

Part 1: Epistemology according to different Schools of Indian Philosophy.

Part 2: Effect of Yogic Relaxation Techniques on Memory and Sustained Attention in CABG Patients.

By

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ABSTRACT

Part 1: Epistemology according to different Schools of Indian Philosophy.

Like all other living beings man struggles for existence. He wishes to lead his life in the light of his knowledge. Desire for knowledge springs from the rational nature of man. Philosophy is an attempt to satisfy this very reasonable desire. Philosophy in its widest sense means 'love of knowledge' and aims at knowledge of truth. The science that deals with theory of knowledge is called as Epistemology, which enquires into the nature of human knowledge, as to how it develops and how far it is able to grasp reality.

As regards the means of knowledge there is great divergence among the different systems of philosophy. The Charvakas who are out and out materialists believe only in perception; the Buddhists and the Vaisheshikas in perception and inference; the Sankhya and Yoga schools in perception, inference and verbal testimony (shabda); the Nyayayika adds to these comparison as well; the Prabhakara school of Mimamsaka includes presumption; while the Vedantists, along with the Bhatt school of Mimamsaka believe in six means of knowledge, viz., perception, inference and verbal testimony (shabda), presumption and non apprehension.

The place of Vedas in Indian philosophy is very important. The Vedas are the earliest available records of Indian literature. Mimamsa and Vedanta may be regarded as the direct continuation of the Vedic culture. Though the Sankhya, Yoga, Nyaya and Vaisheshika based their theories on ordinary human experience and reasoning, they did not challenge the authority of the Vedas, but tried to show that the testimony of the Vedas was quite in harmony with their rationally established theories. The Charavaka, Bauddha and Jaina schools arose mainly by opposition to the Vedic culture and therefore they rejected the

authority of the Vedas.

Thus, Authority or the testimony of the reliable person and scriptures forms the basis of philosophy.

CONCLUSION

Means of understanding are very important as are the means so is the end. If means are proper then understanding will be correct. With proper understanding one can organize his activities well. When activities are well organized its usefulness is confirmed. This is how the whole mechanism of one's success takes place.

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With regard to the conception of knowledge, Nyaya holds that knowledge is a product of the contact of the mind with the self; while according to the Vedanta it is eternal pure consciousness (chaitanya), only it is manifested through mental states (vritti). According to Samkhya, in all knowledge, three factors are involved: the object known, the subject knowing, and the process of knowledge. In the Samkhya philosophy, the pure consciousness is the knower (pramata), the modification (vritti) is the pramana, prama is the reflection in the consciousness of the modifications in the form of the objects. Experience belongs to purusha. Budhhi (intellect), ahankara (self-sense), manas (mind), and the senses constitute the apparatus by means of which the subject apprehends the external object. Knowledge according to Yoga is a state or modification of the empirical Self. But as Purusha, in itself, knows no change whatsoever, this modification must be solely of the internal organ. The cognitive situations, involve not only Purusha and some modifications of the internal organ but also an appropriate object. Of these three factors the

internal organ mediates or serves as a connecting link between Purusha and the object and it is supposed to do so by taking on a "form" through which alone an object can be known, is called its mode (vritti) and knowledge means that mode as informed or illuminated by the light of Purusha. According to Mimamsa, the nature of valid knowledge is defined as an apprehension of an object, which is produced by, causes free from defects and which is not contradicted by subsequent knowledge. The theory of knowledge forms an essential part of philosophy. All schools of philosophy regard ignorance as the root cause of the human suffering. So, each system tries to discover the means and the processes of true knowledge by means of which reality could be known and life could be so lived as to overcome misery or minimize suffering. According to the first Nyaya sutra of Gotama, the study of the source of knowledge (pramana) is necessary, because through it alone can we properly know reality and thereby guide our actions so as to be able to attain desirable ends and avoid sufferings.

Knowledge whether perceptual, inferential or verbal is essentially a process directed to the attainment of truth. Thus, truth is an intrinsic characteristic of knowledge. If the knowledge fails to attain truth, it is because some special hindrance stands in the way of knowledge itself. In order to overcome the hindrances and to gain the knowledge of that truth one should first of all go through the fourfold mental and moral discipline namely discrimination between the eternal and non eternal, giving up desires for enjoyment of fruits of action, acquisition of self control, powers of endurance, concentration etc., and ardent determination for liberation. Prepared thus one should enter upon the three steps under the guidance of a master who himself has realized Brahman. The steps are (1) Listening (shravana) to the Upanishadic teachings, (2) Reasoning (manana) about their truth, (3) Intensive meditation (nidhidhyasana) on the truths accepted. By long and continued contemplation the truths known from authority attain maturity. Brahman shines forth as the only Reality in all outer things and the inner self. It is thus that teacher's precept, "Thou art Brahman", comes to be realized by the pupil in an immediate consciousness of the form, "I am Brahman". This is the Ultimate Knowledge.

