A KEY TO ALLEVIATE BUSINESS RELATED CHALLENGES: CRUNCHING MEDITATION SCIENCE AND ITS INFLUENCE ON BRAIN & PHYSIOLOGY

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ABSTRACT

1. Challenges / Description of problem:

India is being widely acknowledged as one of the most matured and exciting emerging economics in the world. (http://www.bbc.co.uk/news/business-11135197). More to the point of becoming a global focal point of outsourcing, Indian firms are diffusing globally through international mergers and acquisitions (http://www.ft.com/cms/s/0/562a5072-18ef-11e0-9c12-00144feab49a.html#axzz1XwOAEi7G). Various studies suggests that by the year 2020, India is anticipated to add about 250 million to its labor pool at the rate of about 18 million a year (http://www.tutorial-reports.com/Advantages-of-Offshoring-to-India.html). Employee’s knowledge is significantly weighed when it comes to employee performance, agility and their efficiency in performing their tasks i.e. their professional skills. Based on this fact we can now consider training to be a vital factor when it comes to competency, agility, performance and effectiveness of an employee towards his/her job. (http://www.dartmouth.edu/~hrs/pdfs/discussion_worksheet05.pdf). Also, the business history have shown us the decline of the original brilliance of family industries due to lack of proper management training (http://www3.weforum.org/docs/WEF_GCR_Report_2011-12.pdf). Employee’s knowledge and skills are significantly weighed when it comes to employee performance, agility and their efficiency in performing their tasks i.e. their professional skills. Based on this fact we can now consider training to be a vital factor when it comes to competency, agility, performance and effectiveness of an employee towards his/her job. (http://www.dartmouth.edu/~hrs/pdfs/discussion_worksheet05.pdf). Also, the business history have shown us the decline of the original brilliance of family industries due to lack of proper management training (Family businesses-on-the-wane.html | LiveMint.com | The Wall Street Journal).
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know quite a many organizations keep various areas of training, such as communications, computer skills, customer service, diversity, ethics, human relations, quality initiatives, safety, sexual harassment, organizational behavior, time management training (Soft Skill Training as well as technical Trainings) as their training module. This Study contemplates about the possibilities of, What if we train our mind which directly controls all the aspects mentioned above. This will not only increase our ability to learn the things but also suffice all the benefits of training employee at a very low cost.

INTRODUCTION

If we see the routine work of managers, we will find that there is a lot of brain functioning every day to meet organizational goals, be it any department or function (finance, marketing, human resource, IT, sales, commercial, legal, technical or administration). Decision Making and Critical Thinking are the two extremely significant elements in the business world where every single person in the organizational hierarchy uses these abilities during their course of work. It’s not just we use it during our professional work but quite frequently it helps us even in our personnel life as well, kind of a latent force (Foundation for Critical Thinking | http://www.criticalthinking.org/print-page.cfm?pageID=430). Business Week reported that 95% of Americans reject the idea that a corporation’s only purpose is to make money. 39% of U.S. investors say they always or frequently check on business practices, values and ethics before investing. The ‘Trends Report found that 75% of consumers polled saying they are likely to switch to brands associated with a good cause if price and quality are equal (Spirituality and Ethics in Business | http://www.visionarylead.org/articles/spbus.htm ). In Indian context, Hindustan Times came up with ‘You Read, They Learn’ initiative, similarly companies like Tata Steel, ITC, Suzlon and the Mahindra Group have shown various initiative to woe investors on similar lines. Organizations are also showing their serious concerns over the various issues related to their employees, to name few - Stress-related ailments, health care costs, productivity, absenteeism, team building, attention, focus, commitment, compassion, healthy environment. These issues are of huge pain to deal with the high end existing competition. Apart from this when we talk about a society, bullying, low pay, contracts , long hours work , unfair dismissal , health & safety , holidays , racial harassment and discrimination , sexual harassment and discrimination and age discrimination are few serious social concerns giving birth to low productivity, low motivation, stress, depression, attrition, (Bullying: surveys, facts, figures and costs | http://www.bullyonline.org/workbully/costs.htm ).

MATERIAL AND METHOD

To study the possibilities here I have reviewed scientific researches, research papers, various blogs and online text of meditation science, management concepts, business literatures and ancient literatures/Online. This paper traces remarkable evidence for the need of managerial training and their cognitive development using a fabulous cocktail of ancient Indian sources of meditational with contemporary advance neuroscience, psychology and management for various organizations.

