ramos First Author Student Poster Awards. Another nice touch to thank members for their membership was that each member's name was listed in a PowerPoint presentation as they entered the awards ceremony ballroom. Dr. Orsillo encouraged all members to submit names for the 2007 nominations. Details and applications are available on our web site.

Convention and Education Issues

Coordinator Cheryl Carmin noted that many of the Chairs who put the convention together are completing their terms: Maureen Whittal, as Program Chair, Pam Weigartz, as Local Arrangements Chair, Christopher Correia, as AMASS Chair, and Lizbeth Roemer as Workshop Chair. Carolyn Pepper will be taking over Workshops Committee Chair, and Dean McKay will be next year's Program Chair. She also thanked Mary Ellen Brown, our Director of Education and Meeting Services, and Tonya Childers, her assistant, and the rest of the ABCT staff. She noted that the convention would not be possible without the efforts of these people, both members and staff. We had 2,552 preregistered, and, as of this moment, we have 3,331 attendees, breaking the old record set in Boston. For the first time, our program was available on the web. She noted that the presidential panels, another innovation this year, were well received; for those who missed them live, they're being recorded and will be available on DVD. Our Thursday presentation, a dissemination of CBT to psychiatrists, continues to grow. We'll see you all next year in Philadelphia.

Membership Issues

Coordinator Gayle Iwamasa reported that we had 4,773 members in 2006; and, already, for 2007, we have 3,388 members, 457 more than at this time last year. Our aim for 5,000 members, started under Membership Issues Coordinator Mike Petronko, looms ever closer. She thanked Curtis Hsia for his efforts as the Committee on Student Membership Chair. She said that Trevor Hart is facilitating communication among SIGs and between SIGs and the Board. Kristen Sorocco's Membership Committee is looking to recruit new members outside the traditional Ph.D. programs. She noted that Stephanie Felgoise researched various ways to make the nomination and voting process easier; Stephanie reports that ballots must be mailed, as it is a New York State law, in which ABCT is incorporated. Doreen DiDomenico has done a fabulous job heading up the Clinical Directory and Referral Issues Committee, and will always be remembered not only for improving the process and making it easier for clients to find our therapists, but for her wonderful sense of humor that was displayed in many ways, most memorably in the "Where's Waldo?" posters from last year's convention. Dr. Iwamasa thanked Laura Dreer for the hard work she's been doing as the Chair of the List Serve Committee and as its moderator, describing it as "a work in progress." She said that she just couldn't say enough about Dr. Dreer and the job she's doing and the many, many hours she's committed to the project. She reminded attendees to visit the behavioral genealogy survey on our web site. Dr. Iwamasa announced the winners of the membership lottery: New member (video): Britta K. Rothschild; Sponsor (video): Robin Barrett; New Member (1 year journal): Thomas C. Mack; Sponsor (1 year journal): Lauren Alloy; and our grand prize winner for sponsoring the most number of new members (earning 1 year complimentary membership): John E. Williams.

Publications

Coordinator Judy Favell resolved that her Publications Committee was the best committee the earth has ever seen. She thanked Sue Orsillo, who headed up our efforts to revamp the Web site; David Fresco, who oversaw our transition to on-line journals; Christine Maguth Nezu, who successfully negotiated to have *Behavior Therapy* included in MedLine; Rick Heimberg, *Behavior Therapy*'s Editor; Stefan Hofmann, Editor for *Cognitive and Behavioral Practice*; *the Behavior Therapist*'s Editor, David Reitman; Ken Ruggiero, who heads up the efforts of the Public Education and Media Dissemination Committee; Eric Wagner, our video series editor; and John Eustis Williams, who just joined our committee as Web Editor; and our three presidents, Gayle Beck, Michael Otto, and Ray DiGiuseppe. Dr. Favell thanked David Teisler, our Director of Communications, as the constant force driving publications and who worked with the various committee members to get the journals on-line and to revamp our Web site. She also thanked Michael Otto, Sue Orsillo, Ray DiGiuseppe, and Anne Marie Albano for their help in generating new copy for our Web site. She noted that all three serial publications were healthy by all measures, including submissions, impact ratings, and turn-around time, marveling at *C&BP*'s incredible 49-day turn-around time to initial decision. She complimented Gayle Beck on her work in developing the Publications Policies and Procedures that look to be a model for our other coordinators and their committees. Other major projects are revisions being done on all the Association's fact sheets, new policies being developed for video production, work on a web-based job bank that will supplement jobs now posted on the list serve, and the list serve itself, indicating that it was an excellent example of cooperation among various people, especially Laura Dreer, Lisa Yarde, and David Teisler. Drew Anderson will become editor of *the Behavior Therapist* next year, Maureen Whittal has been selected to become the

next editor of *Cognitive and Behavioral Practice*, and we're leaving the committee in the excellent hands of Phil Kendall, our incoming coordinator.

