

SCENAR REFLEX BIOFEEDBACK FOR THE TREATMENT OF PAIN: A RETROSPECTIVE STUDY

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ABSTRACT

Purpose: Complementary and Alternative Medicine (CAM) use is increasing in the United States, and while research on CAM is growing, there continues to be a need for more to be done in this field. One type of CAM that has recently been introduced into the United States is called SCENAR (Self-Controlled Energo Neuro Adaptive Regulator). Developed for the Russian space program, SCENAR is an electrobiofeedback device that has been used worldwide to treat injuries and pain. It was approved by the Federal Drug Administration (FDA) for use in the United States in 2009. Although research on SCENAR has been ongoing in Russia for many years, there have been few research studies in the English language or in the United States. The purpose of this study is to examine the rate of improvement of clients in a small SCENAR pain treatment center, as well as look at relationships that might exist between clients' improvement and the number of treatment sessions, gender, age, reason for visit (main complaint) and prior use of CAM. **Design:** This study used secondary data and a retrospective chart review design. It examines a sample of clients that received SCENAR treatment at a pain management center. **Measurement:** A variable was created to express the ratio of clients' "Perceived Improvement Events" (PIE) relative to their total number of treatment sessions (PIE ratio). A data sheet was developed to record the relevant chart data for the study. **Results:** Clients' perceived improvement was .5639. There was a significant difference found between women ($m = .5925$, $sd = .22891$) and men ($m = .4600$, $sd = .25438$) relative to the PIE ratio ($t = -.2523$, $df = 106$, $p = .013$). A positive, statistically significant relationship was found between the number of

Perceived Improvement Events relative to the total number of treatment sessions ($r = .859$, $p = .000$). A significant inverse correlation was found between the SCENAR numerical output at first and last session and the mean of the PIE ratio ($r = -.218$, $p = .030$). No association was found between PIE ratio and age, reason for visit or prior use of CAM. **Conclusions:** Although the rates of improvement in this sample of SCENAR clients were not found at the level reported in Russian SCENAR literature, it may be possible that these differences are due to lack of systematic use of pain rating scales in the charts, inexperience of practitioners, or protocol differences between this center and Russian treatment centers. The SCENAR numerical outputs did perform as expected in relationship with the clients' perceived levels of improvements.