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PREFACE

Physical activities and games, though very crude, were in vogue in ancient times for the development of man. In those days, the emphasis was on increasing physical strength and life span, survival, ascendancy over the rival and exhibiting superiority in the Gladiatorial sports, i.e. demonstration of naked brutal force. With the passage of time, the concept of physical activity and games has undergone a tremendous change to meet the scientific needs of human endeavour. The modern age has influenced by the development of science and its application to make the human life more and more comfortable with the danger of deterioration in his physical abilities. Realising this fact, the man has taken up the challenge to use the scientific development for his fitness and well being also. The development of physical education curriculum is so inclusive that it includes many of the scientific disciplines (dealing with the human activities and performance) such as Anatomy, Physiology, Kinesiology and Psychology

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Editor

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COMPARISON OF BLOOD PRESSURE (RESTING, DURING PHYSICAL ACTIVITY & RECOVERY) OF PHYSICAL EDUCATION MAJORS

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Abstract

The purpose of this study was to compare blood pressure (resting, during physical activity & recovery) of physical education majors. For this Fifty (N=50) male student, who were majoring in the physical education profession or joined physical education as profession for the session 2014-15 at undergraduate and postgraduate level were selected as subjects by using random sampling technique. The sample was selected from Shaheed Kanshi Ram College of Physical Education Bhagoo Majra (Kharar), Mohali, Punjab. Twenty five subjects were from undergraduate classes and twenty five subjects were from postgraduate classes.

Analysis of data was carried out by applying t-test. On the basis of results it was concluded under graduate physical education majors were having higher mean scores of selected physiological variable blood pressure -systolic (resting), blood pressure – systolic & diastolic (during physical activity) and blood pressure -diastolic (Recovery) (119.64, 147, 87.96 & 78.16) as compared post graduate physical education majors except blood pressure –diastolic (resting) and blood pressure –systolic (Recovery) (75.56 and 120.48). Under graduate and post graduate physical education majors were significantly differed in blood pressure systolic (during physical activity) and blood pressure diastolic (recovery) as their calculated values of $t = 2.17$ and 3.50 were greater than the table value of $t = 2.01$. Whereas, they did not show any statistically significant differences in blood pressure systolic (resting), blood pressure systolic (recovery), blood pressure diastolic (resting) and blood pressure diastolic (during physical activity) as the calculated values of $t = 1.78, 0.56, 0.11$ and 1.50 were less than the table value of $t = 2.01$ required to be significant at 0.05 level.

INTRODUCTION

Physical activities and games, though very crude, were in vogue in ancient times for the development of man. In those days, the emphasis was on increasing physical strength and life span, survival, ascendancy over the rival and exhibiting superiority in the Gladiatorial sports, i.e. demonstration of naked brutal force. With the passage of time, the concept of physical activity and games has undergone a tremendous change to meet the scientific needs of human endeavour. The modern age has influenced by the development of science and its application to make the human life more and more comfortable with the danger of deterioration in his physical abilities. Realising this fact, the man has taken up the challenge to use the scientific development for his fitness and well being also. The development of physical education curriculum is so inclusive that it includes many of the scientific disciplines (dealing with the human activities and performance) such as Anatomy, Physiology, Kinesiology and Psychology.

Physiological variables may be defined as those variables which are directly linked with various physiological systems such as pulse rate, blood pressure, vital capacity, fat percentage, respiratory rate and haemoglobin.

Among all the factors, physiological variables play an important role for the attainment of high level performance. Physiological variables may be defined as those variables which are directly linked with various physiological systems such as heart rate, blood pressure, vital capacity, respiratory rate and haemoglobin. Physiological variables such as cardiovascular efficiency, percentage of fat, reaction time, vital capacity and other should be taken into consideration while selecting volleyball players. Cardio respiratory endurance denoted capacity of individual to work effectively with the help of oxygen which is collected, transported and utilized by lungs, blood and muscle respiratory. Any work is daily task or form of physical activity is directly related to energy supplying system which in turn is the cardio-respiratory endurance varies from individual to individual and one of the important variables for establishing top class performance in volleyball as the game involves work of long duration endurance type.