Employee’s knowledge and its application to what he/she does are significant. To learn this we need to know how to train our mind. Training mind is a major aspect, when it comes to performance enhancement and effectiveness and efficiency of the job in hand. It is totally the quantity and quality acquisition of knowledge which improves the efficiency, effectiveness, efficiency of organization. It is in loop with improving the existing skill sets and exploring the potential skills for the job of an individual i.e. upgrading the employees’ skills and extending their knowledge database. Therefore, training mind is a key to optimizing the utilization of human intellectual, technological and entrepreneurial skills. Training and Development here is referred to the attainment and sharpening of employee’s capabilities to build
themselves as a brand. Not only on the personal ground but that they are required to perform various
tasks, functions and obligations. Developing the employees quality output and discover their extreme
potential to make the most of their qualities to meet organizational development is the purpose, This will
also help us developing an organizational culture where superior- subordinate relationship, team work,
and collaboration among different sub units are strong and contribute to organizational wealth, dynamism
and pride to the employees (http://traininganddevelopment.naukrihub.com/training-development.html).
We discussed few question in the introductory part - what field or subject should you train your
employees? What’s the right amount of training? Which method of training works best for your
employees? And how effective was the training provided? Trying to find answers to the questions I came
to a simple conclusion to answer them. What if, we train our mind, which directly controls all the aspects
mentioned above, It is the genesis of all our thoughts which transforms to our action. This will suffice all
our needs, be it, employee welfare strategy, Employee Benefit Strategy or Employee Training and
Development, and that too, with almost no cost involved. The recent studies have shown meditation
Increases job satisfaction and morale among employees, Increased employee motivation, Increased
efficiencies in processes, resulting in financial gain, Increased capacity to adopt new technologies and
methods, Increased innovation in strategies and products, reduced employee turnover, enhanced company
image, risk management (e.g. training about sexual harassment), diversity training etc.

Many companies around the globe are attracted to different style of Meditation tuning to improve the
caliber of their managers, executives and staffs. Those employees who are much more creative,
intelligent, healthier, rational and energetic automatically will contribute more to the company.
Productivity increases, absenteeism decreases and teamwork improve these has been researched and has
been proved by various research institutions. In a study of “Mindfulness-Based Stress Reduction”
(MBSR), one of the most widely used mindfulness training programs is reported to produce positive
effects on psychological well-being and to ameliorate symptoms of a number of disorders (Mindfulness-
based stress reduction and health benefits: A meta-analysis | Paul Grossman Corresponding Author,
Ludger Niemannb, Stefan Schmidtc, Harald Walacl | a Freiburg Institute for Mindfulness Research,
Konradstr. 32, 79100, Freiburg, Germany | b Department of Psychology, University of Freiburg,
Freiburg, Germany | c Institute of Environmental Medicine, University Hospital Freiburg, Freiburg,
Germany | Received 5 March 2003; Accepted 8 July 2003 | Available online 20 July 2004). I have tried to take a step ahead to define how mediation
work out as part of training and development in our organization will considerably help making its
employees to take most compatible decisions for its business affairs and achieve the organizational targets
successfully. Hence, in my research I have stressed on training the mind with the help of meditation
science. Meditation will lead to an increase in the brain functioning (discussed further down the research
paper) and resulting a better position of mind during any decision making or critical thinking (Does
point of time it is critical to understand our brain functioning, so that we may then work on its application.
This research is a blend of multiple subject to draw out the best out of human resource and hence it
becomes a mandate to understand the thinking process of the resource functionary. Thinking Process is
the translations of the data captured by our sensations and then those data’s are transferred to the brain
through the biological cables i.e. nerves which then translates, decodes and encodes messages and sends
them out through the nervous system through the biological and psychological dimensions of the thinking
process of the perceptions and reactions into concepts, ideas, assumptions, suppositions, inferences,
hypotheses, questions, beliefs, premises, logical arguments, etc [Abelson, R.P. (1979). Imagining the

BACKGROUND

Over centuries India has imbibed in itself the managerial thoughts and practices from the diversified world. Early records of trade, from 4500 B.C. to 300 B.C. show the evolutionary pattern which not only indicates international business and political links, but also, the ideas of various social & public administrations and strategies to deal with foreign affairs. The world’s first management book, titled ‘Arlhãshastra’, was written three millennium before Christ and codified many aspects of human resource practices in Ancient India (Conceptualistic Questions In Performance Evaluation | Jyotirmaya Satpathy | Doctoral Candidate Dept of Management, F M University Odisha, India | http://www.oppapers.com/essays/Conceptualistic-Questions-In-Performance-Evaluation/535149?topic). This treatise unfolds the notions of the financial administration of the state, diverse guiding principles for trade and commerce, as well as the management of people which shows the trait of human resource management in that primitive period which was supposed to be significant. These ideas were to be entrenched in organizational thinking for centuries (Rangarajan 1992, Sihag 2004). Increasing trade with the rest of the world including engagement with the Romans, led to prevalent and systematic governance methods by 250 A.D. Then after 300 years, the first Indian empire, the Gupta Dynasty, encouraged the establishment of rules and regulations for managerial systems, and later from about 1000 A.D. Islam influenced many areas of trade and commerce (Human Resource Management In India | http://www.oppapers.com/essays/Human-Resource-Management-India/143090?read_essay). The evolution of management did not end with this, but a significant impact of British system of corporate organization for over 200 years had powerful effect on the managerial history of India. Clearly, the socio cultural roots of Indian heritage are diverse and its gene has multiple sources including ideas brought from other parts of the ancient world which were essentially secular even when they originated from religious bases (Research and Practice in Human Resource Management | Dec, 2007 | Human resource management in India: 'where from' and 'where to?' | by Samir R. Chatterjee | http://findarticles.com/p/articles/mi_6769/is_2_15/ai_n28479859/).
In the modern-day context, the Indian management dynamics continues to be opinionated by the persistent traces of ancient acumen as it faces the complexities of global realities. One stream of holistic wisdom, identified as the Vedantic philosophy, pervades managerial behavior at all levels of organizational hierarchy. This philosophical tradition has its roots in sacred texts from 2000 B.C. and it holds that human nature (human behavior) as a capacity for self transformation and attaining highest spiritual ground while facing real time complexities of our day to day challenges [(Lannoy 1971) | ( Asian Journal of management Research | Research Article ISSN 2229 – 3795 |ASIAN JOURNAL OF MANAGEMENT RESEARCH 40 |Future of HR management in Indian scenario: Issues & Challenges| Saleena Khan 1 , Bhawna Chahar 2, 1 Professor | Institute of Management Technology, Nagpur, India 2Sr.|Lecturer, Institute of Management Studies, Dehradun [http://ipublishing.co.in/ajmrvol1no1/sped12011/AJMRSP1005.pdf]). Such cultural based conventional belief and legacy can have a substantial impact on current managerial mindsets in terms of diversified cultural bonding, family bonding and mutuality of obligations in an organization. Exposed with the confront of responding to the underlying principle of Western organizational ideas in the changing social and economic state of affairs of Indian organizations and practitioners are increasingly taking a wider and reflective perspective of human resource management (HRM) in India but on the same time we cannot discount the rich quality in the history of Indian HRM.

