

Consciousness in Clinical Hypnosis and Ashtanga Yoga.

Shitika Chowdhary, Teaching Associate, Department of Psychology, Christ University, Bangalore.

Jini K Gopinath, Clinical Director, Mind Matters Clinical and Corporate Consultancy Services, Bangalore.

Abstract

The altered states of consciousness (ASC) in yoga and hypnosis are associated with similar phenomena like relaxation, disinclination to talk, unreality, misrepresentation, alterations in perception, increased concentration, suspension of normal reality testing, and the temporary nature of the phenomena. While some researchers consider yoga to be a form of hypnosis, others note that there are many similarities between the ASC in yoga and the hypnotic trance. The present study aimed to find similarities between the ASC of hypnosis and Patanjali's Yoga Sutras. The ASC were compared on the understanding of the ASC, the phenomena of the ASC, and the therapeutic techniques and benefits of both. An understanding of the concept of ASC in Patanjali's Yoga Sutras was gained through a thematic analysis of the book *Four Chapters on Freedom* by Swami Satyananda Saraswati. The obtained concepts were compared to the concepts of ASC in hypnosis (obtained through the literature on hypnosis) to investigate whether or not there exist similarities. The findings of the study show that there are similarities between the ASC in hypnosis and the ASC in Patanjali's yoga sutras in the induction and deepening of the ASC in hypnosis and that of Samadhi, the phenomena present in hypnosis and the kinds of siddhis that are obtained through Samadhi, and the therapeutic techniques and the therapeutic process in Patanjali's yoga sutra and hypnosis.

Keywords: *hypnosis, yoga, altered states of consciousness, consciousness*

Consciousness and Altered States of Consciousness

Consciousness is one of the most studied topics. ~~in.~~ Even though consciousness has been theorized about by plentiful researchers there is a lack of understanding about what it means to be conscious and what is meant by the altered states of consciousness.

Consciousness was the subject matter of philosophy, and it was only after the work of William James that the field of psychology began to look at consciousness as its subject matter too. James, through his work with consciousness recognized that it was the process of attention that gave focus and margin to consciousness. Along with his interest in consciousness he emphasized the unconscious process as well.

Defining consciousness is difficult, but can be understood as the subjective awareness of the momentary experience interpreted in the context of personal memory and present state (John, 2003). The most subjective part of consciousness is the presence of qualia. It refers to how sensations, thoughts, beliefs, pains etc occur to one. It is an epiphenomenon and has no discernable physical effects. Altered states of consciousness are also defined in terms of change to subjective experience. One popular definition is the one given by Tart in 1990. He defines the altered state of consciousness as one in which the individual feels a qualitative shift in his pattern of mental functioning; there is a change in the qualities of mental processes (in Revonsuo, Kallio & Sikka, 2009).

This definition highlights that altered states of consciousness include awareness of a changed pattern of subjective experience and cognitive judgement that makes one recognise that the experience is different from normal.

Altered states of consciousness (ASC) or trance state have also been understood as a deviation from the normal states of consciousness. It's a state in which the world or the self tend to be misrepresented. ASC can be caused by an internal or external change in the organism's biological makeup and is not a functional, original or permanent state of the organisms' consciousness. ASC is thus due to a change in the subjective pattern of experience. It is not restricted to any specific

cognitive, affective of sensory modality, but is a combination of them, and it is a temporary phenomenon (Revonsuo, Kallio, & Sikka, 2009).

According to this understanding of ASC, hypnosis can be considered as one, because it changes the background mechanisms of consciousness, as strong and multiple changes in conscious experiences are experienced through hypnotic suggestions.

Hypnosis Through the Ages

Hypnosis is derived from the Greek root *hypnos*, which means to sleep. Even the origins of the word means to sleep, hypnosis is not a state of sleeping. The trance in hypnosis resembles sleep but is different from the other states of consciousness (awake, sleep, and dream states).

Techniques of induction were being used by ancient Egyptian and Greek priests 2000 years before Anton Mesmer; who is credited for the origin of hypnosis (Cunningham, 1998). There is evidence of Egyptian priests performing death and rebirth rituals in what they called as “Temples of Sleep”.

Drugs and psychedelics were used to assist the process. Those who lived through the experience were said to “have experienced other levels of reality while being out of the physical body” (Cunningham, 1998). This is believed to be the first account of hypnosis being reported.

