

Enhancing wellness of adolescents through yogic practices

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Abstract

The present research attempted to study the efficacy of Yogic exercises in enhancing the wellness of adolescents. The sample consisted of 70 adolescent participants randomly selected for the study and an experimental design with a pre-post intervention assessment was adopted. Assessment of the participants was done on the measure of *Adolescent Wellness Scale*. Data was analyzed statistically to observe the differences between responses of pre and post intervention. A yoga based intervention program was developed incorporating Surya Namaskar, pranayam and meditation. The results indicated that the dimension of physical and spiritual wellness was enhanced significantly after yogic intervention.

Keywords: yoga, wellness, adolescence

Introduction

According to World health organization adolescence is a period of life between 10 to 20 years of age. The focus of present research is on adolescence; a developmental stage where a person experiences vast physical changes as well as identity changes i.e. from a child to a grown-up person. It's a transition period between childhood and adulthood and so a person experiences diverse biological changes, encounters emotional issues and identity crises during this developmental stage situation. All these biological and psychological changes cause stress, which in turn leads to lack of total wellbeing and wellness even if she/ he is not suffering from any pathological illness. It has been identified as periods in which young people develop abstract thinking abilities, become more aware of their sexuality, develops a clear sense of psychological identity and increase their independence from parents. G. Stanly Hall (1904) ^[6] denoted this as a period of "Storm and Stress" and, according to him conflicts at this developmental stage is normal and not abnormal. Girl child experience Menarche at this stage, which is the onset of menstruation cycle. Spermarche is the first ejaculation, which usually occurs due to masturbation or wet dream (nocturnal emission) in males. The rising testosterone level is associated with a number of physical changes in boys (Hiort, 2002) ^[7]. Estradiol is an estrogen that leads to development of breast, uterine development, and skeletal changes in adolescent girl (Cameron, 1990) ^[3]. The results of the study have shown that the parts of the brain that suppress impulses are not fully mature until early adulthood and so adolescents experience more problems in inhibiting a previously reinforced response than the young adults (ages 21 to 24 years) (Casey, Trainor, Orendi, Schubert, Nystrom, Giedd, Castelonos, & Cohen, 1997) ^[4].

Hatha Yoga also called Hatha vidya is a system of Yoga introduced by Yogi Swatmarama, a sage of 15th century India, and compiler of the Hath Yoga pradeepika. In Hath Yoga, it

focuses on shatkatma, the purification of the physical as leading to the purification of the mind (ha) and prana, or vital energy (tha). In contrast, the Raja Yoga posited by Patanjali begins with a purification of the mind (yama) and spirit (niyama), and then comes to the body via asana (body postures) and pranayam (breath). Hatha yoga contains substantial tantric influence, and marks the first point at which chakras and kundalini were introduced into the yogic canon. Compared to the seated asana of Patanjali's yoga, which were seen largely as a means of preparing for meditation, it also marks the development of asana as full body 'postures' in the modern sense. Ashtanga is the yoga of Patanjali, the saint compiled the Yoga Sutra. It is composed of eight limbs: yama and niyama, which are ethical observations; asana; pranayama, which is breath control; pratyahara, which is sense withdrawal; dharana, which is concentration; dhayana, which is meditation; and samadhi, which is a high state of concentration, mastery of the mind. Hatha Yoga has its many modern variations namely Bikram Yoga, power yoga and dance yoga, is the style that most people actually associate with the word "Yoga" today.

Wellness is mind-body-spirit integration that promotes self-care and self-understanding and connects one's life to the larger world. It is a state of being joyfully and enthusiastically engaged with one's life, even when it doesn't turn out exactly as you had planned. The World Health Organization (WHO) defined health as "a state of complete physical, mental, and social well-being and not merely the absence of disease and infirmity." There are many individuals who have no apparent disease condition but who are not living balanced, healthy lives. Similarly, there are many examples of individuals with chronic medical conditions who appear to have transcended their disease state to embody what many of us would identify as wellness. Wellness does not require that you be free of all medical conditions. To understand wellness completely it has to be discussed in a broader sense in terms of all dimensions

of wellness. Following dimensions reflect the meaning of wellness.

