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Author(s): Pamela D. Hall

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THE EFFECT OF MEDITATION ON THE ACADEMIC PERFORMANCE OF AFRICAN AMERICAN COLLEGE STUDENTS

PAMELA D. HALL
Hampton University

With the dawn of the next millennium at arm's length, many individuals are starting to engage in practices that lead to altered states of consciousness. Altered states of consciousness refer to states other than the normal waking state, including sleep, meditation, the hypnotic trance, and the distorted perceptions that may be caused by the use of certain drugs (Rathus, 1997, p. G1). Meditation is one such process that alters one's consciousness. Meditation is a systematic narrowing of attention that slows the metabolism and helps produce feelings of relaxation (Rathus, 1997, p. G13). There are numerous forms of meditation, with two of the most used being transcendental and Egyptian. The goal is the same, yet the process is somewhat different.

Transcendental meditation is a simplified form of Far Eastern meditation that was brought to the United States by the Maharishi Mahesh Yogi in 1959 (Rathus, 1997). During the process, an individual repeats and concentrates on a mantra. Mantras are words or sounds that are claimed to have the capacity to help one achieve an altered state of consciousness. Egyptian meditation involves focusing on and visualizing an Egyptian symbol that represents a certain quality or characteristic. The purpose of focusing on the symbol is to obtain a particular goal (e.g., ward off enemies, to bring wealth or happiness). It also involves chanting words of power that correspond to the goal (Amen, 1990). Although these forms of

meditation may be slightly different, they both include the components of proper breathing and posture.

GOALS OF MEDITATION

What are the potential benefits of meditation? They are numerous. They range from reducing anxiety to increasing well-being, and from the reduction of psychological distress to the improvement of cognition. An excerpt in *Prevention Magazine* from work done by Harp and Feldman in 1997 addresses the notion of “3 minutes to total relaxation.” They explained four meditation techniques that allow one to switch stress from “overdrive” to “off” in just minutes. Jon Kabat-Zinn (1997) states that breathing awareness, yoga, and other meditation techniques help in reducing the frequency of panic attacks. In research on meditation and therapy, an article by Epstein (1998) describes how psychotherapy and meditation can help a person in managing his powerful emotions. Furthermore, research has begun to examine the relationship between meditation and memory, as well. This relationship will be the focal point of this study.

MEDITATION AND MEMORY

Memory is the process by which information is encoded, stored, and retrieved (Rathus, 1997). Memory can be accessed via recall or recognition tasks. Recall refers to the retrieval or reconstruction of learned material (Rathus, 1997). Recognition refers to identifying objects or events encountered before (Rathus, 1997). To date, several studies have shown that meditation has a positive effect on memory. One study demonstrated that children in public schools who were taught to meditate displayed an increase in academic performance (Chang & Hiebert, 1989). The results and possible implications of this study reach beyond the realm of school-age children. Jangid, Vyas, and Shukla's (1988) study of 30 normal adult individuals who practiced meditation for a 6-week period revealed a

significant increase in memory quotients. A study involving 73 elderly adults found a significant improvement in cognitive flexibility among those who practiced meditation (Alexander, Langer, Newman, & Chandler, 1989).

Can meditation also be beneficial to college students? If individuals experience stress associated with being in college, could meditation alleviate some of that stress? Could this lead to a reduction in test anxiety, thereby improving academic performance? To date, research is limited with regard to the potential effects of meditation on memory. None of the above-mentioned studies used a college student sample. Thus, the purpose of this research is to study the effect of meditation on college student performance. This will be done by addressing the following research questions:

1. Will participants who meditate for a semester versus those who do not meditate have a significantly higher semester grade point average (GPA)?
2. Will participants who meditate versus those who do not meditate have significantly higher cumulative GPAs?

METHOD

PARTICIPANTS

Fifty-six undergraduates who were enrolled in an introduction to psychology course at Hampton University participated in the study. The participants were chosen from two classes of the same subject. Half of the participants in each class were randomly assigned to the meditation and no meditation groups. Their participation served to fulfill a course requirement.