It was Chanakya, (A professor in University of Taxila , A Writer, An Indian Politician and A Strategist, 350 BC-275 BC) quoted “Before you start some work, always ask yourself three questions - Why am I doing it, What the results might be and Will I be successful. Only when you think deeply and find satisfactory answers to these questions, go ahead.” (http://thinkexist.com/quotation/before_you_start_some_work_always_ask_yourself/342039.html). In another words he insisted to use the rational mind before practicing any business or making any decision towards business. The managerial ideologies in Indian dates back at least four centuries. Arthashastra written by the celebrated Indian scholar-practitioner Chanakya had three key areas of exploration, 1) public policy, 2) administration and utilization of people, and 3) taxation and accounting principles (Chatterjee 2006). Parallel to such pragmatic formulations, a deep rooted value system, drawn from the early Aryan thinking, called Vedanta, deeply influenced the societal and institutional values in India. Overall, Indian collective culture had an interesting individualistic core while the civilization values of duty to family, group and society was always very important while vedantic ideas nurtured an inner private sphere of individualism ( The System of Vedanta by Paul Deussen. 1912. Reprint 2007. | The Eye of Shiva. New York, William Morrow & Co. 1981. Amaury de Reincourt | Forgotten Truth: The Primordial Tradition by Huston Smith | Theology After Vedanta by Francis X. Clooney | Sankara and Indian Philosophy, by Natalia Isayeva | A History of Early Vedanta Philosophy by Hajime Nākāmura | Encyclopedia of Indian Philosophies and "Vedanta Sutras of Nārāyana Guru" by Karl Potter and Sibajiban Bhattachārīya | Isherwood, Bowles, Vedanta, Wicca, and Me by Lee Prosser. 2001. ISBN 0-595-20284-5 | The Upanishads by Sri Aurobindo [2]. Sri Aurobindo Ashram, Pondicherry. 1972. | Vedanta Treatise- The Eternities by Swami Pārthaśārathy [3] | Vedanta: A Simple Introduction by Pravrajika Vrajaprana [4]).

There has been substantial interest in the view that managerial values are a function of the behaviors of managers. England, Dhingra and Agarwal (1974) were early scholars who contended that managerial values were critical people who all helped shape organizational architecture. The relevance of managerial values in determining modern organizational lifestyle is reflected in scholarly literature connecting them to corporate culture (Deal & Kennedy 1982), organizational commitment and job satisfaction (O’Reilly, Chatham & Caldwell 1991), as well as institutional governance (Mowday, Porter & Steers 1982). Thus, understanding the source of these values and in particular societal cohesiveness & societal work values (which link the macro-micro relationships and in turn organizational practices) had become a popular line
of enquiry, and a great deal of evidence that has been presented to support the importance of national
culture in shaping managerial values. (Chatterjee, S. R. - 2007. Human Resource Management in India:
how the human mind was carved, processed, designed, mechanized or say trained to meet goals of
organizations. They talked about critical thinking, values, ethics, habits and behaviors which governs
the strategies and decisions we make for any institutions. From where do all concepts come from? Who do
the brain storming part? Who thinks what is right and what is wrong? Who makes the decision? Who is
responsible for ups and down in the course of business? The answer lies inside the magnificent, beautiful
and masterly processed Human Mind ( Perception, Reason, Imagination, Memory, Emotion, Attention,
and a capacity for Communication, a rich set of Unconscious Processes all included in many modern
characterizations of mind). This is the single place where creation and destruction of thoughts occurs. The
controlling hub which is responsible of maintaining a proper balance of the two giving an end result of
fulfillment of desired result of growth and development. With this game begins, were scientific
meditation will show its role in training the mind by achieving goals through critical & rational thinking.
This innovative methodology will surely be the most reasonable and revolutionary area towards training
and development, which when practiced will not only show considerable increase in the employee’s
productivity but also help employees in making more rational decisions and bring in a new fold towards
practicing trade and business with the help of critical thinking.

