

The Effects of Transcendental Meditation on Intelligence and Learning Ability

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ABSTRACT

The purpose of this study was to analyse the effects of transcendental meditation on intelligence and learning ability. Fifty-four high school students from Bangkok School volunteered to participate in three groups of this study : regular meditators, irregular meditators and non-meditating controls. Each group is consisted of students, with age between 16–18 years. All students were administered with the Wechsler Adult Intelligence Scale (WAIS) and one list test of nonsense syllables. Then, regular meditators practised TM more than 50 percent of time during the four-month interval. Irregular meditators, practised TM less than 50 percent of the time during the four-month interval. The control group was instructed by the experimenters to sit easily with eyes closed regularly twice a day – 20 minutes in the morning and evening for the same four-month period. After four-month period, each group was administered with WAIS and the other list of nonsense syllables again. F-test and t-test were used for analysis of data. It found the regular meditators and irregular meditators showed significant increase in intelligence. The non-meditating controls showed insignificant increase in intelligence. In post-test, the mean I.Q. scores of the three groups showed significant differences. The regular meditators showed significant increase in learning ability more than the irregular meditators and non-meditating controls.

INTRODUCTION

Every actions of men are directed by the intelligence and learning ability. Higher intelligence and learning ability can reduce delinquent behavior and they also allow the individual to understand himself, to become more self-actualization and to develop morality. The intelligent man can adjust to environment effectively. The better he adjusts, the less tension he becomes and the psychological problems will be withdrawn from his learning, a kind of specific intellectual capacities, it also required in adjustment, especially verbal learning. Human beings are verbal organism and verbal behavior is our predominant form of behavior. Thus, the study of verbal learning is a way to understand the process of human learning. So intellectual ability is one of the important

factors for human to adapt himself to environment. Through the intellectual developmental process, many experts try to find the method which will increase man's intellectual functions. A common systematic and well-known form of meditation is Transcendental Meditation. The majority of scientific researches show that during the Transcendental Meditation technique, the body functions such as the rate of respiration, pulse rate, the amount of oxygen consumption, work as the time of deep rest, but the brain function is like the state of full alertness. The brain waves also indicate an increase in the orderliness of brain functions by hypersynchrony and rhythmicity of EEG waves, which can be correlated with increase in the integrative ability of the subjects. It would be very interesting to study the influence Transcendental

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Meditation technique on intelligence and learning ability of high students who are in the stage of adolescence. Increasing intelligence and learning ability during adolescence will improve an effective in whatever undertakes.

PURPOSE OF THIS STUDY

To investigate the effects of the Transcendental Meditation (TM) program intelligence and learning ability for the period of four months.

METHODS AND PROCEDURE

Subjects

The 54 high school students from Bangkapi School volunteered to participate in three groups of this study : regular meditators (who practised TM more than 50 percent of the time during the four-month interval) irregular meditators (who practised TM less than 50 percent of the time during the four-month interval) and non-meditator controls (who sat easily with eyes closed regularly twice a day – 20 minutes in the morning and the evening for the four-month period)

Variables

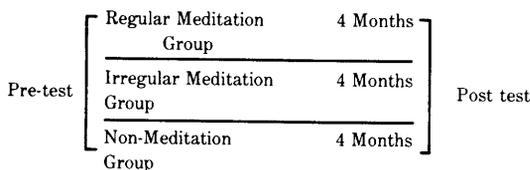
Dependent Variables :

- Intelligence
- Learning ability

Independent Variable :

Transcendental Meditation

Study design



Transcendental Meditation technique was brought by Maharishi Mahesh Yogi. The TM technique is a form of meditation involving the use of special Sanskrit syllable known as "MANTRA". Transcendental Meditator sits

in a comfortable posture and applying the mantra silently according to the technique taught by Maharishi Mahesh Yogi for about twenty minutes and for two times a day : once in the morning and once in the evening.

Test Instruments

1. Wechsler Adult Intelligence Scale (WAIS)
2. Two verbal learning lists of Thai nonsense syllable, one for pre-test, another for post test.

Analysis of data

1. t-test was used to compare the mean differences in pre-test and post test within each group.
2. F-test was used to compare the mean score difference among three groups of subjects.

RESULTS

1. The regular meditators and irregular meditators showed significant increase in intelligence. The non-meditating controls showed insignificant increase in intelligence.
2. There were insignificant differences between regular, irregular and non-meditating controls in the pre-test. But in the post test, the mean I.Q. scores of the three groups showed significant differences.
3. The regular meditators demonstrated significant increase in intelligence more than

Table 1 : Comparison of mean IQs of the regular meditators, the irregular meditators and non-meditator group in the post test

Source	df	SS	MS	F
between	2	1106.9360	553.468	6.3143*
within	51	4470.2778	87.6525	
Total	53	5577.8138		

$F_{.05} (2,51) = 3.17$

Table 2 : Comparison of means scores of learning ability among the regular meditators, irregular meditators and non-meditating control subjects in the post test.

Source	df	SS	MS	F
between	2	741	370.5	5.828*
within	51	3241.8334		
Total	53	3982.8334		

$F_{.05} (2,51) = 3.17$ *significant at .05 level

irregular meditators and non-meditating controls. There was an insignificant different differences in intelligence between the irregular meditators and controls.

4. The regular meditators showed significant increase in learning ability. The irregular meditators and non-meditating controls showed insignificant increase in learning ability.

5. There were insignificant differences among the three groups of subjects in the pre-test. In the post test the mean learning scores showed significant differences among the three groups.

6. The regular meditators showed significant increase in learning ability more than the irregular meditators and non-meditating controls. There was insignificant difference in learning ability between irregular meditators and non-meditating controls.

DISCUSSION

The experimental evidence obtained in the present study clearly showed that the students who practise Transcendental Meditation regularly for a period of four months had

the greater increased in intelligence and learning ability than the irregular meditators and non-meditators. Before the meditators learned the TM technique, the intelligence and learning ability of all subjects of the three groups were not different. It could be explained that all the subject came from the same school, so the factors affecting intelligence such as general home town situation, socioeconomic status and culture were not much different. The similar background situation of subjects explained the uniformity of intelligence before starting the TM technique. After four months, the regular meditators showed greater increase in intelligence than the irregular and non-meditating controls group. The irregular meditators show a slight increase in intelligence than the non-meditating control group. It was probably explained by the effects of TM technique related to two factors, first the changes in the personality and second in the mechanism of nervous system. According to Wechsler (1958) and Hurlock (1974), the intelligence could not be separated from the personality especially emotional factors. Schwartzman and Douglas (1962) found that an individual's function intelligently declined when he became mentally ill. Previous investigations demonstrated that anxiety markedly decreased through the TM technique and developed more harmonious personality in self-actualization. Therefore the improvement of personality from practising TM technique probably caused the improvement of intelligence. Furthermore, the effect of TM related to internal factor of the meditators could be explained in two ways, one was anxiety, another was attention. Evidence from many researches (Yerkes and Dodson, 1908) on learning demonstrated that anxiety played important role in learning ability. High anxiety could decrease learning ability while the moderate anxiety as arousal increased learning ability. The meditators attended more efficiency to the task than the non-meditating

controls. Therefore, the increase of attention and the decrease of anxiety from practising TM technique probably caused the improvement of learning ability.

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