PROCEDURE

The study addresses the effect of meditation on academic performance during a full semester. At the beginning of the semester,

the participants were informed that their participation was needed for a semester-long experiment. They were told that the experiment involved the effect of focused study groups on academic performance. They were then told they would have to meet twice a week for study time. If they agreed to participate, they were given a consent form to sign at that time. Once they were told which of the two study groups they would be in, they were informed of the dates, times, and places their respective groups would meet.

Each of the study groups was facilitated by two upper-class psychology majors who were enrolled in an independent study course. These students had experience with meditation and went through a period of further training prior to the start of the experiment. During the first meeting, the participants were given another review of the purpose of the experiment. The first group (meditation group) was instructed in a simple meditation process that consisted of natural breathing techniques, relaxation, and attention-focusing techniques. This was practiced for a duration of 10 minutes at the start and end of each study session. The amount of time spent studying in each group was 1 hour. Those who participated in the meditation group were asked to use the process when they studied on their own and before they went to take a test. The second group (nonmeditation group) met and spent 1 hour studying. All of the participants were asked not to discuss what occurred during their respective groups with their classmates. At the end of the semester, all of the participants received a complete debriefing.

RESULTS

A one-factor analysis of variance was performed on the data for the fall 1994 cumulative GPAs. The results of this analysis revealed no significant differences between the two groups, $F = .811$, $p < .318$. The means were 2.77 and 2.64 for the meditation and non-meditation groups, respectively. This illustrates that the groups were evenly matched at the start of the experiment (see Figure 1).

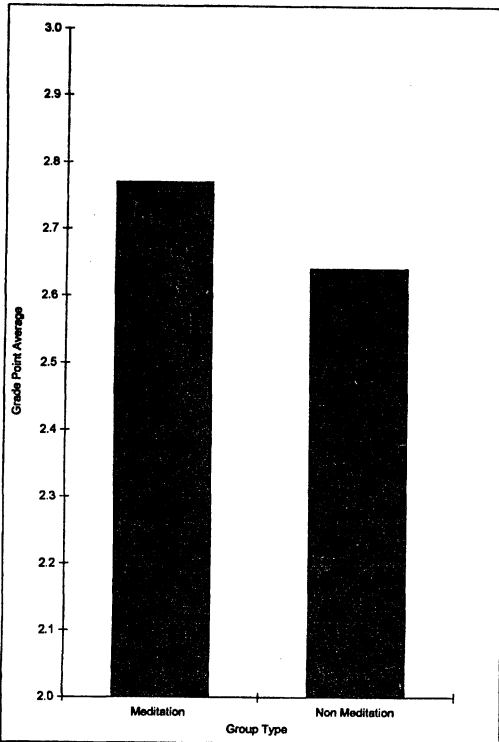


Figure 1: Fall Semester Grade Point Averages as a Function of Study Group Type

SEMESTER ACADEMIC PERFORMANCE

A one-factor analysis of variance was conducted on the two groups' spring semester GPAs. These findings yielded a significant difference between groups, $F = 4.25, p < .041$. The means in Figure 2 (2.85 and 2.55 for the meditation and nonmeditation groups, respectively) show that participants who meditated for a semester had significantly higher GPAs than those who did not meditate.

CUMULATIVE GPA

A one-factor analysis of variance was conducted for the two groups' cumulative GPAs for the spring semester. The findings of

