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Increasing retention rates among the chemically dependent in residential treatment: Auriculotherapy and sublaxation-based chiropractic care. Jay M. Holder, Robert C. Duncan, Matthew Gissen., Michael Miller, and Kenneth Blum, American College Of Addictionology & Compulsive Disorders, Miami Beach, Fl., University of Miami School of Medicine, Miami, Fl., Village/Exodus Addiction Treatment Center, Miami, Fl. and University of North Texas, Denton, Tx.

In the residential treatment of the chemically dependent a major clinical problem is retaining the dependent person in treatment long enough to initiate the recovery process. Following the abrupt discontinuation of high-dose chemical use, the subject may experience lethargy, pain, dysphoria, and sleep disturbances, culminating in anxiety and depression. Because of the known calming effect of auriculotherapy (ear acupuncture) a randomized study of auriculotherapy versus a capsule placebo group was carried out in a residential setting among 66 residential patients. In addition to the traditional Shen Men, Sympathetic, and Kidney points, the Limbic system, Brain, and Zero points were incorporated in the treatment of the acupuncture group. Completion rates were analyzed by multivariate logistic regression. Patients who completed at least 10 days of auriculotherapy and did not receive intercurrent medications were more likely to complete the 30 day residential program than were patients in the comparison group (odds ratio =9.68, p=0.026). This study suggested that non-medication based treatment could have a positive effect on retention in a residential program. Based on these results, a randomized, placebo controlled, single blind study utilizing sublaxation-based chiropractic care (Torque Release Technique) was implemented in the same residential setting. Three groups were randomized: active treatment comprising daily adjustments to correct vertebral sublaxations using the Integrator adjusting instrument but set to deliver zero force with no direction while maintaining the audible click; and, a usual care group who followed the general policies of the residential program. A total of 98 subjects (14 female and 84 male) were enrolled after giving informed consent. The chiropractic and usual care groups each had 33 subjects (5 females each) while the placebo group had 32 subjects (4 females). At baseline the Spielberger State Anxiety scores were 50.0 + 1.9 for the Active group, 45.3 + 2.5 for the Placebo group, and 42.8 + 2.0 for the Usual Care group. The Active and Usual Care groups were significantly different at baseline (p<0.05). The corresponding scores on the Beck's Depression Inventory were 18.6 + 1.6, 21.0 + 1.8, and 16.7 + 2.0 respectively. All of the Active group completed the 28-day program, while only 24 (75%) of the Placebo group and 19 (56%) of the Usual Care group completed 28 days. These completion rates are significantly different than that for the Active group (p<0.05). A Kaplan-Meier survival analysis showed that the

probability of retention in the Placebo and Usual Care groups was less than that for the Active treatment group (Log Rank Test, $p < 0.001$). At four weeks the Spielberger State Anxiety scores were 32.0 ± 1.6 for the Active group, 42.5 ± 3.0 for Placebo group, and 33.1 ± 3.7 for the Usual Care group. The Active and Placebo groups were significantly different at four weeks ($p < 0.05$), with the Active group showing a significant decrease in anxiety (19.0 ± 2.2 , $p < 0.001$) while the Placebo group showed no decrease in anxiety (2.3 ± 2.9 , ns). The corresponding scores on the Beck's Depression Inventory at four weeks were 2.6 ± 0.7 , 6.5 ± 2.0 , and 3.3 ± 1.2 respectively. In contrast to anxiety, the three groups showed similar decreases in depression scores. The frequency of visits to the Nurse's station was monitored during the courses of the study. Among the Active treatment group only 9% made one or more visits to the Nurse, while 56% of the Placebo groups ($p < 0.001$ compared to Active) and 48% ($p < 0.002$ compared to Active) made such visits. In summary, these modalities show significant promise for increasing retention of patients in the residential setting.