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Using Alpha/Theta Training for Enhancing Creativity and Well-Being

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ABSTRACT.

Introduction.

Previous research has supported anecdotal reports of a possible correlation between the state of hypnagogia and the enhancement of creative ability (Green, 1972; Green, Green, & Walters, 1970, 1974; Parks, 1996; Stembridge, 1972; Whisenant&Murphy, 1977). Some psychologists (e.g., Maslow, 1963; Rogers, 1978) have suggested that there is also a correlation between creative ability and enhanced well-being.

Methods.

This study utilized an 8-week repeated-measures experimental design to investigate the effects of electroencephalogram (EEG) biofeedback on the willful use of hypnagogia for increasing creativity and well-being. The sample size of 62 (30 experimental subjects and 32 controls) was comprised of both sexes with a mean age of 45. The EEG parameters of hypnagogia were broadly defined as the presence and predominance of alpha and theta brain wave activity. Creativity was defined by the three most readily agreed upon divergent thinking abilities: (a) fluency (the ability to generate numerous ideas), (b) flexibility (the ability to see a given problem from multiple perspectives), and (c) originality (the ability to come up with new and unique ideas).

Results.

Hypnagogia was analyzed through multiple univariate analyses of variance. The EEG data showed that both experimental and control participants were able to achieve light to deep hypnagogic states in every training session. T-tests results on fluency and originality scores from the Torrance Test of Creative Thinking and the Christensen-Guilford Associational Fluency Test showed no significant changes in pre- and post-tests for either group. However, flexibility in thinking, as measured by the Alternate Uses Test was significantly increased ($p < .001$) for all participants. Well-being, as measured by the Friedman Well-Being Scale, also significantly increased for all participants ($p = .002$).

Discussion.

The data suggest that willful use of hypnagogia may indeed increase creativity and well-being. Participants reported increased personal creativity, stress reduction, heightened self-awareness, emotional equanimity, and improved work performance.

INTRODUCTION

Many notable creative people have described their innovative ideas as coming from a state of deep reverie, an almost dream-like condition in which thoughts often materialize in symbolic form. This altered state of consciousness has been referred to by many names, including hypnagogia (Maury, 1848), the reverie state (Green, Green, & Walters, 1970), and the twilight state (Budzynski, 1977). Subjective reports from highly creative individuals are the most direct source of information depicting how this state of consciousness facilitates the inspiration for new and unique ideas (e.g., Poincare, 1978; Kekule, as quoted in Japp, 1898). Wolfgang Amadeus Mozart wrote that the inspiration for his music often came to him in a dream-like state.

> When I am, as it were, completely myself, entirely alone, and of good cheer-say, traveling in a carriage, or walking after a good meal, or during the night when I cannot sleep; it is on such occasions that my ideas flow best and most abundantly. Whence and how they come, I do not know; nor can I force them. . . . All this fires my soul, and, provided that I amnot disturbed, my subject enlarges itself, becomes methodized and defined, and the whole, though it be long, stands almost complete and finished in my mind, so that I can survey it, like a fine picture or a beautiful statue, at a glance. Nor do I hear in my imagination the parts successively, but I hear them, as it were, all at once. What a delight this is I cannot tell! All this inventing, this producing, takes place in a pleasing lively dream. (Mozart, 1978, p. 55)

The purpose of this research is to study whether the commonly held belief that hypnagogia enhances creativity and well-being is supported by empirical evidence. Previous research has reported anecdotal data that supported a possible correlation between the state of hypnagogia and the enhancement of creative ability (Green, 1972; Green, et al., 1970, Green, Green, & Walters 1974; Parks, 1996; Stembridge, 1972; Whisenant&Murphy, 1977). Some psychologists (e.g., Maslow, 1963; Rogers, 1978) have suggested that there is also a correlation between creative ability and enhanced personal well-being. Although the potential utility for enhancing creative thinking and personal well-being through the willful use of an altered state of consciousness (i.e., the alpha/ theta state) appears worthy of additional scientific exploration, very little research has been conducted on these topics in the past two decades.

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