

# A Comparative Study between Vedic and Contemporary Education Systems using Bio-Energy Markers

## Abstract

**Background/Aim:** “The destiny of the whole world depends on the children. If you want to see the silver lining on the horizon it is not you and me, but the children who have to be spiritualized” says Swami Satyananda Saraswati. Sri Aurobindo states “Education to be complete must have five principal aspects corresponding to the five principal activities of the human being: the physical, the vital, the mental, the psychic and the spiritual.” Vedic education system (VES) focuses on inculcating all facets for overall development of personality. This study is an attempt to understand the lore of Vedic education followed by yoga as a way of lifestyle for physiological well-being and for successful unfoldment of children’s personality. **Materials and Methods:** The sample size was 378 (108 VES and 270 contemporary education system [CES]). We have excluded volunteers who had minor health problems from the study. The ethical clearance was taken from SVYASA University Ethics Committee, and informed consent was obtained for each individual undergoing the study. As it was aimed to collect one-time data, the yoga as a lifestyle in VES itself considered as an intervention. Thus, the two systems of educations are compared. The variables are measured using the Electro-photonic Image Bio-Well instrument. **Results:** Bio-Well variables for VES and CES were compared. There was a significant difference in VES and CES energy level scores, left–right symmetry scores, organ balance, and entropy coefficient scores. **Conclusions:** Results suggest that Vedic Education System to be better in the measured parameters compared to Contemporary Education System.

**Keywords:** Ancient lifestyle, biological well-being, education

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## Introduction

Indian system of education has been known for centuries for its unique nature of imparting knowledge. Basic objective of education is to explore the inner potentials through different modules, such as personal tutoring system, family vocational training, and self-learning method.<sup>[1]</sup> Among all the different education methods, Vedic education system (VES) was very popular for different reasons; community living for mutual emotional understanding, ethical values for humanitarian approach, exploring the inner potentials through individual mentoring in the chosen area of knowledge, to name a few.<sup>[2]</sup> Education in ancient India was to nurture all the tools of expression by every available resource: physical, vital, mental, social and spiritual as described by Sri Aurobindo.<sup>[3]</sup> As the physical body is an instrument to achieve the desired goals of life, the health and fitness of the body and mind were maintained well in accordance with nature.<sup>[4]</sup>

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## Characteristics of physical well-being

Yoga, as a lifestyle, was an inherent practice of VES which ensured the expected outcome of teaching and learning processes.<sup>[5]</sup> The essential components of yoga way of life are moderation in food, recreations, activities, and sleep–wake cycle proclaims Bhagavad-Gita.<sup>[6]</sup> As a part of yoga lifestyle, the physical well-being is meant to be a perfect balance of *Dhatus*/ body tissues in the body as described in Ayurveda; it conveys that the three *Doshas*/ humors, namely, *Vata* – air, *Pitta* – fire, and *Kapha* – water, should be in balance; the appetite and digestive fire are in a balanced state with cellular metabolism comprising complete digestion, absorption, and assimilation; the functions of seven *Dhatus* (body tissues) are normal in quality and quantity; whose metabolic wastes and toxins are properly and timely excreted; the sensory and motor organs with an efficiency of right perception and strength; an undisturbed mind, the *Atma* (soul) also in a

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pleasant/blissful state. Such a person is named as having overall well-being or *Swasthah*.<sup>[7]</sup> Further, *Shvetashvatara Upanishad* defines the physical well-being as lightness, health, steady mind, complexion, melodious voice, pleasant odor, and scantiness of excretions.<sup>[8]</sup>

### **Routine of Vedic education system: A yoga lifestyle**

- Food – Pleasing to body and mind, seasonally available, least processed, measured quantity
- Recreation – Doing things in ideal time, bed and wake up time are fixed in accordance with nature
- Actions – According to one’s nature, within the limits of one’s own capacity
- Psychological attitude – Practice of ethics and values, universal brotherhood, focused on continuous self-improvement.

### **Sedentary lifestyle and its consequences on physiological health**

The acceptable differences between the education systems (prior and postmodern education) in India should be analyzed in terms of its influence on health and well-being of the human. Because of the modern industrialization and capitalistic economic policies, the education system and lifestyle were altered to a great extent which consequently influenced the overall well-being of humans and other living creatures across the globe.