LITERATURE REVIEW AND HYPOTHESIS

In this piece of research work HRM is conceptualized as carefully designed combinations of ancient
practices to recent technological blend geared towards improving organizational effectiveness and hence
better performance outcomes. Wright and McMahan (1992: 298) define it as: “the planned HR
deployments and activities intended to enable [an organization] to achieve its goals” (Delery and Doty
1996: 805). HR deployments reflect the central assumptions behind the (positive) conceptualization of
what HRM is and does: namely, that it responds accurately and effectively to the organization’s
environment and complements other organizational systems and contingencies (Boselie, Dietz and Boon
2005).

This study posits that for firms facing the disordered environment in India that:

**Hypothesis 1:** In the context of Training and Development, Meditation as an innovation of HRM
practices (role of HRM, Increase Productivity, Reduced employee turnover, Enhanced company image,
Risk management, e.g., training about sexual harassment, diversity training etc.) will be positively related
to organizational performance and decision making.

**Hypothesis 2:** In the context of Training and Development, Meditation as an innovation of HRM
practices will be adopted in the recent global management system and would be significantly more
innovative than those followed in the preliberalization era or in the recent times.

These two hypotheses propose that in the context of Training and Development, Meditation as an
innovative HRM practices have a “positive effect” on organizational performance. Later on in the
discussion the study lists the various innovative HRM practice measures. Here it is important to mention
that although meditation in India started beyond the known history of mankind have shown positive
results in brain functioning and when compared to its roll in business its significance and potentials are
yet to be tested. According to archaeologists, a figure of a yogi found in the Indus Valley Civilization
indicates that yoga practice could have existed in the first Indian civilization itself (Experiments in Buddhist Meditation, by Shanta Ratnayaka | http://www.buddhanet.net/tr20.htm). Ever since then yoga and other forms of meditation had been an essential practices in Hinduism. The Buddha's life story gives detailed accounts on the advanced yogis from whom Siddhartha Gautama learned yoga practices. Some of these pre-Buddhistic teachers had achieved eight dhyānas as well as the magical skills based on their trance states (Buddhist Tradition | http://www.crvp.org/book/Series03/IIIB-12/chapter-5.htm). Meditation is anticipated to be as a tool which will bring about a remarkable change in the industry, it was around the second phase of 1997–1999 that organizations stared to restructure and take on innovative practices to face competition. Thus, leading to various researches on the power of meditation out of which one reports that Therapeutic interventions incorporate training in mindfulness meditation have become increasingly popular, but to date little is known about neural mechanisms associated with these interventions. Mindfulness-Based Stress Reduction (MBSR), one of the most widely used mindfulness training programs, has been reported to produce positive effects on psychological well-being and to ameliorate symptoms of a number of disorders. The report to have controlled longitudinal study to investigate pre–post changes in brain’s gray matter concentration attributable to participation in an MBSR program. The research talks about the Anatomical Magnetic Resonance (MR) images which were sourced from 16 healthy, meditation-naïve participants before and after they underwent the 8-week meditation program. The team found changes in gray matter concentration which were investigated using voxel-based morphometry, and was compared with control group of 17 individuals (kept in waiting list). Analyses confirmed increase in gray matter concentration within the left hippocampus. Whole brain analyses identified increases in the posterior cingulate cortex, the temporo-parietal junction, and the cerebellum in the MBSR group when compared with the controls. The results suggest that participation in MBSR is associated with changes in gray matter concentration in brain regions involved in learning and memory processes, emotion regulation, self-referential processing, and perspective taking (PubMed | TI | Mindfulness practice leads to increases in regional brain gray matter density | AU Hölzel BK, Carmody J, Vangel M, Congleton C, Yerramsetti SM, Gard T, Lazar SW | SO | Psychiatry Res. 2011;191(1):36 | Massachusetts General Hospital, Harvard Medical School, Boston, MA, USA | britta@nmr.mgh.harvard.edu). Another study has shown neuro-imaging results that Buddhist meditators engaged various dissimilar parts of the brain than expected. Meditators were able to disengage the negative emotional response, most probably by attending to internal bodily states (interoception) reflected by activity in the posterior insula." Similar researches talks about practitioners of Buddhism, who are well known for their prolonged periods of mediation repetitive time on regular basis, were consistently shown to make more rational decisions than any other group. Accordingly,

Hypothesis 3: In the context of Training and Development, Meditation as an innovation of HRM practices, would be positively related to organizational performance with the enhanced ability of mind.

METHOD

Data
The unit of observation and data for this study was compiled from various academic journals and the business press in India (Business India, Business Today, Business World, Economic Times, News Abstract, Experimental neuroscience research papers, Psychological Articles).