V. Executive Director's Report

Executive Director Mary Jane Eimer exclaimed that it has been a phenomenal year. Planning the 40th anniversary celebration and name change branding with staff and members has brought out a sense of satisfaction, fun, and whimsy. Stephanie Schwartz, our managing editor, is also a graphic designer with a wonderful gift, and much of this 40th anniversary art work is hers. Ms. Eimer noted that the Association is committed to planning, and will be embarking on its next 3-year planning retreat in June 2007. She said that your staff members are tireless workers, many of whom are distinguished outside the office as well as in the service of the organization. Patience Newman, our Web master, just completed her master's in public health administration; Stephanie, besides being a designer and managing editor, is an accomplished dancer; Teresa Wimmer, ABCT's SIG liaison and fulfillment manager, is a composer and producer; Tonya Childers is our conference registrar with boundless energy; Lisa Yarde, our membership manager, is about to publish a historical novel and has a travel guide under her literary belt and several others in the pipeline. Mary Ellen Brown and David Teisler are my rocks. Thank you all.

VI. Finance Committee Report

Secretary-Treasurer Frank Andrasik explained that the Finance Committee's charges include overseeing annual financial condition, monitoring fiscal projections, ensuring funds are available for achieving specified goals over single- and 3-year periods, making recommendations regarding personnel and capital equipment, ensuring reserve funds are invested prudently, and evaluating financial considerations related to ownership of permanent headquarters. The Committee is comprised of the Secretary-Treasurer plus two members he selects, Pat Friman and George Ronan, plus the President-Elect, Ray DiGiuseppe. He thanked all for their hard work, noting in particular Dr. Ronan's assistance with overseeing our investments. The scope of the Committee's work includes over 400 budget lines, which is prepared by the Association's "Big 3" (Mary Jane Eimer, Mary Ellen Brown, and David Teisler). He noted that over the last 21 years, the Association has been in the black 18 of them, and 2006 is no exception. Our profit, or "income over expenses," has ranged from -7.5% (2000) to +23.1% (1988) in that period, and one of those three down years was due to funding the purchase of headquarters. He reported that the 2006 budget year, which ran from November through October, had an estimated total income of $1,441,672, with expenses of $1,306,153 and net income $135,519. This represents a profit margin of 9.4%. Dr. Andrasik explained that our financial foundation is made up of three major components: 43% Convention ($613,433); 31% Dues/Fees ($445,528); 20% Publications ($285,930); and 6% Other ($96,781). Thank you for paying dues, subscribing to our publications, and supporting our annual meeting! He also explained that our financial foundation included a "rainy day fund" comprised of a restricted reserve of $448,365. We have been targeting one third of operating expenses. A near-term goal is to increase this amount to one half of operating expenses, with a longer term goal to increase that to 1 year of operating expenses. We also have other set-asides, including technology enhancement, office overhaul, and our 3-year retreat. He said that ABCT is fiscally sound, it routinely passes yearly independent audits, it follows generally accepted accounting principles (GAAP), it is compliant with all state and federal regulations, its budget is completely transparent, and we track staff time and task allocation throughout the year. He concluded that there are no corporate scandals here!

VII. President's Report

Michael Otto made some final remarks as President. He noted that the conference is important for our mental health professionals; the Web is important as an outreach vehicle and explains who we are to the general public. He said that this, our 40th anniversary, because of the great success of our convention and the huge strides made by the Web, provide us with an opportunity to rejoice at what we have accomplished and to expand our outreach efforts.

VIII. New Appointments

President Otto announced the following appointments: Philip Kendall, 2006-2009 Publications Coordinator; Mitchell Schare, 2006-2009 Membership Issues Coordinator; Dean McKay, 2007 Philadelphia Program Chair; Amy Wenzel, 2007 Local Arrangements Committee Chair; Sandra Pimentel, 2008 Orlando Program Chair; Carolyn M. Pepper, 2006-2009 Workshop Committee Chair; Joaquin Borrego, Jr., 2006-2009 Committee on Student Members Chair; and Gerald Tarlow, 2006-2009 Clinical Directory & Referral Issues Committee Chair. (Editorial Note: Since the November Annual Meeting of Members we had several resignations and appointments as follows: Craig Marker, 2006-2009 AMASS Committee Chair; and Kevin Del Ben, 2006-2009 Professional Issues Committee Chair; the Association currently has a Call for a Web Editor with a deadline date of March 1, 2007.)