For the physiological system of the body, to be fit, the system must function well enough to support the specific activities that individual is performing. Moreover, different activities make different demands upon the organism with the respect of circulatory, respiratory, metabolic, neurological and temperature regulating functions. Physiological fitness is specific to activity. Physiological systems are highly adaptable to exercise. Each task requires different functioning of the appropriate systems.

The physical education profession is an activity oriented profession. It has theoretical and practical parts. To attain professional competence or to score high in activities of

physical education, one has to excel to perform well. But physical performance is based on many factors such as physiology, sociology, anthropometry, psychology etc. In physical performance, if two dominant factors are in favour and one essential factor is missing or vice versa, one cannot excel well or give optimum performance even.

The rationale of this study is to fill the existing gap in research that is important from the point of view of growth and development of professional physical education programmes. Therefore, the present study was designed to compare blood pressure (resting, physical activity & recovery) of physical education majors

METHOD AND PROCEDURE

Fifty (N=50) male student, who were majoring in the physical education profession or joined physical education as profession for the session 2014-15 at undergraduate and postgraduate level were selected as subjects by using random sampling technique. The sample was selected from Shaheed Kanshi Ram College of Physical Education Bhagoo Majra (Kharar), Mohali, Punjab. Twenty five subjects were from undergraduate classes and twenty five subjects were from postgraduate classes.

STATISTICAL PROCEDURE: - The obtained data were statistical analyzed to compare the blood pressure (resting, physical activity & recovery) of under graduate and post graduate male physical education majors by applying 't' test.

RESULTS

Descriptive statistics of blood pressure (resting, during physical activity & recovery) of under graduate and post graduate physical education majors have been given in table 1.

Table 1

DESCRIPTIVE STATISTICS OF BLOOD PRESSURE (RESTING, DURING PHYSICAL ACTIVITY & RECOVERY) OF UNDER GRADUATE AND POST GRADUATE MAJORS

Variables	Groups	N	Mean	Standard Deviation	Standard Error
BP-Systolic (Resting)	Under Graduate	25	119.64	8.24	1.65
	Post Graduate	25	116.08	5.63	1.13
BP-diastolic (Resting)	Under Graduate	25	75.36	7.22	1.44
	Post Graduate	25	75.56	6.15	1.23

BP-Systolic (During Physical Activity)	Under Graduate	25	147	14.44	2.89
	Post Graduate	25	139.40	9.95	1.99
BP-Diastolic (During Physical Activity)	Under Graduate	25	87.96	7.90	1.58
	Post Graduate	25	84.28	9.38	1.88
BP-Systolic (Recovery)	Under Graduate	25	119.28	8.85	1.77
	Post Graduate	25	120.48	6.19	1.24
BP-Diastolic (Recovery)	Under Graduate	25	78.16	6.96	1.39
	Post Graduate	25	72.20	4.91	0.98

The results (Table 1) revealed that under graduate physical education majors were having higher mean scores of selected physiological variable blood pressure -systolic (resting), blood pressure –systolic & diastolic (during physical activity) and blood pressure -diastolic (Recovery) (119.64, 147, 87.96 & 78.16) as compared post graduate physical education majors except blood pressure –diastolic (resting) and blood pressure –systolic (Recovery) (75.56 and 120.48).

Significance of mean differences of blood pressure (resting, during physical activity & recovery) of under graduate and post graduate physical education majors have been given in table 2.

Table 2

SIGNIFICANCE OF MEAN DIFFERENCES IN BLOOD PRESSURE SYSTOLIC AND DIASTOLIC (RESTING, DURING PHYSICAL ACTIVITY & RECOVERY) BETWEEN UNDER GRADUATE AND POST GRADUATE PHYSICAL EDUCATION MAJORS

Variable	Groups	Mean ± SD	MD	SED	t value
BP-Systolic (Resting)	Under Graduate (N = 25)	119.64 ± 8.24	3.56	2.00	1.78
	Post Graduate (N = 25)	116.08 ± 5.63			
BP-Systolic (During	Under Graduate (N = 25)	147 ± 14.14	7.60	3.51	2.17*