In an appealing finding, a survey shows that yoga, Art of Living techniques and meditation are the most popular precautionary forms of healthcare but are yet to be a magnet for corporate India for blending them in their comprehensive employee healthcare benefit strategies. This lack of attraction is especially so among the top 500 blue-chip companies in India, the survey by Towers Watson, 'Group Healthcare: Healthcare Trends 2010', said. The Towers Watson survey, interestingly, observed a slow but gradual
shift from protective to preventive health measures with many employers now offering wellness-based health programmers to their employees. "The shift will happen once employers drop their 'one size fits all' approach and start providing innovative and more segmented health benefits to improve the perceived value of their current offerings," the survey said. Interestingly, providing incentive programmers’ to improve employee health/wellness, increasing quality of healthcare and controlling cost of employee health programmers are amongst the top priorities for employers, the survey said pointed out. But no survey still has been made on the successful practice of mediation in corporate to improve their workforce when it comes to critical and rational thinking. (The Economic Times/Yoga, meditation yet to catch up with India Inc./PTI Feb 13, 2011, 12.02pm IST)

Transcendental Meditation is widely practiced by the industrial and governmental leaders of India. Recently Maharishi Corporate Development Programme has been introduced to the multinational giants of India, Tata Tea Ltd. and Tata Chemicals. 20,000 managers and employees of Tata Tea and 6,000 of Tata Chemicals have taken part in the programme. Other renowned companies enjoying the benefits of this unique programme include: Associated Cement, Indian Aluminum, Reckitt & Colman, Oriental Bank of Commerce, SRF, Eveready, Tata Unisys, BHEL, Jindal Polyester, Indian Petro Chemicals Ltd., Anand Group, DCM Shriram, Finolex, Hewlett Packard India, DCM Financial Services, Indian Sugar and General Engineering Corporation, SWIL, Williamson Magor and Co., and Kribhco shows the growing interest of the organization towards utilizing meditation as a tool for training to not only increase the productivity of the employees but also their wellbeing. Science is also relieving the power of meditation in making rational decisions and high quality of critical thinking.
EMPLOYEE RESPONSES TO THE COMPANY'S INTERNAL "FEEDBACK FORM" ABOUT THE TRAINING AND THE PRACTICE OF MAHARISHI'S TRANSCENDENTAL MEDITATION

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
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<tbody>
<tr>
<td>1. How was the quality of training?</td>
<td>93% said &quot;above Average&quot;</td>
</tr>
<tr>
<td>2. Is Transcendental Meditation beneficial to you?</td>
<td>97% said &quot;Yes&quot;</td>
</tr>
<tr>
<td>3. Did you practice Transcendental Meditation after training?</td>
<td>93% said &quot;Yes&quot;</td>
</tr>
<tr>
<td>4. Do you recommend your colleagues be trained?</td>
<td>100% said &quot;Yes&quot;</td>
</tr>
<tr>
<td>5. Do you suggest TM be included in work culture?</td>
<td>91% said &quot;Yes&quot;</td>
</tr>
</tbody>
</table>

(Over the past 30 years we have witnessed increasing number of published studies on mindfulness. The current scientific literatures on the effects of mindfulness practices show immense potential despite the presence of many methodological weaknesses. The current research suggest that mindfulness practices are positive in the treatment of stress, anxiety, pain, depressive relapse, disordered eating and addiction but this research focuses more on the transformation of mind towards critical and rational thinking where very few or per say handful research has been performed. Meditation is time and again used synonymously with the traditional Buddhist processes of cultivating awareness as described above, but more recently studied it to be as a psychological tool capable enough of stress reduction and the elevation of quite a lot of positive emotions or traits. In this comparatively new field of western psychological Meditation, researchers all over world made appreciable attempt to define and measure the results of meditation for the most part through controlled, randomized studies of meditations interference on various dependent variables. I am trying to figure out along with few more scientists the measurable scales to map and statistically prove the after math of meditation over decision making and critical thinking in a business world. Research till date has shown substantial about of change before and after practicing meditation of brain function to make a decision for same constraint. An increase in brain activity has been recorder in taking a decision once meditation was practiced.)

(http://www.mcdpindia.com/mcdpindialink.jsp)

In a study, scientist Andrew B. Newberg studied the brain activities of few experienced Tibetan monks for a period of time i.e. before and during meditation. He put them under scan which showed increased activities in the meditators’ frontal lobe (Frontal Lobe is responsible for focusing and concentration). Another study at the University of Wisconsin-Madison by using functional magnetic resonance imaging technique (fMRI) showed that compassion (disambiguation) could be learned. It has been seen that parts of the brain which is associated with compassion could be changed through the simple practice of meditation.

With considerable advancement in functional magnetic-resonance imaging (fMRI) it have opened the way to dynamics of the human brain to institutive study. From the recent imaging (fMRI) studies on brain activity suggest that elements like moods and dispositions are embedded in specific regions of the brain. (For example, positive states of mind : marked by high activity in the left frontal area, while the negative states of mind : shown in the right frontal area.)

In a conference session which was talking about emotions, Richard Davidson (a neuroscientist from University of Wisconsin) comprehensively shared some of his pilot research (described in Daniel Goleman's 2003 book Destructive Emotions). Davidson used fMRI and electroencephalography (EEG) to image the vital organ (brains) of six monks, including conference panelist Matthieu Ricard, this was done during and outside the state of meditation. When Davidson interacted with the monks and asked to induce a state of compassion in them through meditation practice, the result were exciting - they showed a much greater swing toward left frontal brain activity than the controlled subjects who all were untrained in meditation practices.

