

Impression of Group Consciousness on Alpha E.E.G. Brain Waves

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Abstract:

Introduction: According to the US Department of Health and Human Services, mental illness is characterized by alterations in thinking, mood or behaviour associated with distress and impaired function.^[1] It could refer to one or more mental disorders at a time. Mental illness is a global public health concern. According to the World Health Organization, one out of four (25%) persons is affected with some kind of mental illness.^[2] The prevalence of mental disorders is higher in developed countries, but the global burden of untreated mental disease is higher in developing nations.^[2,3] Eighty percent (80%) of the population suffering with mental illness lives in low-and middle-income (LAMI) countries.^[2,4,5] The presence of mental illness does not affects only the individual and his personal, social, educational and occupational life, but it also makes his entire family to suffer from negative consequences.^[6,7]

Method: For this study we had selected randomly 50 Sanskrit students with age ranging between 18 to 26 years of age. Practicing 51 minute/ day yogic intervention particularly and only those students were considered who were willing to participate in such type of practices. The students are male and almost equal in the term of education, mental status, socio economic status and types of work. Then at the initiation of practice 0th day pre data was collected by team on mental activity by Neurosky mind wave mobile apparatus and at the end of session on 45th day of intervention post data was taken.

Result: According to obtained data we found that there was statistically significant difference at 0.01 levels between pre and post conditions in the level of alpha E.E.G. of the adults. This reveals the effectiveness of group yoga practices/ group consciousness in enhancement of mental activity and the state of meditation in special reference of adults.

Conclusion: finally we can firmly state that group consciousness can play a efficient role in the enhancement of positive mental activity and state of meditation as well in the adults.

Keywords: Alpha E.E.G., Mental activity, Group consciousness

Introduction:

The American sociological Association project a survey which hold multiple indicators of mental health problems, including internalizing and externalizing problems in young children (McLeod and Kaiser, 2004), psychological distress and depression in pre adolescents and

adolescents (Needham, Crosnoe and Muller 2004) and specific disorder such as attention deficit hyperactivity disorder (ADHD) (Galera et al. 2009). It also holds for behaviour problems that are closely associated with mental health, including delinquency and substance use (Lynskey and Hall, 2000; Maguin and Loeber 1996;

staff et al.2008). These problems covers the two major dimensions of emotional and behavioral problems; internalizing problems from of distress such as depression, anxiety and externalizing problems-form of behavioral and academic. For attaining physical and mental well being the important objective is yoga. Various kriyas, asanas, pranayama help oneself to getpurified along with a good and sharp mind with a sound body. Yoga also develops the ability to harmonize and integrate the thoughts, desires, emotions feelings and aims of an individual. Many exercises help us to do so.

The human brain is amazing – even so more sophisticated than any existing computer – that it gives people powerful potential. “A baby is born into the world with around 100 billion brain cells, give or take a few million. A brain cell is technically called a neuron, and a neuron is so miniscule that 30,000 of them fit on a pinhead. The brain is so important to the species that four weeks after conception, an embryo that will become a baby produces half a million neurons every minute. A complex system of 300 million neurons connects the brain’s right and left lobes. Each person’s 100 billion neurons have about 20,000 very important connecting branches called dendrites. There are said to be more possible connections in the human brain than the number of atoms in the entire universe.”^[13] “Yoga research for children with ASD has demonstrated improvements in stillness, following directions, emotional expression, and social interaction.”^[13,14,15,16,17,18,19,20] There were no studies found on alpha E.E.G. and super brain yoga. “Super brain Yoga is a simple and effective technique to energize and recharge the brain. It is based on the principles of subtle energy and ear acupuncture.”^[9] Super brain Yoga is an

exercise that involves squatting while holding the ear lobes with controlled breathing. Advocates claim that this exercise improves cognition and academic performance.^[10] It appears that this multisensory enriched yoga did have a positive impact on this young boy's behaviours related to physical, social, and emotional well-being on and off the mat.^[11] The present study is to test the ability of group conciousness in the improvement of mental performance like efficiency, memory as well as E.E.G. brain waves.

A case study done by Koterba, R. (2007) with administering the super brain yoga revealed a great result in the case of ADHD i.e. RT is a seven year-old boy with a diagnosis of attention deficit/hyperactivity disorder and pervasive developmental disorder. Following regular Super brain Yoga exercises, he appears calmer and more focused. He is able to engage in an entire therapy session, for about 30 minutes, with little to no behaviours. He is able to walk through the hallways without running, jumping, spinning or crashing. He sits and attends in class, displays improved social skills and expressing his feelings to his classmates and teachers. R.T. has made a huge improvement in all visual-motor integration subtests. Most improvement was seen in the area of Visual-motor Speed.^[13]

With the use of regular Super brain Yoga, the children are calmer and more focused. Overall improvement is shown in all areas including function and behavior; interacting with the environment with more success.^[13]

According to these study we conclude that the practice of yoga can make a positive change in the condition of normal brain activity, that’s why we are going to assess the efficacy few Yogic practices which is basically describes by a saint pandit Shri Ram Sharma ji like Pragyā yoga,

Pranakarshan pranayama and savita meditation (a pre recorded audio in the voice of Shri Ram Sharma ji) and Gayatri mantra chanting. According to him these techniques are the best way for the enhancement of the super conscious state of mind .