Physical Activity)	Post Graduate (N = 25)	139.40 ± 9.95			
BP-Systolic (Recovery)	Under Graduate (N = 25)	119.28 ± 8.85	-1.20	2.16	0.56
	Post Graduate (N = 25)	120.48 ± 6.19			
BP-diastolic (Resting)	Under Graduate (N = 25)	75.36 ± 7.22	-0.20	1.90	0.11
	Post Graduate (N = 25)	75.56 ± 6.15			
BP-diastolic (During Physical Activity)	Under Graduate (N = 25)	87.96 ± 7.90	3.68	2.45	1.50
	Post Graduate (N = 25)	84.28 ± 9.38			
BP-diastolic (Recovery)	Under Graduate (N = 25)	78.16 ± 6.96	5.96	1.70	3.50*
	Post Graduate (N = 25)	72.20 ± 4.91			

$t_{0.05} (48) = 2.01$

* Significant at 0.05 level

The results (Table 2) revealed that under graduate and post graduate physical education majors were significantly differed in blood pressure systolic (during physical activity) and blood pressure diastolic (recovery) as their calculated values of $t = 2.17$ and 3.50 were greater than the table value of $t = 2.01$. Whereas, they did not show any statistically significant differences in blood pressure systolic (resting), blood pressure systolic (recovery), blood pressure diastolic (resting) and blood pressure diastolic (during physical activity) as the calculated values of $t = 1.78, 0.56, 0.11$ and 1.50 were less than the table value of $t = 2.01$ required to be significant at 0.05 level.

DISCUSSION

From the findings it has been observed that under graduate physical education majors were having higher mean scores of selected physiological variable blood pressure - systolic (resting), blood pressure -systolic & diastolic (during physical activity) and blood pressure -diastolic (Recovery) as compared post graduate physical education majors except blood pressure -diastolic (resting) and blood pressure -systolic (Recovery). Results further revealed that under graduate and post graduate physical education majors were significantly differed in blood pressure systolic (during physical activity) and blood pressure diastolic (recovery). Whereas, they did not show any statistically significant differences in blood pressure systolic (resting), blood pressure systolic (recovery), blood pressure diastolic (resting) and blood pressure diastolic (during physical activity).

CONCLUSIONS

1. Under graduate physical education majors were having higher blood pressure -systolic (during physical activity) than post graduate physical education majors.
2. Under graduate physical education majors were having higher blood pressure -diastolic (recovery) than post graduate physical education majors.

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PHYSICAL PERFORMANCE IN RELATION TO MORPHOLOGICAL ASPECTS AMONG PUNJAB STATE SCHOOL GIRLS

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Abstract

The purpose of this study was to study the physical performance in relation to morphological aspects among Punjab State school girls. For this Ten thousand (N=10,000) girls studying in 6th to 10th classes from Government schools of rural and urban areas of Punjab State were taken as subjects. One rural and one urban school were selected randomly from two Tehsils of each district of Punjab State to get the subjects. The age of the subjects was ranged between 11 to 17 years. The International Physical Performance Test (ICSSPE, 1985) was used to measure physical performance and Heath Carter (1967) method of somatotyping was used for evaluation of morphological aspects of the subjects. Analysis of variance (ANOVA) was computed to find out the cross sectional differences among Punjab State school girls on taken variables, which was followed by Scheffe's Post hoc test and level of confidence was set at 0.05 levels. On the basis of results it was concluded that endomorph, mesomorph, ectomorph and balanced meso-endomorph girls were significantly differed in all the physical performance components namely speed, muscular endurance (upper extremities), abdominal muscular strength endurance, shoulder power, leg power and cardio-respiratory endurance. Results further revealed that balanced meso-ectomorph girls were superior in speed and cardio-respiratory endurance than endomorph, mesomorph and ectomorph girls. Ectomorph girls were superior to other category girls in muscular endurance (upper extremities) and abdominal muscular strength endurance. Whereas, endomorph girls were superior to other category girls in shoulder power and leg power.

INTRODUCTION

Physical fitness has been considered as one of the most important aspects of human existence. A sound body and an active mind are interrelated. This is relationship respectability to physical education. No education is complete without good physical health as it makes a person efficient and fit to work in any area of human activity.