Hypnosis is as old as time and has been employed in all parts of the world in some form or the other (Erickson, Hershman, and Senter; 1961).

The modern history of hypnosis can be traced to Franz Mesmer in 1773. He observed Father Gassner cure people by laying hands and making passes over the patients’ bodies. Mesmer believed that the Father was using animal magnetism. Mesmer worked upon Gassner’s technique and theorised that a fluid circulating in the body was influenced by the magnetic forces originating from the astral bodies. Later however, Mesmer believed that this force was within him and that patients could be cured when the magnetic rays flowed from his fingers.

In 1778, Mesmer moved to France and there he developed a large following due to his high percentage of cures. He was deemed as a fraud by a committee; which comprised of the chemist Antoine Lavoisier, physician Joseph Guillotin and astronomer Jean Sylvian Bailly; as they found that the results attributed to animal magnetism were the result of imagination. Suggestion as a reason of the cure was not recognized by the scientists. Even though Mesmer was discredited, it

was him who laid the foundation. . Abbe Faria, a Catholic priest, was a pioneer in the scientific study of hypnosis. It was him who stated that it was not animal magnetism that was involved in the cure, but suggestion. These findings led to the understanding of the power of suggestion in psychotherapy (Erickson, Hershman, and Sectar, 1961).

The word hypnosis was coined by James Braid. He derived it from the word hypnos as he thought that hypnosis was similar to sleep. Later, Braid recognised that hypnosis is similar to meditation in both, the psychological and physiological aspects. He defined hypnotism as a state of focussed attention upon a single idea or mental image. In his view, since hypnosis was the state of focused attention, it was fundamentally the opposite of normal sleep. After he recognised his error (of believing that hypnosis was similar to sleep), he tried to change the name to *monoedismo*, which means concentration on one side. The term hypnosis, even though a misnomer, still persists (Robertson, 2009).

In 1854, James Esdaile, a Scottish surgeon, was working in India with the East India Company. While here, he performed hundreds of minor and major surgical procedures on Indians under Mesmeric anaesthesia. His book describes hundreds of operations that he performed under this technique including amputations of the legs, removal of tumours, and other comparable surgeries. He even noted the dwindling of surgical shock in his patients. In his book, *Hypnosis in Medicine and Surgery*, 1957, he describes that he or his assistants would induce hypnosis (mesmerised) the patients in the morning, and would leave them in a cataleptic state. He would then return later and operate. When Esdaile returned to England and shared his experiences, he was, unfortunately ridiculed and ostracised by his colleagues (Vyas & Vyas, 2009).

The first scientific text on hypnosis, *Suggestive Therapeutics* was published in 1886 by Bernheim. Bernheim observed the work of Dr. Ambroise-Auguste Liebault, a French physician. Liebault became interested in hypnosis after reading Braid's work, but in order to avoid being discredited, he worked pro bono. Bernheim and Liebault then began to work together, treating patients.

Ernst Simmel, a German psychoanalyst began using hypnosis for the treatment of war neurosis or shell shock. He called his technique hypnoanalysis. In hypnoanalysis, hypnosis was combined with the psychodynamic techniques. During World War II Grinker and Spiegel used barbiturates

to induce a state of drug hypnosis in order to bring traumatic material to the surface. Hypnosis has since been playing an important part in the treatment of combat fatigue and other neuroses. The most important development to come out of the world wars was the merger of hypnotic techniques with psychoanalysis. This development revived a great deal of interest in hypnosis and led to the publication of various books with hypnosis and suggestibility as the subject matter (Erickson, Hershman and Senter, 1961).

Hypnosis has since been recognised as a treatment method by the American Medical Association (in 1958). There are now several journals devoted exclusively to the experimental and clinical applications of hypnosis. These include, but are not limited to The American Journal of Clinical Hypnosis, The British Journal of Medical Hypnotism, The Journal of Clinical and Experimental Hypnosis.

Theories of Hypnosis

The phenomena associated with hypnosis are explained through two main types of theories. These are referred to as state and non state theories. A key debate in hypnosis had been between the state and non state theorists. According to the state theorists, the altered states of consciousness in hypnosis, is produced due to an altered state of brain function. The non state theorists however are of the view that responses to suggestions are a product of normal psychological processes such as attitudes, expectancies and motivations.

