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## STUDY:

# TREATING SEXUAL O

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#### **Abstract**

Beginning in October of 1995 and ending in February 1996, two studies were performed by the Delos Mind and Body Institute on the use of Cranial Electrotherapy Stimulation (CES) on three groupings of patients: generalized anxiety disorders; substance abusers; and pedophiles. The first study involved a triple blind procedure comparing the effectiveness of CES among and between the three groups. Variables of effectiveness involved EMG testing of

to one of two groups, CES or hypnosis like relaxation training. While both groups showed significant improvement, the CES group was more responsive to the treatment. This second study focused entirely on trait anxiety. The significance levels between groups was approximately 0.1. The pre and post treatment of pedophiles is related to actual personality restructuring. (N=15).

The results of these preliminary studies suggested the need for further

primary statistical tool used was the Mann-Whitney Test.

### Introduction

The serious issues of sexual offenders within society are made worse by the lack of any definitive treatment modality. All the claims for treatment success are at best suspect, and the majority of clinical opinion seems to side with the notion that treatment is not possible, only behavioral control. Given that perspective, most treatment pro-

## The serious issues of sexual offenders within made worse by the lack of any definitive trea

frontalis muscles, skin temperature, and the State/Trait Anxiety Inventory (STAI). With significance level as high as .001 for reduction of state anxiety among the three groups of patients (N=107), we designed a second study of pedophiles only.

The second study involved random assignment of admitted pedophiles

research in this area. The need to increase sample size is obvious, but, even with small N groups in both studies, the results appear impressively significant.

The statistical data analysis was provided by the University of Texas Southwest Medical School in Dallas, Texas. The Bioresearch department assisted us in our design and analysis. The

viders opt for a confrontational model that seeks to use shame and guilt as a tool of control, wielded harshly in shaming groups which confront the individual's thoughts, behaviors and emotions.

Peniston and Kulkosky began a treatment program with alcoholics in which the goal was to alleviate anxiety since they had earlier demonstrated that

## FFENDERS

## CRANIAL ELECTROTHERAPY STIMULATION

confrontational methods found in many treatment facilities tended to be counterproductive in reducing anxiety and hence placed the alcoholic at greater risk for relapse.

Using this same type of reasoning, and believing that  $\beta$ -endorphin levels would rise with a reduction of stress, the Delos Mind/Body Institute began to use Cranial Electrotherapy Stimulation (CES) as a means of alleviating the trait anxiety that was found without exception in all the self-professed pedophiles. Working in conjunction with the Dallas Country Probation Department, the following study was undertaken to see if it was possible to reduce anxiety in pedophiles.

## society are ment modality.

An important note is to recognize that the small N number limits the generalizability of the study. Likewise, further study

needs to be done between a reduction of trait anxiety and sexual preoccupation. The lack of anxiety in itself does not lead to the conclusion that the eradication of the identified behavior is at hand. However, the presence of trait anxiety in all pedophiles subjects with a one to one correlation deems the area be examined more carefully.

### **Pedophiles and Cranial Electrotherapy Stimulation**

For a period of six weeks, two groups of convicted

pedophiles were treated using relaxation training and Cranial Electrical Stimulation (CES). Individuals were assigned randomly to treatment groups by numbers out of a hat. Group A

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consisted of 8 individuals ranging in age from 24 to 73. Group B consisted of 7 individuals ranging in age from 26 to 70. All patients were male, and all patients were part of continuing pedophilia group, whose participation was controlled by Dallas Probation Department.

Group A was given 20 minutes of CES, using the Alpha-Stim 100, with a setting of 0.5Hz and a 300 microamperes. All members were given this weekly, for four weeks. Group B was given 20 minutes of relaxation training which involved a hypnotic like induction using the Speigal method of eye rotation and eye closure, with focus on breath control.

Both groups were given the *State!* Trait Anxiety Inventory (STAI) using form X which is measuring the trait anxiety factors. This compares to the state anxiety factors which monitors temporary factors. State anxiety is a persistent manner of relating to the world, consistent with the Diagnostic and Statistical Manual IV for generalized

anxiety and compulsive/paranoid personality disorders. Individuals who suffer from a chronic pattern of anxiety responses would be diagnosed as having trait anxiety. Indeed all members of these groups had received one or more of the above as secondary diagnosis to pedophilia.