Of course, lifestyle practiced by the monks isn't for everyone. So, we need to focus more on short meditation sessions as in corporate we run short of time for everything. In a recently published study it discussed about the effects of short meditation sessions with newbie practitioners, and is perhaps of greater significance to the rest of us. A report in the journal Psychosomatic Medicine, Davidson and Jon Kabat-Zinn, a medical professor at the University of Massachusetts, Amherst, conducted a small controlled study of "mindfulness meditation" training for employees of a small biotech firm. Four months
after an eight-week meditation course, the researchers found that emotional and immune system benefits persisted—with just 15-minute meditation sessions only two or three times a week (Business: Meditation and the Brain: New imaging technology makes it possible for scientists to document the brain activity of Buddhist monks/February 2004/By Curt Newton/technology Review India/ Published by MIT).

Another scientific study on Neuroelectric and imaging studies of meditation were reviewed. Electroencephalographic measures indicate an overall slowing subsequent to meditation, with theta and alpha activation related to proficiency of practice. Sensory evoked potential assessment of concentrative meditation yields amplitude and latency changes for some components. Cognitive event-related potential evaluation of meditation implies that practice changes attentional allocation. Neuroimaging studies indicate increased regional cerebral blood flow measures during meditation. Taken together, meditation appears to reflect changes in anterior cingulate cortex and dorsolateral prefrontal areas. Neurophysiological meditative state and trait effects are variable but are beginning to demonstrate consistent outcomes for research and clinical applications. Psychological and clinical effects of meditation are summarized, integrated, and discussed with respect to neuroimaging data.

Summary of Meditation Studies Using Neuroimaging Methods

<table>
<thead>
<tr>
<th>Study</th>
<th>Meditation type</th>
<th>N</th>
<th>Experimental design</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herzog et al.</td>
<td>Yoga meditation, eyes open</td>
<td>8</td>
<td>Meditation vs. resting thought, separate days PET</td>
<td>Increase: frontal-parietal and frontaloccipital activation ratios, low-resolution analysis Decrease: slight for posterior-anterior ratios</td>
</tr>
<tr>
<td>Jevning et al.</td>
<td>TM</td>
<td>3</td>
<td>Meditators vs. controls, rest 3 meditation Rheoencephalography</td>
<td>Increase: frontal, occipital Decrease: none, low-resolution analysis</td>
</tr>
<tr>
<td>Lou et al.</td>
<td>Yoga Nidra (guided)</td>
<td>9</td>
<td>Rest 3 meditation Rest 3 meditation Increase: anterior parietal (postcentral gyrus), fusiform gyrus, occipital cortex Decrease: dorsolateral orbital, cingulate, temporal, caudate, thalamus, pons, cerebellum</td>
<td></td>
</tr>
<tr>
<td>Lazar et al.</td>
<td>Kundalini yoga mantra</td>
<td>5</td>
<td>Meditation vs. control periods silently generating number lists fMRI</td>
<td>Increase: DLPFC, ACC, parietal, hippocampus, temporal, striatum, hypothalamus, pre-post central gyr i Decrease: 20% globally</td>
</tr>
<tr>
<td>Khushu et al.</td>
<td>Raja yoga</td>
<td>1</td>
<td>Rest 3 meditation fMRI</td>
<td>Increase: PFC Decrease: none, low-resolution analysis</td>
</tr>
<tr>
<td>Baerentsen</td>
<td>Mindfulness</td>
<td>5</td>
<td>Rest 3 meditation fMRI</td>
<td>Increase: DLPFC, ACC Decrease: occipital</td>
</tr>
<tr>
<td>Newberg et al.</td>
<td>Tibetan Buddhist imager</td>
<td>8</td>
<td>Meditators vs. controls, rest 3 meditation (self-reported peak) SPECT</td>
<td>Increase: cingulate, inferior-orbital, DLPFC, bilateral thalamus, midbrain, sensorimotor Decrease: PSPL; increases in left DLPFC correlated with decreases in left PSPL</td>
</tr>
<tr>
<td>Study</td>
<td>Methodology</td>
<td>PET/MRI Results</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Azari et al. (2001)</td>
<td>Religious vs. nonreligious participants, rest, reading, and reciting Psalm 23 vs. versus nursery rhyme vs. phone book</td>
<td>Increase: right and left DLPFC, right medial parietal dorsomedial prefrontal (pre-supplemental motor area), cerebellum Decrease: none reported</td>
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<tr>
<td>Kjaer et al. (2002)</td>
<td>Yoga nidra (guided)</td>
<td>Separate days for meditation and baseline PET-11C-raclopride binding, EEG Increase: EEG theta Decrease: raclopride binding in ventral striatum, indicating increase dopamine binding</td>
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<tr>
<td>Ritskes et al. (2003)</td>
<td>Zen</td>
<td>Interleaved periods of meditation and rest fMRI Increase: DLPFC (R, L), basal ganglia Decrease: right anterior superior occipital gyrus, ACC</td>
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<tr>
<td>Newberg et al. (2003)</td>
<td>Christian prayer</td>
<td>Franciscan nuns, rest 3 prayer SPECT Increase: PFC, inferior parietal lobes, inferior frontal lobes Decrease: PSPL</td>
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<tr>
<td>Lazar et al. (2003)</td>
<td>Mindfulness vs. Kundalini yoga; meditators vs. controls.; meditation vs. random number generation</td>
<td>fMRI Increase: both showed cingulate activation, right temporal lobe (Vipassana only); Decrease: none reported; different distribution of activated networks in the two groups</td>
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</table>

Note. PET _ positron emission tomography; TM _ transcendental meditation; fMRI _ functional magnetic imaging; DLPFC _ dorsolateral prefrontal cortex; ACC _ anterior cingulate cortex; PFC _ prefrontal cortex; SPECT _ single photon emission computed tomography; PSPL _ posterior superior parietal lobe; EEG _ electroencephalographic; R _ right; L _ left.