Psychological wellness –Having high Emotional intelligence which refers to as being aware of your emotions and the ability to maintain in control of them. Being able to change a negative emotion to conscious awareness and problem solving techniques to better resolve conflicts.

Social wellness - A supportive social group help support a wellness lifestyle. Actively involving empathy and active listening skills while enjoying nurturing friendships offer a state of happiness to support wellness.

Spiritual wellness - A sense of connectedness with healthy morals values for better living. Spiritual wellness reflects understanding of personal values and purpose.

Physical wellness - Stay focused on taking care of one's body with proper nutrition, exercise, adequate sleep, avoiding abusive habits such as alcohol, drugs, tobacco, etc. Regular relaxation facilitates attainment of physical wellness.

Yoga is one of the most ancient forms of exercising initiated by maharishi Patanjali and further developed by many other yoga rishis. But what is unique about yoga is that it takes care of mind, body and spirit, which actually relates to the concept of wellness, i.e. mind-body-spirit integration. Soyoga is very beneficial in enhancing the complete wellness. The asana, pranayama and the meditation promote to complete wellness that is an integration of mind-body and spirit.

Many studies have been conducted to see the connection between yoga and its effect on human body and mind. The study conducted by International Association for Religion and Parapsychology on a sadhu, Ramananda Yogi, who had practiced pranayama for many years, revealed that he has the ability to control the heart muscle and also his basal metabolic rate (Anand, Chhina, & Singh, 1961) [1]. Similarly Vahia and his associates (1975) [14] have concluded in their research that patients who get maximum benefit from Yoga are neurotics and suffering from psychosomatic disorders.

Andre Van Lysbeth (1979) [10] in his book "Pranayam-The Yoga of Breathing", states that kapalbhati influences the circulation of blood within the brain and therefore, increases the blood volume in brain. It is logical to conclude that increased blood in brain is accompanied by elevated pranic levels and ensures even and harmonious distribution of prana throughout the body.

Study conducted by Farrow and Hebert, (1982) [5] observed increase in the frequency and length of the breath suspension episodes in Transcendental Meditation practitioners as compared to those who do not practice TM. It was also observed that the heart rate and breath rates were significantly different when the practitioners voluntarily shifted from 'single thought' to 'no thought' state (Telles & Desiraju, 1992) [11].

Telles S., Nagaratha, R., and Nagendra, H.R. (1995) [12], studied the effect of 'OM' Meditation on autonomic changes and found that the experienced Om meditators showed a decrease in heart rate along with increased peripheral vascular resistance. It was concluded that there was a mental alertness while being physiologically relaxed autonomic changes during "OM" meditation.

Birkel and Edgren (2000) [2], studied the effect of yoga on vital capacity of lungs. The study revealed that yoga has a positive

effect on the vital lung capacity.

Dr. Kaviraja Udupa (2002) [13] studied the efficacy of slow Suryanamaskar (SSN) and fast Suryanamaskar (FSN). Training in SSN produced a significant decrease in diastolic pressure. In contrast, training in FSN produced a significant increase in systolic pressure. Also increase in hand grip strength and handgrip endurance in both the groups were reported.

Lavey, Sherman, Mueser, Osborne, Currier, and Wolfe (2005) [9] conducted a study to see the effects of yoga on mood. Results suggest that yoga was associated with improved mood, and may be a useful way of reducing stress during inpatient psychiatric treatment.

Kants and Sharma (2009) [8] studied the effect of yoga on academic performance in relation to stress. The results show that the students, who practiced yoga performed, better in academics as yogic practice reduced stress in students and in turn enhanced the academic performance. The present study attempts to examine the effect of yogic practices on the wellness of adolescents.