	Group II (Speigal)	Difference
pre 41.6250	41.2857	0.3393
post 27.3750	36.8571	-9.4821
diff 14.25	4.4286	9.9769
Using a one tall signific	ence for group 1 pre and post, sig	

Grou	pl(CES)	Group II (Spelgal)	Differences
ore	8.4	9.81	-1.39
post	3.97	11.20	-7.23
dif	4.45	-1.39	5.85

The STAI was administered on week one prior to any treatment. Beginning on week two both groups were given the various treatments for the next four weeks. On the sixth week the STAI was re-administered. The results were tabulated and compared and produced as shown here in Table 1.

To ensure that the results of the STAI were not just a self-report mechanism in which the desire to please the staff influenced the responses, we also administered the EMG, which measured tension related to stress Table 2 shows the results of that testing.

We further administered a sexual inventory investigating time and activities spent in sexual behavior. The inventory was broken into two division: 1) deviant fantasy and activity, and, 2) overall sexual fantasy and activity. Table 3 demonstrates the differences between the two groups.

### **Report of Findings**

These scores must be viewed cautiously due to the small sample size. Nevertheless they do reveal some important findings. The results of the STAI suggest that there is a reduction of trait anxiety in both groups at the .01 and .0049 significance levels. Likewise there is evidence that the difference in outcome between groups I and II is also significant at the .0068 significance level. Both of these statistics involved one tail t-tests. It is also obvious that both groups are nearly matched in the mean in the pre-treatment scores.

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	Table	3	
	Group (CES)	Group II (Speigal)	Differences
deviant score	1.5	3.0	-1.5
total sex	11.5	19.67	-7.92
T-test scores betw	veen group I and II on	deviate scores shows	a significand

The scores regarding the EMG indicate a score between pre treatment groups which would be accounted for by chance, giving a significance of 0.47. However, post treatment between groups indicates a significance of 0.12 using a t-test single tail. The significance difference indicates an increase in state anxiety of the members of Group II, while Group I showed a decrease in state anxiety.

The sexual inventory demonstrated a significance between groups I and II of 0.23 using a single tail t-test on deviant behaviors. That significance increase on total sexual behaviors to 0.058 between groups I and II, with the less behavior, both normal and deviant being demonstrated in Group I.

### **Discussion of Findings**

The fact of significant lowering of STAI scores in both groups suggest the effectiveness of hypnosis/relaxation

and CES, with the clear advantage being demonstrated with CES. The question of the effectiveness of lowering trait anxiety among admitted pedophiles is much in dispute in the literature. It would appear important to make the distinction between state anxiety and trait anxiety. While both groups demonstrated a significant lowering of trait anxiety, group II actually demonstrated an increase in state anxiety as measured by the EMG. That finding was

surprising to us, and makes necessary more testing in the distinctions between state and trait anxiety as they relate to pedophilia.

The difference on the sexual inventory between group I and II, particularly on the total sex score showed a significance of .058, suggesting that CES was effective in lowering sexual behavior/acting out. The difference between the behavioral outcomes of the two groups speaks strongly of the need for further research in this area.

The measures of a lowering of trait anxiety and lower sexual inventory scores implies the need for investigating long term patterns of anxiety in pedophiles, as compared to short term state anxiety. The importance of lowering anxiety among pedophiles has long been suspected, but now the distinction is made between state and trait anxiety. While group II has an increase in state anxiety, demonstrated by





EMG, it also demonstrated a lowering of trait anxiety.

This research began looking at the feasibility of introducing a mechanism for reduction of trait anxiety among pedophiles. CES, according to the results of this study, has

accomplished that task very well. It would be premature to claim CES as the best treatment for pedophilia behavior, as it is obvious that hypnosis/relaxation is also effective in reduction of trait anxiety and should be included in the full treatment protocol of treatment of pedophilia. However, between the two variables, CES would be the first choice.

various electrical devices that are being used for surgical recovery procedures. The application of CES to psychiatric and psychological areas opens a new whole treatment possibility which is worth exploration.

The significance of using cranial electrotherapy stimulation in this study is that it opens a new paradigm for treatment.

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### Summary

This study was concluded in February and in a follow up of six months, the CES treated patients are still present in the groups with no dropouts. The relaxation group shows two individuals who have terminated treatment, including one who was incarcerated for violation of parole.

The significance of using CES in this study is that it opens a new paradigm for treatment. Rather than viewing through the lens of biochemical, biomechanical and behavioral biases, it may be possible to view the patients through a bioelectrical-magnetic frame. This shift in a paradigm is already being seen in the treatment of pain via TENS units and





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