The study based on this experiment and the data collected in the above table suggests Psychological and Clinical Effects on the Brain:

A number of studies have been investigating for the psychological concomitants to meditation have already been conducted and some steadiness of results has been obtained. There were few limitations which were observed one of the important caveats while using the subjective reporting of psychological functioning was that the impact of expectancy and the performance motivation which they were looking within meditator participants was difficult to control (Shapiro & Walsh, 1984; West, 1987). Nevertheless, number of the reports (both psychological and medical) are suggestive of important effects and, together with the other psychological studies, provide interesting intriguing correlates of the meditation and brain activity findings which was summarized previously. The single most psychological domain mediating and affected by meditative practice is attention (R. J. Davidson & Goleman, 1977), but it has been found relatively few empirical evaluations of meditation and attention that have been conducted. Studies of breath-focused meditation in adults & children have been reported an improved performance on -
Embedded Figures Test, which have need of the individual to ignore distracting stimuli (Kubose, 1976; Linden, 1973). A cross-sectional study of children practicing TM and a cohort of age- and sex-match controls found that meditation practice led to improved measures of attention (Rani & Rao, 1996). Mindfulness and concentrative practices were compared using an auditory counting task susceptible to lapses in sustained attention (Valentine & Sweet, 1995; Wilkins, Shallice, & McCarthy, 1987). Superior attentional performance was obtained for meditators compared with controls as well as long-term compared with short-term meditator status. Further, mindfulness meditators demonstrated better performance than concentrative meditators in a second task assessing sustained attention on unexpected stimuli. In contrast to these trait effects on attentive capacity, short-term meditation effects on a focusing task suggested that TM produced no improvement in concentrative functioning (Sabel, 1980), a finding consistent with the explicit lack of emphasis on concentrative effort using the TM technique. The CNV studies reviewed previously support the view that attentive capacities are increased in long-term TM meditators relative to controls (Travis et al., 2000, 2002). Given that meditation is a form of attentional training, the neurophysiological findings imply increased activity in the frontal attentional system; additional studies are needed to confirm this hypothesis. A related clinical study assessed the impact of a yogic concentrative meditative practice on attention-deficit/hyperactivity disorder in adolescents; findings indicate a substantial improvement in symptoms (al., 2000). The specific effects appear related to the prevention of depression relapse in patients already experiencing three or more previous depressive episodes (Teasdale et al., 2000). The psychological variable most associated with the increased resistance to depression after mindfulness-based cognitive therapy is metacognitive awareness, the shift toward experiencing negative thoughts as observable mental contents rather than the self (Teasdale et al., 2002). As with stress, depression is linked to increased cortisol and decreased hippocampal neurogenesis (E. S. Brown, Rush, & McEwen, 1999; Gould, Tanapat, Rydel, & Hastings, 2000; B. L. Jacobs, 2002; Malberg & Duman, 2003; Thomas & Peterson, 2003; Vollmayer, Simonis, Weber, Gass, & Herr, 2003), implicating meditative training in eliciting a cascade of neuroprotective events that are possibly related to the enhancement of the frontal attentional control system or the decreased arousal associated with alpha increases. The increase in metacognitive awareness that seems associated with the efficacy of mindfulness-based approaches to therapy is difficult to reconcile with current neuroimaging data but appears related to the fundamental goals of meditative practice in producing lasting impact on the self–nonself relationship (Austin, 2000; Levenson, Jennings, Aldwin, & Shiraishi, 2005; Walsh, 1982). The development of a number of experimental paradigms aiming to assess the subtleties of selfreferential processing in health and illness provides a means to quantify further psychometrically derived claims for changes in self-experience with brain-based measures (Kircher & David,2003; Kircher et al., 2000; Lou et al., 2004; Platek, Keenan,Gallup, & Mohamed, 2004).Understanding the state and trait neurophysiological and psychological changes induced through meditative practices requires better psychometric assessment of the elicited states and traits. Several investigators have produced such measures for both state and trait changes (K. W. Brown & Ryan, 2003; Buchheld, Grossman, & Walach, 2001; Levenson et al., 2005; Ott, 2001; Piron, 2001). Such trait-based research suggests that the psychological variable mindfulness, which has influenced theories of psychological intervention, is increased after meditative training and associated with the experience of well-being (K. W. Brown & Ryan, 2003). A proposal to pare down altered states of consciousness into a four-dimensional state space consisting of activation, awareness span, self-awareness, and sensory dynamic constructs is an appealing proposal for meditation research as well (Vaitl et al., 2005). This approach provides encompassing signatures of experienced state that may map more easily than higher dimensional state spaces onto neurophysiological differences, although this limited four-dimensional space may not adequately address the full range of alterations induced by meditation (Travis et al., 2004; Walsh, 1982; Wilber, Engler, & Brown, 1986). Given the wide range of possible meditation methods and resulting states, it seems likely that different practices will produce different psychological effects and that different psychological types will respond with different psychobiological alterations. Indeed, reports have shown that novices in Zen
meditation demonstrated low trait anxiety correlated with frontal alpha coherence effects (Murata et al., 2004), whereas novelty seeking scores correlated with frontal alpha power increases and harm avoidance scores correlated with frontal theta increases (Takahashi et al., 2005). These findings are preliminary in nature but serve as a potentially important model for how psychological set may be related to meditation state neurophysiology. Quantification of the trait changes elicited by given different mental sets may foster insight into specific avenues of meditation’s psychobiological impact; rigorous comparison of techniques is needed to identify specific psychological outcomes.