Methodology:

The total sample of 50 Sanskrit students ranging in age from 18 to 26 years was selected from the Sanskrit college of district Haridwar, Uttarakhand, (India). This sample consists of 50 Students in experimental group. A random sampling was done to select the best and interested samples. Pre test and post test was administered to assess the effectiveness of

Yogic Intervention:

S.n.	Yogic practices given to the sample	Round/ day	Duration
1	Savita dhyan	28 min	28 min
2	Gayatri mantra chanting	12 time	06 min
3	Pragya yoga practice	05 round	10 min
4	Pranakarshan Pranayama	05 round	05 min
5	Shantipath	01 round	01 min
	Total	-----	50 min

Design:

Pre test and post test research design was used in the present study; groups are practicing the yogic practices along with the Gayatri mantra chanting as intervention. At the end of the treatment, group is measured again to evaluate the difference between pre and post condition as a result of the treatment or intervention.

Tools:

To measure the alpha E.E.G. level of the students, Neurosky mind wave mobile

Table and Graph:

yogic practices. Only male participants are considered and minimum education was at least secondary level.

Experimental session:

The intervention program of yogic practices was given to the experimental group. Participants assigned to the group and they performed the selected yogic intervention in group early in the morning at 6:30 A.M. for Fifty one (51) minutes for just 45 days excluding Sundays and holidays. Total 36 days intervention given to the students. The intervention schedules are as shown in given. During the course of this study they instructed not to do any other yogic practices as well.

apparatus has been used for the measurement of alpha wave of the student in the pre and post condition. .

Statistical analysis:

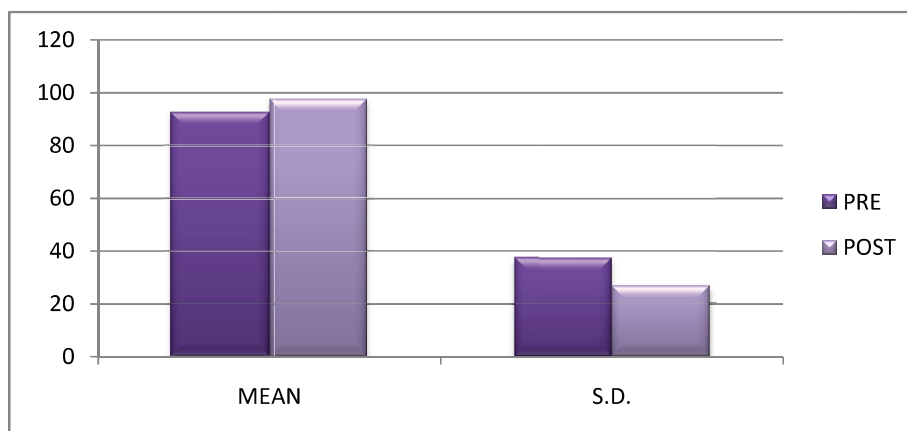
Obtained data were tabulated and analyzed. The initial values on 0th day of parameter were compared with the final values obtained on 45th day's measurement. Paired t- test was used for the statistical analysis with the help of SPSS ver. 23

Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 pre	92.4740	50	37.52160	5.30636
post	97.4240	50	27.14535	3.83893

Paired Samples Test

	Paired Differences					t	df	Sig. (1-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence				
				Lower	Upper			
Pair 1 pre - post	4.950	13.987	1.978	8.925	.974	2.502	49	.016



Result:

The mean & standard error of mean ($M \pm S_{Ed}$) of pre test and post test on level of Alpha E.E.G. of the **experimental group** were consecutively found to be 92.47 ± 5.03 and 97.42 ± 3.83 . The correlation (r) .95 and pre SD 37.52 and post SD= 27.14 as well. Obtained t-value is 2.50 which are statistically significant at 0.01 level of confidence. .

On the basis of obtained result it can be concluded that yogic intervention along with the practice of Gayatri mantra chanting is **significantly (at .01 levels) increases the level of alpha wave** of the secondary level students in the experimental group.

Conclusion:

On the basis of the findings of this study it can be concluded easily that this package can enhance the meditative state of mind which can further improves the overall performance of the secondary level students.

According to a research by Cornell university of New York, mental health problems affect one in every five young people at any given time. Since to face all the problems such as: strain, tension, depression, anxiety and more our intellectual level adolescents are targeted first. So, for any type of mental as well as physical disorders yoga, along with asana, Super Brain Yogic technique and Surya Namaskara i.e. Sun Salutation proves it best of all. ^[21]

Physician James Gordon, clinical professor of psychiatry at the Georgetown University School of Medicine, teaches deep breathing to most of his patients. For example, it has helped adults reduce the suffering from advanced cancer and crippling arthritis, and aided young person's coping with attention deficit disorder. ^[25,26] "Slow, deep breathing is probably the single best anti-stress medicine we have," says Dr. Gordon.

“When you bring air down into the lower portion of lungs, where oxygen exchange is most efficient, everything changes. Heart rate slows, blood pressure decreases, muscles relax, anxiety eases and the mind calms. Breathing this way also gives people a sense of control over their body and their emotions that is extremely therapeutic.”^[22]

Studies also indicate that coordinated exercise increases one's attention. The component of holding the earlobes seen only in the practice of super brain yoga may account for the significant improvement in alpha wave scores. Overall, the reduction in hyperactivity and increased present moment awareness may be cited as a possible mechanism for the improved performance.^[27] Further, the role of stimulating acupressure points on

earlobes may enhance attention performance.

While this study resulted in important findings, the results have to be considered in light of several limitations. Representation of males while females are not included in this study and small sample size does not allow for generalization of the findings to a realistic population. Moreover, neither psychological measurements nor the lasting effect of intervention was assessed. Furthermore, the study used a mix of novice and long-term yoga practitioners who were part of an on-going residential yoga course. Therefore, it is unclear what effect the yoga practice had in influencing the participant's performance and psychological states. The long term impact of the intervention remains to be studied.

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