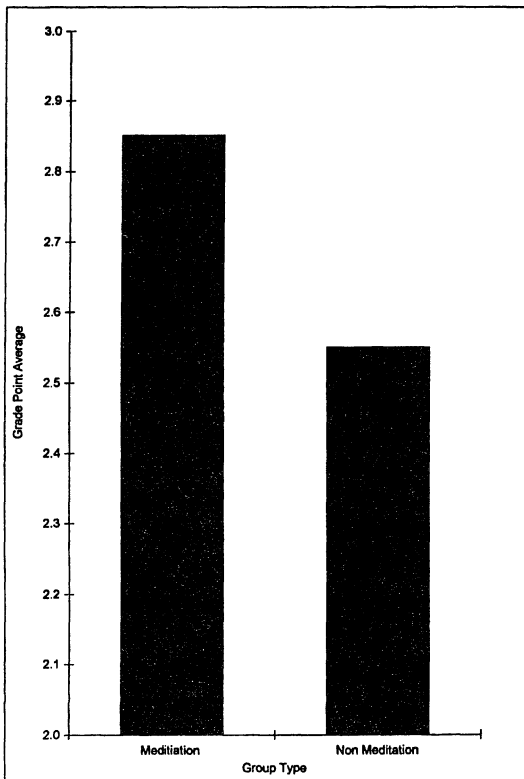


Figure 2: Spring Semester Grade Point Averages as a Function of Study Group Type

this analysis yielded a significant difference between groups, $F = 6.41$, $p < .014$.

The means in Figure 3 (2.93 and 2.48 for the meditation and non-meditation groups, respectively) show that the students' overall academic performance increased.

DISCUSSION

There is a great deal of research on learning and a pretty fair amount on meditation. There is very little by way of meditation and

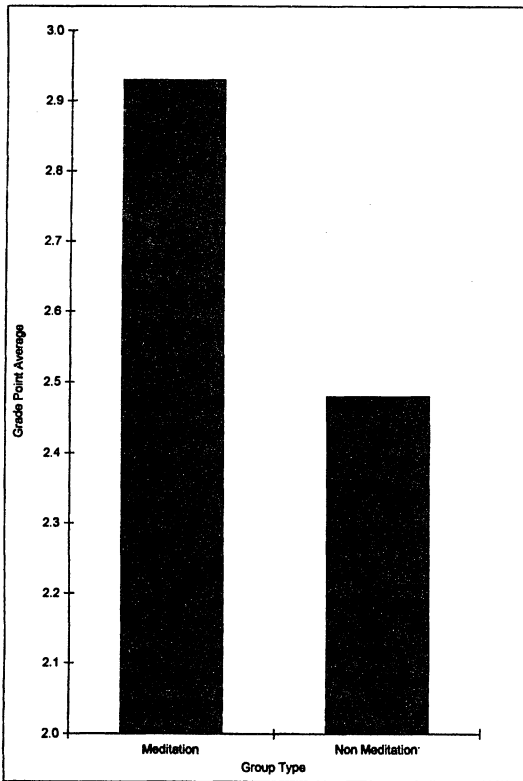


Figure 3: Spring Semester Cumulative Grade Point Averages as a Function of Study Group Type

consistent with the research that has been done on the effect of meditation on memory (Chang & Heibert, 1989; Jangid et al., 1988).

The one finding that is most interesting is the difference in the cumulative GPAs of the meditation groups. Not only were the semester GPAs of the meditation group significantly higher than the nonmeditation group, so were the cumulative GPAs. When we consider the broader implications of this information, it may be beneficial to the educational system on all levels. The rigid, tense, anxiety-filled semesters that students have come to dread may be replaced with calm, relaxed sessions dedicated to optimal learning and cognitive development for those who choose to participate. If

college students can learn more in a semester, then they will learn more in that year as well as their entire academic career.

Furthermore, these findings are consistent with the notion of state-dependent learning. State-dependent learning suggests that information is better retrieved in the physiological or emotional state in which it was encoded and stored or learned (Rathus, 1997, p. 285). Those who meditated while learning the material also did so prior to taking the test. This may have been a factor that contributed to their improved recall of the test information, thereby improving the GPAs. Before this can be conclusively stated, further research is necessary. Expanding the study to a larger sample would increase the generalizability of the findings. However, this study provides a good beginning for examining new techniques aimed at improving academic performance.

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Pamela D. Hall is a social psychologist whose research interest is in the area of social cognition. She is involved in exploring the relationship between mood and memory, the relationship between attitudes toward rap music and personality, and intragroup racism. She is currently an assistant professor of psychology at Hampton University.