



Transcendental Meditation on a measure of Self-Regulation

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Abstract

There are four kinds of yoga, and they are Raja-Yoga, Jnana-Yoga, Bakti-Yoga, and Karma-Yoga. All these are to attain super conscious knowledge of God consciousness. All these different steps are the means to attain transcendental knowledge. This study was done to investigate whether the practice of transcendental meditation TM, a cognitive exercise involving internal attention improves attention regulation capacity in its practitioners. A group of TM practicing children (18) and a group of children (19) who do not practice any meditation were compared on their attention regulation capacity as measured by Star Counting Test (SCT). Analysis of the data indicated that TM practitioners have greater attention regulation capacity than the control group.

Key words: Yoga, , pratyadhara, meditation, technique, knowledge.

Introduction

Patanjali says 'tasmin sati scasa-prasvasayorgativicchedah pranayamah'. Raja yoga is said to be the best means, I it is the royal road to god consciousness. It is divided into eight steps and those are called in Sanskrit: *yama, niyama, asana, pranayam, pratyadhara, dharna, Dhyana and Samadhi.* All these different steps are described in the patanjali-darshana (swami Abhedananda, 1983), as the means to attain transcendental knowledge (TM). Meditation produces a profound state of relaxation. Therefore many researchers considered mediation as an unique self-regulation strategy. On the other hand, investigators such as Benson (1975) argued that the physiological changes

produced by meditation are not unique to meditation alone, but common to any passive relaxation strategy. This view-point led to a number of comparative studies between mediation and other self-regulation strategies such as progressive muscular relaxation, autogenic training, and hypnosis. These studies do not unequivocally suggest that mediation is substantially different from other self-regulation strategies (Holmes, 1984; Morrel & Hollandsworth, 1986).

Contemporary interpretations it appears that attention is the key process of mediation and it is attention that distinguishes it from other self-regulation strategies (e.g. Goleman, 1978; Walsh, 1984). Apart from it,



meditation may share with other self regulation strategies a number of characteristic such as reduction in somatic arousal and induction of relaxation. The essence of mediation seems to be attention; it may be profitable to look into the effects of meditation on cognitive processes and performance on attention-related tasks. A number of investigators (e.g. Rao, 1989; scuhuman, 1980) suggested that since meditative practices enable selective deployment of attention, a study of cognitive variables, besides phenomenological studies, may be more important than studying physiological correlated to improve our understanding of meditation. The general tendency of the mind is to focus attention towards the external world. The specific processes involved in transcendental meditation (TN) demand internalization of attention (Mahesh Yogi, 1963). The on-going processes have to be inhibited and another proves i.e., focusing of attention on meditative object has to be initiated and maintained in meditation. Therefore, it may be hypothesized that the procedure involved in TM would provide sufficient exercise a cognitive kind and enable the practitioners to gain a better control over their attention when compared to non-meditators. The present study attempted to verify the hypothesis on school going children in an educational setting.

Method Subjects

The investigation was carried out on two independent groups of subjects. The experimental group consisted of 18

children (10 boys and 8 girls) in the age range of 9-11 years. These children have been practicing TM twice daily since one year in a school run by M.R Public School, Gajuwaka in Visakhapatnam. Practice of transcendental meditation was a part of their school curriculum. The control group consisted of 19 children (12 boys and 7 girls) drawn from VPT Godavari High School. A school runs by port organization in the same vicinity and of same socioeconomic status. The subjects in the two groups were matched on their age and class. The subjects in the control group differed from the experimental group in one important aspect. These children did not practice any meditation.

Transcendental Meditation

It is a concentrative meditation technique developed by Maharshi Mahesh Yogi. TM is defined as "turning the attention inwards towards subtler levels of thought until the mind arrives at the source of the thought" (Mahesh Yogi, 1963). It is believed that this internalizing of attention results in the "expansion o the conscious mind" (Mahesh Yogi, 1967, p.350). In this technique the meditator is advised to practice daily twice for about 15 minutes with eyes closed and sitting comfortably in a quiet place where there are no distractions. Children are advised to practice meditation for 15 minutes only.

Star Counting Test (SCT)

This test developed by De Jong and Das-small (1990) was used in the present study. The SCT measures attention



regulation function. It is based on the theoretical model of working memory postulated by Baddeley (1986). The SCT focuses directly on the activation and inhibition function of central executive (CE) which is the crucial element in this model.

The test consists of two parts. First part contains twelve items and has to be completed in twelve minutes. The second part contains ten items and this has to be completed in ten minutes. Each test item is a pattern of stars with a 'plus' or 'minus' sign in between. The job of the subject is to start counting the stars beginning from the number at the top left corner. The counting should proceed either forward or backward based on the signs in between till he/she reaches the last star in the item. The last counting will be the answer for that particular item.

In the second part, the basic procedure is similar except that the meaning of the signs is reversed in this section. When the subject finds a 'minus' sign he has to count forward and when he finds a 'plus' sign he should start counting backwards. The total score on this test will be the number of correct answers in both the sections combined.

Procedure

The SCT was administered on both groups separately. The testing was conducted in small groups of five subjects each. On both the groups the test was administered in the morning session. Part A of the SCT was given to the subjects first. An example of the test

items was presented on the black board. Clear instructions of the test procedure were given; an example item was first worked out by the experimenter while the subjects were watching. Thus it was ensured that all the subjects understood the test procedure. They were asked to work out practice items A and B. All the doubts raised by the children were clarified. After ensuring that everyone has understood the test procedure, actual test was started. They were instructed to complete the test within twelve minutes. Exactly after twelve minutes, the second part of the test was given to them, after a gap of 45 minutes; the second part of the test was given to them. During this interval the students were left to themselves. The subjects were instructed to listen to the instructions carefully and as in the previous session an example was worked out on the blackboard. Later they were asked to do the practice item on their own. When all the subjects have finished working out the practice item, actual test was started. In this section the subjects were given 10 minutes to complete the test. Exactly after 10 minutes the test papers were collected back from them.

Results and Discussion

The mean and standard deviation scores of the Star Counting Test are presented Table 1. The meditators obtained a mean of 13.05 (SD=4.87) and the non-meditators scored a mean of 10 (SD=5.57). The difference between the two means is significant at 0.05 levels. The results indicate that meditators



have greater attention self-regulation capacity than non-meditators. This may

be due to regular cognitive exercise involved in meditation practice.

Table 1: SCT scores of Meditators and Non-meditators

	Meditators	Non-meditators
M	13.05	10
SD	4.87	5.57
N	18	19

$t = 1.81, p = < 0.05, df = 37$

The conceptual level and at the level of practice, concentration or attention (dharana) to a chosen object and steadiness with which the mind flows towards that object have been emphasized in mediation. It appears that a regular practice of internalizing attention through mediation may influence the performance on attention tasks which require outward attention. The practice of TM, which is an internal attention exercise, may facilitate performance on the attentional tasks that demand control over the activation-inhibition processes of the central executive (CE) system of attention of self-regulation as postulated by Baddeley (1986) and which underlies the performance on SCT. Further research on these lines and phenomenological inquiries into meditation experience may lead to a better understanding of the processes involved in this cognitive change when the sense of limitation is removed by the recognition of the limitless divine consciousness and enjoys everlasting bliss and freedom.

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