The study concluded with the magnificent use of technology using neuroelectric and other neuroimaging methods we can explore the meditation states and various traits. The findings are becoming more unified and directed day by day, even though comprehensive empirical and theoretical foundations are still on the emerging side. By the above studies we can easily conclude CNS function gets affected by meditation, but the specific neural changes (may be neural plasticity) and differences among various practices are not yet clear. The researches have made an attempt to set the stage for this progress by providing an organized and descriptive state-of-the-art summary explaining how meditation affects the brain.

(Ref: http://anneminard.com/wp/2009/03/09/day-45-this-is-your-brain-on-god/)

In the above image it has been showing the difference of how the brain behaving during meditation. Compared with: the brain's normal state the left side image, brain scans by Andrew Newberg with the right side of image of a Buddhist in meditation which clearly shows decreased activity in the parietal lobes, parietal lobes is involved with our perception of our physical and temporal distinction.
All the above research stands for and confirms that if we train our employee’s brain with meditation they will be more focused, attentive and composed which will give them an edge over any other employee who have not been trained. He/She is expected to be using more of his/her brain while decision making which
may be critical and the decisions would be more rational with activation of the frontal and the left hemisphere of the brain. (Meditation States and Traits: EEG, ERP, and Neuroimaging Studies/B. Rael Cahn/University of California, San Diego, and University of Zurich/Hospital of Psychiatry/ Received August 16, 2004 / Revision received July 15, 2005/Accepted August 2, 2005)

There are several ways by which we can do "mental exercise such as participation in a reading of a book, article, journal, write, solve a puzzle or listening to music so relaxing and smooth election. But a short-term meditation may have an edge; also it will improve communication between different parts of the brain. It has been said that increase participation in such activities, including might prevent or delay dementia. (By admin http://www.debbielewissings.com/meditation-mri-scan/)

A mind with cheerful attitude can take better decision, hence an employee practicing or is being trained through meditation is better trained to handle any situation of business then a normal employee.

CONCLUSION

We talked about India’s human resource capabilities comparatively weaker and to contribute a strong workforce I conclude that Meditation not just as a part of T&D but part of employee growth, employee productivity enhancement and healthy being will take charge. This will help us create a unique standard in HRM which will play pivotal role in global success and Indian HRM cultural change in the years to come. The nature of meditation should be part of every organizational training module to serve all hierarchy, status, authority, responsibility and similar other concepts. Indeed, organizational performance and personal success are critical in the new competitive era. The above study confirms that If we train our employee’s brain by practicing meditation they will be more focused, attentive, composed, and focused which will give them an edge over any other untrained employee. Employees would be using more of their brain while decision making which may be critical and the decisions would be more rational with activation of the frontal and the left hemisphere of the brain. In context to training and development, Meditation as an innovation of HRM practices (role of HRM, Increase Productivity, Reduced employee turnover, Enhanced company image, Risk management, e.g., training about sexual harassment, diversity training etc.) will be positively related to organizational performance and decision making and will be adopted in the recent global management system and would be significantly more innovative than those followed in the preliberalization era or in the recent times. This will come positively and would be related to organizational performance with more advance studies.

LIMITATION

There are some limitations in this research study. This study is based on secondary data which have been collected over considerable period of time, but are still perceptive and can thrive on the result that are interpreted. We can derive significant relationships between innovative HRM practices and meditation which is a very new concept and not much of research has been done. Even not many organizations are
presumably willing to invest in training their employee in improving their brain strength through meditation as they feel it’s a waste of time. Second, the study is not in context with the business decision making, as many of the western studies have used multiple criteria for performance. But they are ignoring their own genesis to improve employee over their multiple performance creating further limitation in the study. Third, the result interpreted is based on secondary research, the conclusion is based on assumptions and is not implemented in current / live scenario and hence is not conclusive. However, the study presents significant data as to the overall affiliation between key factor of improving performance with the help of meditation and also corroborates it with all round productivity. Fourth, the results were not tested for support of the contingency perspective. Although we cannot fully rule out contingency processes, as there was no evidence to support them.

I hope with the current research and advancement organizations will definitely look upon such magnificent practice to build their work force. Human Resource Management will explore more on this innovative concept to enrich the growth of the organization.

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How to succeed in business: Meditate

With hellish hours and info overload now the norm, the C-Suite set is turning to extreme meditation to cope, says Fortune's Oliver Ryan.

By Oliver Ryan, Fortune writer-reporter
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