Hilgard's neodissociation theory of hypnosis is a classic state theory. It states that the hypnotic suggestion splits the functioning of the executive control system into different streams. Part of the executive control system functions normally, but is unable to represent itself in conscious awareness due to the presence of an amnesic barrier. The hypnotic suggestions act on the dissociated part of the executive control system and the subject is aware of the result of the suggestion and not the process by which they came about (Hilgard, 1991).

Neuro-physiological theories of hypnosis propose that high hypnotisable people have better executive function than low hypnotisable people. Since they have better executive functioning, they are able to deploy their attention in different ways. Gruzelier (1998) presented a model of hypnosis characterised by changes in brain function. His neurophysiological account emphasizes

that the changes in the way the attentional control system operates in hypnosis makes the subject more suggestible.

Spanos' socio-cognitive theory is a non state theory that explains the phenomena of hypnosis. The theory states that the hypnotic phenomenon is shaped by the attitudes, beliefs, imaginings, attributions and expectancies that an individual possess. He proposed that hypnotic behaviours could be explained by the same processes that explain non hypnotic behaviour (Spanos, 1986; Spanos, Stam, D'Eon, et al 1980).

The ecological theory of hypnosis is based on Shor's idea that the depth of hypnotic trance is related to the degree to which the participant loses awareness of the distinction between imagination and reality. This distinction is termed as the generalized reality orientation. Ego-psychological theory distinguishes between primary processes (emotional, holistic, illogical, unconscious, developmentally immature) and secondary processes (affect-free, analytical, logical, conscious, developmentally mature). Whereas normal adult functioning is biased towards secondary processing the induction of hypnosis makes the subject 'let go' of some secondary process activity.

Kihlstrom (2008) reported that the third way research in hypnosis understands the phenomena in hypnosis as both a state of cognitive change that involves basic mechanisms of cognition and consciousness, and as a product of social interaction as the hypnotist and the subject come together for a specific purpose within a wider socio-cultural context. The third way theories include Brown and Oakley's (2004) integrative cognitive theory which makes a distinction between being in a mental state and being aware of being in that state. They place an emphasis on perception and consciousness. They include the dissociated control theory concept which suggests that responses are facilitated by an inhibition of high level attention and the response set idea that suggested that involuntariness is an attribution about the causes of behaviour.

The Altered States of Consciousness in Hypnosis

It is difficult to define altered state of consciousness in hypnosis, but it can be inferred from hypersuggestibility, passivity, disinclination to talk, and fixed facial expressions, feelings of relaxation, unreality, automaticity and compulsion, alterations in body image, and unusual

sensations (Erickson, Hershman, and Sectar, 1961). The ASC in hypnosis has been described as one in which there is focused attention, concentration in which learning is maximised, alterations in self awareness, a state of internally focussed absorption and the suspension of normal reality testing, alterations in perceptions (Gruzelier, 2005; Dalal & Barber, 1970; Erickson, Rossi & Rossi, 1976; Kihlstrom, 2005; Yapko, 1984).

Vyas and Vyas (2009) describe that the ASC in hypnosis is characterised by a quiet, calm and peaceful mind. There exists a general sense of well being. They describe it as a state of alert restfulness as the person is awake but the state is more like sleep than awake. The subjective time moves slowly, and the distinction between the present, past and future is lost. There is a shift of space location and one can experience oneself at several different locations in space.

Initially the pulse rate and blood pressure rise, but they soon go below the resting levels. The respiratory rate also first rises and then falls below the resting level. The metabolic rate falls steeply and it may fall below the level of sleep. The body and face seem flushed as the peripheral flow of blood increases. There is also a decline in the plasma **cortisol** levels and there is increased functioning in both the hemispheres of the brain.

Lethargy is present in a light hypnosis state. It is characteristic in this state that muscles contract at the slightest touch, friction, pressure or massage. This contraction can be restricted by the by the repetition of the stimuli that caused it. In this state of light trance, the subject appears to be in deep sleep, the eyes are closed or half closed and the face is expressionless. The body appears to be in a state of complete collapse with the head thrown back, and the arms and legs hang loose, dropping heavily down.

Catalepsy characterises a deeper level of trance and in this the subject becomes rigidly fixed in the position in which they were in while they were entering catalepsy. Whether it is standing, or sitting, or kneeling. Arms or legs can be raised and will remain that position.

History of Yoga

Yoga is an ancient spiritual discipline that originated in India, reportedly more than 5000 years ago (De Michelis, 2005). The word yoga originates from the Sanskrit word *yuj*, which means to join. The Iyengar School of Yoga defines yoga as the joining and integrating of all aspects of the individual, the body with mind, the mind with the soul, to achieve a happy balanced and useful life. Yoga has been viewed as joining and disjoining at the same time by Swami Satyananda Saraswati (1976).