Epistemology thus becomes closely linked up with ontology and both of them again with ethics. Knowledge and moral perfection are regarded as necessary to each other in almost all system of Indian philosophy. Sometimes knowledge

is regarded as the means to the good life and moral purity is regarded as indispensable for perfect knowledge, so that morality and knowledge are regarded as the two inseparable aspects of perfection.

Part 2: Effect of Yogic Relaxation Techniques on Memory and Sustained Attention in CABG Patients.

Background:

Complementary therapies have been used with beneficial effects in the postoperative period after Coronary Artery Bypass Grafting (CABG). The aim of the present study was to know the effect of Yogic relaxation technique namely Mind Sound Resonance Technique (MSRT) and Deep Relaxation Technique (DRT) on the cognitive variables and psychological variable in the first post operative week and followed up to sixth week after CABG in patients with Coronary Artery Disease (CAD).

Methods:

After informed consent was taken 60 male as well as female patients with age range 35-65 years who were posted for Coronary artery bypass grafting randomly allocated into two groups i.e. Yoga (n=30) and control (n=30). Cognitive variables such as memory were assessed by verbal and spatial memory test while sustained attention was assessed by six-letter cancellation test. Psychological variable such as Stress was assessed by perceived stress scale.

Yoga group practiced Mind Sound Resonance Technique (MSRT), which provides deeper relaxation at the mental level through its resonance effect and Deep Relaxation Technique (DRT), which provides deeper relaxation at physical level by relaxing each and every part of the body one by one. This was practiced through a pre-recorded cassette for 20 minutes twice a day from the 5th to 10th postoperative day along with conventional medical management. The control group continued to have conventional medical management.

Result:

Data was analyzed by using non-parametric Wilcoxon Signed Rank Test and Mann Whitney Test. The variables were not normally distributed ($p < 0.05$ Shapiro Wilks Test). The base line data were not well matched ($p > 0.05$ Mann

Whitney U Test) for pre values.

Yoga group showed highly significant recovery of 75% in verbal memory from 8th to 45th day compared to control group. It showed highly significant difference between the groups in all the cognitive variables on 45th day. Off-pump yoga group showed highly significant recovery of 49.32%, 81.82% in verbal and spatial memory respectively and 33.33% improvement in attention from 8th to 45th day compared to on-pump yoga group. There was a significant reduction in stress level after the practice of yogic relaxation techniques like MSRT and DRT for six weeks. The reduction in stress level was by 36.74% in the yoga group when compared to control group which was 12.23% at the end of sixth week. ($p < 0.01$ Wilcoxon Signed Rank Test). Yogic relaxation technique appears to be effective tool for cardiac rehabilitation.

SUMMARY AND CONCLUSION

Yogic Relaxation Techniques such as MSRT and DRT can reduce stress level and promote early recovery in memory postoperatively in CABG patients.

- The randomized control study was aimed to determine the effect of yogic relaxation techniques on cognitive variables and psychological status by administering questionnaires on 60 CABG patients in both yoga and control group who were posted for CABG at Narayana Hrudayalaya, Hosur Road, Bangalore, India.
- The mean age of yoga group was 54.47 ± 7.74 and that of control group was 53.00 ± 7.90 .
- The yoga group practiced yogic relation technique- DRT and MSRT through a pre recorded audiocassette for 20 minutes and the control group received the normal care.
- Memory both verbal and spatial was tested along with attention. Cognitive variables were measured by verbal and spatial memory test while sustained attention was measured by six-letter cancellation test (SLCT). Psychological variables, stress was measured by Perceived stress scale.
- Yoga group showed significant recovery of 75% in verbal memory from 8th to 45th day compared to control group. It showed significant

difference between the groups in all the cognitive variables on 45th day. Off-pump yoga group showed significant recovery of 49.32%, 81.82% in verbal and spatial memory respectively and 33.33% improvement in attention from 8th to 45th day compared to on-pump yoga group. There was significant reduction in stress level from 1st to 45th day in yoga and control groups. Yogic relaxation technique appears to be effective tool for cardiac rehabilitation.

- It is suggested from the study that the yogic relaxation techniques such as MSRT and DRT were beneficial for the patients undergoing CABG, further study on the large population and for the longer period of follow up is necessary to get the desired results.

Key words:

Yogic relaxation technique, postoperative week, CABG, verbal memory, spatial memory, sustained attention, stress.