VIX: Transition of Officers

President Otto announced the transition of officers: Anne Marie Albano, President-Elect; Robert Klepac, Representative-at-Large; George Ronan was elected as our Secretary-Treasurer-Elect and is being trained by Frank Andrasik over the coming year as per our Bylaws. Dr. Ronan will take office in November, 2007; and Ray DiGiuseppe, who, as of this moment, is now your President.

X. Adjournment

There being no additional business, the meeting was adjourned at 1:10 P.M. Central Time. ✍

CALL FOR PAPERS

ABCT's President, Ray DiGiuseppe, Ph.D., invites submissions for the twenty-ninth Annual **President's New Researcher Award**. The winner will receive a certificate and a cash prize of $500. Submissions will be accepted on any topic relevant to behavior therapy, but submissions consistent with the conference theme emphasizing basis research are particularly encouraged. Eligible papers must (a) be authored by an individual with five years or less posttraining experience (e.g., post-Ph.D. or postresidency); and (b) have been published in the last two years or currently be in press. Submissions can consist of one's own or any eligible candidate's paper. Papers will be judged by a review committee consisting of Ray DiGiuseppe, Ph.D.; Michael Otto, Ph.D., ABCT's Immediate Past-President; and Anne Marie Albano, the ABCT President-Elect. Submissions must be received by Monday, August 13, 2007, and must include four copies of both the paper and the author's vita. Send submissions to ABCT President's New Researcher Award, 305 Seventh Ave., 16th floor, New York, NY 10001.

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in *the Behavior Therapist*

Contact Stephanie Schwartz
sschwartz@abct.org for:

- free price estimates
- display ad design
- multi-placement discounts
- deadline stratagems

CLASSIFIED ADS $4 per line
JOB BANK coming soon

Display Ad Preparation

- printing method: offset
- black-and-white
- halftone screening: 133 LPI
- trim size: 8 1/2" x 11"
- binding: saddle stitched
- PDF, Quark files, and camera-ready art accepted
- proof must accompany digital file submissions

Display Advertising

Ad Sizes	Inches (width x depth)	Rate
back cover	7 1/8 x 7	$550
full page	7 1/8 x 9 7/16	$400
2/3 page	4 11/16 x 9 7/16	$275
1/3 page H	4 11/16 x 4 3/4	$175
1/3 page V	2 3/16 x 9 7/16	$150
1/6 page H	4 11/16 x 2 3/16	$75
1/6 page V	2 3/16 x 4 11/16	$75
1/2 page V	4 11/16 x7 1/4	$250
1/2 page H	7 1/8 x 4 3/4	$250

Issue	Deadline
January	December 1
February	January 3
March	February 2
April	March 2
June	May 3
September	August 2
October	September 3
Winter	November 2

PROMOTE YOUR PRODUCT OR SERVICE to all or any segment of ABCT's membership by renting our mailing list. We can customize a list to give you exactly the member breakdown that will be most effective and cost-efficient for your marketing needs. Our mailing list is updated daily. Most orders are shipped within 10 days of receipt. Please direct all orders to Lisa Yarde, Membership Services Manager, at lyarde@abct.org.

Mailing List Rentals

- ENTIRE LIST: DISKETTE: $260
- PRESSURE-SENSITIVE LABELS: $290
- PARTIAL LISTS HAVE A MINIMUM $90 FEE (UNDER 600 NAMES)
- POSTAGE/HANDLING: $25 FOR FIRST-CLASS DELIVERY
- OVERNIGHT AND 2-DAY DELIVERY AVAILABLE AT EXTRA COST

Find-a-Therapist 24/7

Membership has its privileges!

Time spent on phone with caller seeking therapist in Dayton, Ohio:	16 minutes
Time spent on the internet to locate therapist in Dayton, Ohio:	25 minutes
Time spent corresponding with ABCT listserve members for additional referrals:	22 minutes
Time stuck in traffic after leaving late due to above activities:	32 minutes
Total time spent:	1 hour, 35 minutes
Time it would have taken had you used the Find-a-Therapist link:	3 to 5 minutes

BEING AN ABCT MEMBER entitles you to many privileges, including listing your contact information in the Find-a-Therapist Directory at no additional cost. There are over 3,300 members listed in the online directory whose contact information is readily accessible to other ABCT members and the public trying to locate CB therapists nationwide. Why lose time posting referral requests on a listserve or contacting colleagues when you can locate an ABCT cognitive behavior therapist in a few minutes using the Find-a-Therapist service? Remember, the Find-a-Therapist service is fast and easy to navigate making it the most effective way to find a cognitive behavior therapist in your area.

Tip: Include your county in the Find-a-Therapist directory to increase your visibility

the Behavior Therapist
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www.abct.org
ADDRESS SERVICE REQUESTED