The ancient Indian texts have highlighted that the concept of sedentary lifestyle or wrong lifestyle is the root cause of all diseases. Eating unhealthy food which is *raajasik* and *taamasik*, occupation at inappropriate places, the conduct of activities at unsuitable times and association with wrong people, and overfilling the stomach cause diseases by directly influencing the energy channels by blocking the bio-energy flow.<sup>[9]</sup> The bio-physical well-being is disturbed by overeating which in turn leads to sluggishness and dullness. In addition, over a period of time, toxins will be accumulated in the body which causes constipation and other complications. One feels drowsy and sleepy when the body is full of toxins.<sup>[10]</sup>

Modern scientific evidence also proves the consequences of sedentary lifestyle with number of health issues. A study reported that students aged 14–17 years who have the routine of only eating junk food, overeating, and lack of physical activity are found to be obese and thereby suffer from diabetes, stroke, liver diseases, infertility, hypertension, arthritis, and cancer. Obese children also have a high risk of development of early heart diseases.<sup>[11]</sup>

The value and practice of yoga are recognized globally. Regular practice of yoga in children and young people make them face disorders of life with fitness of physical body and steadiness of mind. Adoption of yoga as a significant tool minimizes stress and develops resilience. A study focused on the need of yoga for stress

management, self-regulation, and healthy development reaches similar conclusions.<sup>[12]</sup>

With this brief survey, the present study focuses on the physiological well-being where yoga is practiced as a way of lifestyle (regular, long time and determined) followed by healthy food, suitable recreations, optimal activities, and balanced sleep to avoid consequences of ill health.

### **Materials and Methods**

The sample size was 378 (108 Vedic education setup and 270 contemporary education system [CES]). We excluded volunteers from the study who had minor health problem at the time of the experiment as it was more focused on physiological well-being. The ethical clearance was taken from SVYASA University Ethics Committee, and informed consent was obtained for each individual undergoing the study. As it was aimed to collect one-time data, yoga as a lifestyle in VES itself is considered as an intervention. The sample size was not calculated before the test. However, the G \* Power (Dusseldorf, Germany), an overall power analysis program software, was used to calculate the power of the test as a *post hoc* analysis.<sup>[13]</sup> The power was found to be adequate, i.e., >0.80 for energy, left–right (L\_R) symmetry, and entropy coefficient in Bio-Well parameters.

### **Assessment tool**

#### *Bio-Well*

The Bio-Well which works on the mechanism of Electro Photonic Image (EPI) was developed by Russian Scientist, Dr. Konstantin Korotkov in 1996 to capture, map, and analyze the electromagnetic field emanating from the human body in response to pulsed electrical field excitation and is used to assess the biological well-being.<sup>[14]</sup> Traditional Chinese medicine recognizes that representations of the whole body are found in each organ or region of the body. The phenomenon of fingertip diagnosis in EPI is an example of reflexological diagnosis applied to the fingertips, using *Pranic* energy fields, which are the media through which reflexological maps could arise. Hence, the instrument is of acceptable quality for research and has been used in various research investigations.<sup>[15]</sup>

#### *What does the Bio-Well instrument measure in physical terms?*

The Bio-Well instrument is based on the stimulation of photon and electron emissions called “photo-electron emissions,” and it has been thoroughly studied with physical electronic methods. The emitted particles accelerate in the electromagnetic field, generating electronic avalanches on the surface of the dielectric (glass) plate. This process is called “sliding gas discharge.” The discharge causes glow from the excitement of molecules in the surrounding gas (which is air), and the parameters of this glow are measured by the Bio-Well instrument. Voltage pulses stimulate optoelectronic emission, while intensifying

this emission in the gas discharge, amplified by the electric field created.

*Parameters measured for bio-psychological well-being*

Bio-well is capable of producing various detailed numerical data for multi-varied levels of analysis. In this study, only selected parameters are focused for analysis, as listed below.