There is no written record of who invented yoga as it was practiced by yogis long before people knew how to read or write. The knowledge of yoga was passed down orally by the *guru* to the *shishya*. The earliest written record of yoga is believed to be written by Patanjali, a yogic sage. Although there are various different schools of yoga present, they all follow the same fundamental principles as described by Patanjali.

The classical period of yoga is marked by Patanjali Yoga Sutras. This text is written by Patanjali around the second century. This text standardises yoga, and it consists of 196 sutras.

Consciousness in Yoga

Consciousness in yoga can be conceptualised as William James' idea of consciousness. William James compared consciousness to a stream that was unbroken and continuous. This stream however, goes through constant changes and shifts and Patanjali yoga sutra states that there are seven states of consciousness or *Saptadha prantabhumih pragyana*

These seven states are as follows:

1. Awake
2. Sleep
3. Dream
4. Turya:

5. The fifth state is defined as “abiding in mere nonduality, with all **distinction** and division extinguished, he is seen as one asleep.”
6. The 6th state is described as where he dwells “without knot”, liberated while living and without conception or ideation.
7. The 7th state is the state of enlightenment, which is the state of liberation without the body

The turya state has been described as a tranquil settlement in the state of liberation and the state of witness in action (Vyas and Vyas, 2009). Vyas and Vyas (2009) note that the state of turya has been explained in the Mandukya Upanishad as

...that which has no parts, soundless, the incomprehensible, beyond all senses, the cessation of all phenomena, all blissful and non dual AUM, is the Fourth, and verily it is the same as Atman. He who knows this, merges his self in the Supreme Self- the individual in the total.

Since there is a distorted sense of self in this state, which is a misrepresentation, this state can be considered as an altered state of consciousness.

The altered state of consciousness or trance state of yoga is that of Samadhi. It is described by the phrase *sat-chit-ananda*, which translates to truth-consciousness-bliss. This relates to a different realm of experience which is possible to describe only by metaphors and paradoxes (Dalal & Barber, 1970).

According to Patanjali yoga sutras, Samadhi is the goal of yoga. It can be defined as the pointless point of consciousness beyond which nothing else remains. It is the deepest level of consciousness where even the sense of individuality does not remain.

From the literature reviewed it can be seen that the trance states of yoga and hypnosis have certain similarities. Trance in both the states is associated with relaxation, disinclination to talk, unreality, misrepresentation, alterations in perception, increased concentration, suspension of normal reality testing, and the temporary nature of the phenomena. Erickson, Hershman & Sectar (1961) consider yoga to be a form of hypnosis, while Dalal and Barber (1970), note that there are many

similarities between the trance of the hypnotic state and that of yoga. While yogis are credited with performing difficult tasks like walking over burning coal, or being able to lie on nails, individuals under the hypnotic trance are reported to have “heavy weights on their abdomen while lying stretched in midair with supports only at his heads or ankles”. Apart from this, not much research has been carried out which investigates the similarities if any in the trance of yoga and hypnosis. In this study, I aim to fill this gap literature by comparing the trance state in hypnosis and yoga. Along with this I will also focus on the therapeutic techniques of yoga and hypnosis.

Research Design

In this study, whose aim is to investigate the similarities between hypnosis and yoga in terms of the altered states of consciousness, a qualitative design is used.

A qualitative study is one that provides an in depth understanding and interpretation of phenomena by learning about the social and material circumstances, and histories (Snape and Spencer, 2003).

A qualitative design is suited for this study as it helps to investigate whether or not there are similarities between the trance states of yoga and that of hypnosis. The qualitative methodology also helps to explore the historical, philosophical and scientific roots of yoga and hypnosis and the conceptualization of the trance states in them. The study uses a pragmatic approach as methods and procedures that work best for answering the research question have been employed.

Research Questions:

Broad Research Question: To investigate the similarities between yoga and hypnosis.

Specific Research Question: To investigate the similarities between Patanjali Yoga Sutras and hypnosis in terms of the altered states of consciousness, and their therapeutic value.