Materials and Methods

The study was conducted on seventy adolescent participants studying in 10th to 12th class, taken from English medium schools located in Bhopal. The age of the participants ranged between 16 to 19 years. The average age of participants was 15.8 years.

The Adolescent Wellness Scale was used in the research, which is based on the Adolescent wellness survey, conducted by Sharkey (1999). This questionnaire included five sections for a total of 63 items related to four dimensions of Adolescent wellness namely, physical development, spiritual development, psychological development and social development. The first section sought demographic information. The second section consists of items related to physical development. There are several different scales used in the first and second section. The third section is related to spiritual development, fourth to psychological development and fifth to social development. All the items in section three to five used Likert scale where the responses are to be given in varying degree of agreement to the statement from strongly disagrees, disagree, neutral agree and strongly agree. Scoring is done according to the varying degree of responses.

Yoga Package

Suryanamaskar-Duration 4 Minutes

Pranamasana (prayer pose)

Hasta utthanasana (raised arms pose)

Padahasthasana (hand to foot pose)

Ashwasanchalanasana (equestrian pose)

Parvatasana (mountain pose)

Ashtanganamaskara (salute with eight parts or points)

Bhujangasana (cobra pose)

Parvatasana followed by reverse sequence till pranamasana

Pranayam Session- Duration 5 minutes

Nadi shodhana pranayam

Bhramari pranayam (humming bee breath)

Kapalbhati pranayam (frontal brain cleansing breath)

Meditation- Duration 3 minutes

The data was collected from educational institutions and the main criterion for selection of sample was to select students who are in their late adolescence. A pre-test and post-test intervention design was administered on subjects. Before administering the yoga intervention pre test scores were taken from the participants on the Adolescent Wellness scale. The next step followed was the administration of intervention that is Yoga session of twenty minutes. These yogic exercises were practiced for 15 to 20 minutes daily for twenty days and

after that post intervention data were obtained on same tools. Test of significance (t-test) was used to compare the pre and post test scores.

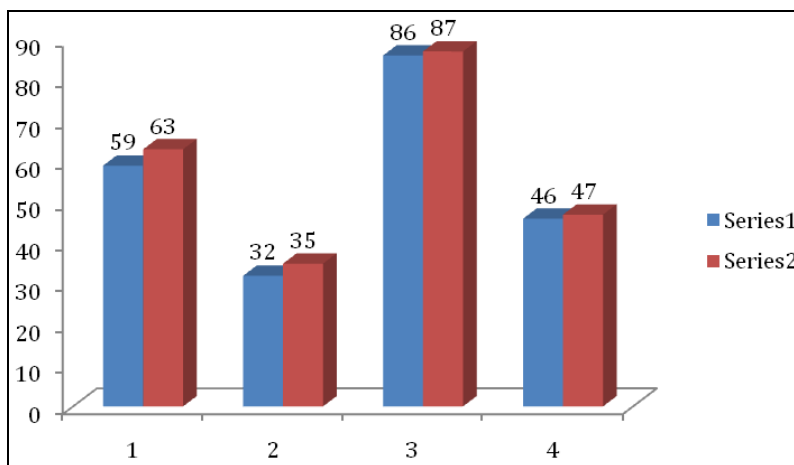
Results and Discussion

Pre-intervention and post intervention scores were obtained and statically analyzed The Means, Standard Deviations and t-values on the measure of Wellness (pre and post intervention) are shown in Table1.

Table 1: Mean, SD and ‘t’ Values for pre-intervention and post-intervention on the measure of Wellness.