- Emotional stress – Stress is a complex factor that has both an emotional component (anxiety) and a somatic component that results from prolonged exposure to permanent anxiety. Stress has a very strong impact on the bio-energy field. Images look very specific
- Energy – Energy (from the Greek *enérgeia* – action, activity) is a general quantitative measure of any type of movement, activity, and the interaction of all types of matter
- L\_R symmetry – A measure of how symmetrical the distribution of energy is on the left and right sides of the body
- Organs balance – Characteristics of L\_R balance of the body. This is an important characteristic in the evaluation of physical and mental conditions
- Entropy – This is an indicator of the level of chaos and disharmony in the energy in the system
- Form coefficient – It is one of the EPI parameters to analyze the level of a person’s involvement in stress–adaptation and adjustability. This also provides the level of stress and balance of activity of sympathetic nervous system (SNS) and para-SNS work.

**Method used to collect the data**

The subjects of the present study were requested to come with empty stomach as a standard procedure of Bio-Well data acquiring norms to avoid postmeal influence on the subtle energy pattern, ideally in the early morning before the subjects get into their normal routine. Data are collected for all 10 fingers using Electro Photonic Imaging equipment from both VES and CES groups. Data are retrieved from the equipment using Bio-Well software and exported to excel sheet in the form of numerical values. Results are analyzed and compared using R-Studio (Boston, MA).

**Data analysis and results**

An independent-samples *t*-test was conducted to compare Bio-Well parameters for VES and CES. There was a significant difference in VES and CES energy level scores;  $t(376) = 10.579, P = 0.00$ , L\_R symmetry scores;  $t(376) = 3.234, P = 0.001$ , organ balance;  $t(376) = 2.130, P = 0.03$ , entropy coefficient scores;  $t(376) = 11.029, P = 0.0001$ , as shown in Table 1.

**Discussion**

These results suggest that VES and CES have different Bio-Well scores. Specifically, our results suggest that when students undergo different styles of educational systems, different aspects of well-being are influenced by

**Table 1: Descriptive statistics of Bio-Well variables of Vedic education system contemporary education system**

Variables	VES	CES
Emotional stress	3.68±1.10	3.43±0.94
Energy	62.04±6.93*	54.54±7.51
L_R symmetry	93.97±6.74*	93.31±9.18
Organ balance	85.98±8.77*	85.84±9.23
Entropy coefficient	2.81±0.48*	2.32±0.27
Form coefficient	3.36±1.09	3.15±1.06

\* $P < 0.001$ , independent *t*-test. VES=Vedic education system, CES=Contemporary education system, L\_R=Left-right

the VES having component of yoga lifestyle compared to normal routine. The study showed a significant difference in energy, L\_R symmetry, entropy coefficient, and organ balance, as for as physical well-being is considered.

Compared to VES, emotional stress values were found less in CES. Form coefficient values which are indicative of adaptability also are found more in VES, perhaps because of their yoga practices. It is intended that EPI measurement technique could provide finer details of physiological states in yoga lifestyle practitioners. The influence of yoga lifestyle helps to maintain health and well-being of the physical body and mind which form basic tools for one’s own successful achievement. It is assumed that the balanced health status is the outcome of purification of the body through different practices and also the bio-energy level is always optimum by the evacuation of mental stressors and accumulated morbid matters from the physical body.

As the entire physical body is maintained by normal secretions of hormones by the endocrine and exocrine glands, yoga lifestyle helps in the regulation of hypothalamic–pituitary–adrenal axis and the SNS in reducing cortisol. Hence, it is reported that yoga may reduce high energy levels in hypothalamus to both bring balance and maintain optimal energy.<sup>[16]</sup> Hence, it is very much evident that when different practices of yoga lifestyle are practiced regularly, the different aspects of physical health are established. Entropy indicates the functional state of cells, organs, and the entire human body. The study also shows less chaos and disorderliness within the system in the subtle energy of mediators.<sup>[14]</sup>

**Conclusions**

Through regular practice of yoga as a way of lifestyle, one can maintain optimal level of energy at physical level for better performance of any activity. As equal importance is given to develop both intellectual and emotional development in VES, the practices of postures followed by *pranayama* help to maintain the balance of SNS and para-SNS, thereby left and right symmetry is achieved. Coordination between the motor organs with awareness is highly enhanced by avoiding chaos/haphazardness, thereby establishing harmony in the entire physiology. Hence, yoga