Sample:

The sample consists of a text on Patanjali Yoga Sutra: Four Chapters on Freedom: A Commentary on the Yoga Sutras of Patanjali, by Swami Satyananda. The book is published by the Bihar

School of Yoga which is the world's first yoga university. The Bihar School of Yoga was founded by Swami Satyananda Saraswati in the year 1964. The book, Four Chapters on Freedom is a text used for the courses in the university, and is a widely accepted text on Patanjali Yoga Sutras. This is the reason this text is selected for analysis.

Data Collection:

The following serve as data for the study

1. The text on Patanjali Yoga Sutra. (Four Chapters on Freedom: A Commentary on the Yoga Sutras of Patanjali by Swami Satyananda Saraswati)
2. Discussion of Findings with Expert: findings obtained from the thematic analysis are communicated to an expert and discussed with her. This discussion provides insights which are incorporated in the study.

The study is conducted in two phases. In the first phase, analysis of the book Four Chapters on Freedom: A Commentary on the Yoga Sutras of Patanjali by Swami Satyananda Saraswati is carried out. In the second phase, the concepts obtained through the analysis are compared to the concepts of hypnosis to uncover the similarities between the two.

Data Analysis

Thematic analysis is the method of analysis for the first phase of the study. Braun and Clark (2006) define thematic analysis as a general method of analysis of text. They explain that thematic analysis is a method for "identifying, analysing and reporting patterns within data".

There are six steps in the through which thematic analysis progresses. In the first phase the familiarization with the data is achieved, followed by generation of initial codes, following which there is the search for themes, which are then reviewed, defined and named and then the report is written.

Following the same process, in the first phase *Four Chapters on Freedom: A Commentary on the Yoga Sutras of Patanjali*, is read to become familiar with the text. This is followed by an initial coding which leads to the formation of themes. The themes are then reviewed and then defined and named. Through this process meaning units are created which describe and explain each of the phenomena under study. These are then used to form themes which illustrate each of the phenomena.

In the second phase of the study, the themes generated through the thematic analysis of the text are compared with the concepts in hypnosis to investigate whether or not there are similarities between the phenomena in Patanjali yoga sutras and phenomena in hypnosis.

Issues of Trustworthiness and Process of Validation

- The themes obtained from the analysis were finalised after discussion with a student pursuing her Masters in Psychological Research Methodology who went through relevant passages from the text independently.
- The findings were discussed with the supervisor and an expert in the field of yoga which provided further insight. This served as a method of triangulation.
- Peer Debriefing: a competent peer was given regular progress reports of the research
- A paper trail of the documents used for analysis, and the different stages of analysis is maintained and is available on request.

Analysis of Results and Discussion

The text which was analysed, *Four Chapters on Freedom: Commentary on the Yoga Sutras of Patanjali* by Swami Satyananda Sarswati was published in 1976. This book is a commentary on the yoga sutras written by the sage Patanjali. Sutra means thread and it is implied, by the use of this word, that the written verses carry and underlying, continuous and unbroken thought. The various ideas in the sutras connect with each other and one thought leads to the next resulting in a complete philosophy.

The Yoga Sutras of Patanjali consist of 196 sutras which are organised into four chapters. These are:

Samadhi Pada: this consists of 51 verses and is the chapter on Samadhi.

Sadhana Pada: this consists of 55 verses and is the chapter on practice.

Vibhooti Pada: this chapter discusses various psychic powers and consists of 56 verses.

Kaivalya Pada: it the chapter on isolation or aloneness. It consists of 34 verses.

From the thematic analysis, it was found that there are similarities between the trance state in hypnosis and yoga. These similarities are found in terms of

- Similarities in the phenomena of the ASC in hypnosis and Patanjali Yoga Sutras
- Similarities in the induction and deepening of ASC in hypnosis and Patanjali Yoga Sutras
- The therapeutic techniques and the therapeutic process in Patanjali yoga sutra and hypnosis.

Similarities in the Phenomena of Altered States of Consciousness in Hypnosis and Patanjali Yoga sutras

In the ASC in hypnosis, there is a shift in the perception of the external world and the internal environment (Vyas & Vyas, 2009). Some of these changes can be compared to the siddhis described in the Patanjali yoga sutras. Subjective time appears to move slowly and an hour may appear to have been only a few minutes. Memories of remote events of the past are recalled with uncanny accuracy. During hypnosis the power of selected groups of muscles can be increased which is the same as the attainment of strength. This increase in strength can be maintained after the trance state through the use of post hypnotic suggestion. The body temperature can be made to increase in the trance of hypnosis; this is found in the yoga sutras as well. The action of the organs can be changed, and this is a siddhi too. Hearing is said, can be made more acute in the trance of hypnosis, this is analogous to the siddhi of divine hearing (Vyas & Vyas, 2009). Thus

we see that there are indeed similarities in the phenomena of hypnosis with the siddhis described in the Patanjali Yoga Sutras.