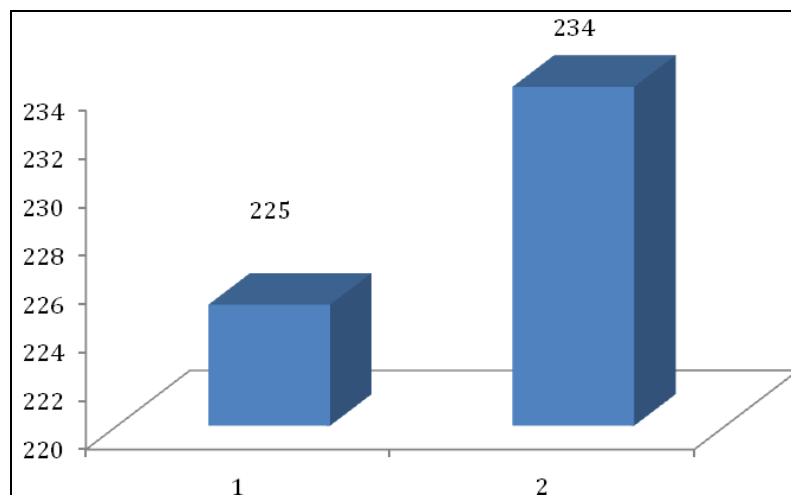
Dimensions of Wellness	Pre Intervention		Post Intervention		‘t’ values
	Mean	SD	Mean	SD	
Physical Development	59.30	7.29	63.08	4.22	3.75**
Spiritual Development	32.72	7.47	35.74	7.06	2.45*
Psychological Development	86.22	13.00	87.50	12.83	0.58
Social Development	46.31	7.10	47.75	8.90	1.06
Wellness Total	224.62	26.03	234.08	23.32	2.26*

* Statistically Significant



1: Physical development, 2: Spiritual, 3: Psychological, 4: Social
 Series 1: In blue Pre Intervention
 Series 2: In red Post Intervention

Fig 1: Mean pre and post-intervention on the measure of physical, spiritual, psychological, social wellness.



1: Pre Intervention
 2: Post Intervention

Fig 2: Mean pre- post-intervention on Total measure of Wellness.

It is clearly evident from the results that there is an increase in value of mean of overall Wellness scores (M=224.62) post yogic intervention as compared to the value of mean of overall Wellness scores (M=234.08) pre yogic intervention. The value of 't' came out to be significant for over all Wellness ($t=-2.26$, $p<.05$).

The result clearly indicates that the students reported enhanced or higher level of wellness on the dimension of physical wellness (M=59.30) post yogic intervention as compared to the pre yogic intervention value (M=63.08). The value of 't' also came out to be significant on the dimension of physical wellness ($t=-3.75$, $p<.01$). Similarly there is an increase in the value of mean on the dimension of spiritual wellness (M=32.72) post yogic intervention as compared to pre intervention value (M=35.74). The value of 't' also came out to be significant on the dimension of spiritual wellness ($t=-2.45$, $p<.05$).

Yoga worldwide is known for its impact on both mind and body. The yoga asana, pranayam, meditation all affect the mind and body as a whole and contribute to the development of all dimensions of wellness. The results of the study clearly indicate that wellness of the participants enhanced significantly after doing yogic practices which included Suryanamaskar, pranayam and meditation for twenty days. The pattern of result indicated that the physical and spiritual wellness of the participants increased significantly after yogic intervention. The present study also evidenced that a positive change was realized amongst the adolescents in relation to their physical wellness after their involvement in yogic practices. Result support that in the post session the adolescent students were sincere towards their physical health accordingly they showed interest in physical exercise, having nutritious diet and internalizing positive health habits. Contrary to this it was observed that students showed decreased preference towards smoking.

Conclusion

The present study was concerned with examining the role of yoga in enhancing the wellness of adolescents. Comparison of result of pre and post intervention data clearly indicates that yoga has a great impact on the Wellness of the adolescent participants. And it can be assumed from the results of the study that Yoga can be a lifestyle practice, which could help them in enhancing the overall mental and physical state. Yoga is not about treating diseases but it helps in improving and increasing the mental and physical strength so that it is in a better condition to fight with diseases and causes of diseases. It is found in various researches that the people who do any kind of exercises daily remain healthier than others do. Yoga in particular is a kind of workout style, which enhances both physical and mental health.

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