Similarities in the Induction and Deepening of Altered States of Consciousness in Hypnosis and Patanjali Yoga Sutras

The process of attaining ASC in hypnosis is referred to as the induction process. One of them is the eye fixation method. The eye fixation method is a type of hypnotic induction method that people associate most with hypnosis. In this method the client is instructed to maintain a fixed gaze on an object. This could be any object, a spot on the wall, the hand of the hypnotist, a finger held in front of the client's eyes, or even, the flame of a lamp (Hunter, 1996). This method is similar to the technique described in the yoga sutras, wherein the aspirant concentrates on an object, internal or external, which could be the image of a deity, a flame, the tip of the nose or even concentrating between the eyebrows to attain ASC in yoga.

Similarities in the Therapeutic Process and Techniques in Hypnosis and Patanjali Yoga Sutras

Hypnosis and hypnotherapy is a paradigmatic phenomenon. It challenges fundamental assumptions of self and reality. An individual's perceptions and beliefs can be overturned through hypnosis and hypnotherapy. Hypnotherapy also believes that schemas or cognitive structures regulate psychological functioning or adaptation and give meaning to contextual relationships. Assignment of meaning at the conscious and unconscious level activates behavioural, emotional, and other strategies of adaptation. One of the essential axioms of hypnotherapy is that meanings do not always represent reality but are a construction of a given context or goal and are subject to cognitive distortions. Some individuals are vulnerable to cognitive distortions (Alladin, 2008); this is the same as the mental modifications that influence the perception of reality as explained by

the yoga sutras; and the techniques of Patanjali yoga sutra and hypnosis allow access to processes below the threshold of awareness, which helps in the restricting of non conscious cognitions.

Like the techniques described in the yoga sutras for therapeutic benefits, hypnosis too induces relaxation which is effective in reducing anxiety. It also promotes ego strengthening through the repetition of positive suggestions to oneself that get embedded in the unconscious mind. These then exert an automatic influence on feelings, thoughts, and behaviours.

Hypnosis and the techniques of yoga sutras facilitate divergent thinking, it maximises awareness among several levels of brain functioning. They both have a direct impact on focus of attention and concentration (Tosi & Baisden, 1984). They also help in directing attention to wider experiences such as feelings of warmth, feeling happy, feeling of contentment, and general feeling of well being (Alladin, 2008). They serve to expand these experiences in the present, past and future. These facilitate in the reconstruction of dysfunctional realities.

Even though modern psychotherapy adopts a curative paradigm and the Yoga Sutras of Patanjali operates through a preventive paradigm, there are similarities in the therapeutic techniques, and the therapeutic gain obtained from hypnosis and Patanjali yoga sutras.

The above discussion highlights there are indeed hypnotic similarities in yoga in regard to the conceptualisation of consciousness and altered state of consciousness, the phenomena in the altered states of consciousness and the therapeutic benefits and the therapy process.

Summary and Conclusions

The ASC in yoga and hypnosis are associated with relaxation, disinclination to talk, unreality, misrepresentation, alterations in perception, increased concentration, suspension of normal reality testing, and the temporary nature of the phenomena. Erickson, Hershman & Sectar (1961) consider yoga to be a form of hypnosis, while Dalal and Barber (1970), note that there are many

similarities between the ASC of the hypnotic state and that of yoga. While yogis are credited with performing difficult tasks like walking over burning coal, or being able to lie on nails, individuals under the hypnotic state are reported to have “heavy weights on their abdomen while lying stretched in midair with supports only at his heads or ankles”.

The findings of the study show that there are similarities between the ASC in hypnosis and the ASC in Patanjali yoga sutras. These similarities are present in the following areas:

- The phenomena of the ASC in hypnosis and yoga
- The induction and deepening of the ASC in hypnosis and that of yoga
- The therapeutic techniques and the therapeutic process in Patanjali yoga sutra and hypnosis.

These findings show that there are similarities in the two states and it needs to be explored further to incorporate the concepts of yoga in modern therapeutic domain. These concepts can be used not only as preventative measures but as curative measures too.

References

- Alladin, A. (2008). *Cognitive hypnotherapy: An integrated approach to the treatment of emotional disorders*. England: John Wiley & Sons
- Braun, V. & Clarke, V. (2006). Using thematic analysis in qualitative research. *Qualitative Research in Psychology*. 3: 77-101.
- Brown, R.J. & Oakley, D.A. (2004). An integrative cognitive theory of hypnosis and hypnotisability. In M. Heap, R.J. Brown & D.A. Oakley (Eds.). *The highly hypnotizable person*. (pp 152-186) New York: Brunner-Routledge.
- Cunningham, J. (1998). Ancient Egyptian mythology: a model for consciousness. *Journal of Regression Therapy*. 12 (1) 86-96.
- Dalal, A. S. & Barber, X.T. (1970). Yoga and hypnotism. In X.T. Barber (Ed.) *LSD, Marijuana, Yoga and Hypnosis*. Chicago: Aldine-Atherton.

- De Michelis, E. (2005). *A history of modern yoga*. London: Continuum Books.
- Erickson, M, Hershman, S, Senter, I. (1961). *The practical application of medical and dental hypnosis*. New York: Julian Press.
- Erickson, M, Rossi, E, & Rossi, S. (1976). *Hypnotic realities: The induction of clinical hypnosis and forms of indirect suggestion*. NY: Irvington Publishers
- Gruzelier, J. (1998). A working model of the neurophysiology of hypnosis: a review of evidence. *Contemporary Hypnosis*. 15 (1) 3-21.
- Gruzelier, J. (2005). Altered states of consciousness and hypnosis in the twenty first century. *Contemporary Hypnosis*. Vol 22, No. 1, 1-7.
- Hilgard, E.R. (1991). A neodissociation interpretation of hypnosis. In S.J. Lynn and J.W. Rhue (Eds.). *Theories of hypnosis: Current models and perspectives*. (pp 83-104). New York: Guilford Press.
- Hunter, C.R.(1996). *The art of hypnosis: Mastering basic techniques*. Kendal Hunt Pub co
- John, E.R., (2003). A theory of consciousness. *Current Directions in Psychological Science*. Vol 12, No.6, 244-250.
- Kihlstrom, J. (2005). Is hypnosis and altered state of consciousness or what?. *Contemporary Hypnosis*. Vol 22. No 1. 34-38.
- Kihlstrom, J. F. (2008). The domain of hypnosis revisited. In M. R. Nash & A. J. Barnier (Eds). *The Oxford handbook of hypnosis: Theory, research and practice*. Oxford: Oxford University Press.
- Revonsuo, A., Kallio, S., Sikka, P. (2009). What is an altered state of consciousness. *Philosophical Psychology*. Vol 22, No 2, 187-204.

- Robertson, D. (2009). Yoga and the origin of hypnotism. Retrieved from <http://ukhypnosis.com/2009/03/11/james-braid-on-hypnotic-meditation/> on January 10, 2011.
- Saraswati, S.S. (1976). *Four chapters of freedom: Commentary on the yoga sutras of Patanjali*. Bihar: Yoga Publications Trust.
- Snape & Spencer (2003). In Ritchie & Lewis (Eds) *Qualitative Research Practice. A Guide for Social Science Students and Researchers*. London: Sage Publications.
- Spanos, N.P. (1986). Hypnosis and the modification of hypnotic susceptibility: a social psychological perspective. In P. Naish (Ed.). *What is hypnosis?* (pp 85-120). Philadelphia: Open University Press.
- Spanos, N.P., Stam, H. J., D'Eon, J. L., Pawlak, A. E., Radtke-Bodorik, H. L. (1980). Effect of social-psychological variables on hypnotic analgesia. *Journal of Personality and Social Psychology*. 34(4), 737-750
- Tosi, D.J. & Baisden, B.S. (1984). Cognitive experiential therapy and hypnosis. In W.C. Wester & A.H. Smith (Eds.). *Clinical Hypnosis: A multidisciplinary approach*. (pp 155-178). Philadelphia: J. B. Lippincott.
- Vyas, B. & Vyas, R. (2009). *Indian handbook of psychotherapy: foundations and strategies*. New Delhi: Concept Publishing Company
- Yapko, M.D. (1984). *Trance work: An introduction to clinical hypnosis and psychotherapy*. New York: Irvington Publishers.

Address for correspondence: jinikgopinath@gmail.com