According to Barrow (1989) for becoming fit and maintaining it throughout life, one must become physically educated. Physical fitness is a part of not only education but it is the part of life also. That is why the number of people are participating in physical fitness programmes has been rapidly increasing in recent

years. A number of standardized test batteries to measure physical fitness have been developed numerous individual as well as organisations.

Performance in games and sports depends not only upon psychological, physiological, sociological and physical training of the individual but also on morphological aspects which too affect it considerably. Though the training is equally important yet at higher level competitions, where training is given to all the individuals, suitable physique and body composition are of fundamental importance.

The morphology of sportsmen at various levels of competitions must be studied in order to make an assessment of how close their physique and morphology is with respect to the champions at various levels. This has been recognized in India and studies are cumulating on the physique and morphology of sportsmen taking part in different competitions (Kansal et al., 1980).

Keeping in view the importance and benefits, physical fitness is a topic of great national interest today. This is the time of national awaking to bestow some serious attention to the most pressing problem of hypo kinetic facing mankind. In the field of physical education, physical fitness and improving it, is perhaps the thrust area requiring some serious searching thinking and doing. Thus, the present study was planned to find out the relationship of physical performance among morphological aspect of Punjab State school girls.

METHOD AND PROCEDURE

Ten thousand (N=10,000) girls studying in 6th to 10th classes from Government schools of rural and urban areas of Punjab State were taken as subjects. One rural and one urban school were selected randomly from two Tehsils of each district of Punjab State to get the subjects. The age of the subjects was ranged between 11 to 17 years. The International Physical Performance Test (ICSSPE, 1985) was used to measure physical performance and Heath Carter (1967) method of somatotyping was used for evaluation of morphological aspects of the subjects.

STATISTICAL PROCEDURE: - Analysis of variance (ANOVA) was computed to find out the cross sectional differences among Punjab State school girls on taken variables, which was followed by Scheffe's Post hoc test and level of confidence was set at 0.05 levels.

RESULTS

Descriptive Statistics of physical performance components among morphological aspect of Punjab State school girls have been presented in table – 1. Whereas, Analysis of variance of physical performance components among morphological aspect of Punjab state school girls have been presented in table – 2.

Table - 1

DESCRIPTIVE STATISTICS OF PHYSICAL PERFORMANCE COMPONENTS AMONG MORPHOLOGICAL ASPECT OF PUNJAB STATE SCHOOL GIRLS

Variables	Morphology	Nos	Mean	Standard Deviation	Standard Error
Speed	Endomorph	30	4.9080	.50183	.09162
	Mesomorph	4637	4.7914	.39128	.00575
	Ectomorph	5301	4.7261	.38019	.00522
	Balanced Meso-ectomorph	32	4.7181	.32807	.05799
	Total	10000	4.7569	.38703	.00387
Muscular Endurance (upper extremities)	Endomorph	30	1.23	1.977	.361
	Mesomorph	4637	1.80	2.152	.032
	Ectomorph	5301	2.21	1.993	.027
	Balanced Meso-ectomorph	32	1.78	1.621	.287
	Total	10000	2.01	2.077	.021
Leg Power	Endomorph	30	1.1233	.18092	.03303
	Mesomorph	4637	1.0878	.13343	.00196
	Ectomorph	5301	1.1173	.12990	.00178
	Balanced Meso-ectomorph	32	1.0806	.11706	.02069
	Total	10000	1.1035	.13249	.00132
Cardio-respiratory Endurance	Endomorph	30	837.41	87.106	15.903
	Mesomorph	4637	861.19	81.288	1.194
	Ectomorph	5301	873.95	80.739	1.109
	Balanced Meso-ectomorph	32	887.65	66.725	11.795
	Total	10000	867.97	81.235	.812

From the table—it has been observed that balanced meso-ectomorph girls performed better in speed and cardio-respiratory endurance (4.7181 & 887.65). Ectomorph girls performed better in muscular endurance (upper extremities) and abdominal muscular strength endurance (2.21 & 10.99). Whereas, endomorph girls performed better in shoulder power and leg power (4.0027 & 1.1233).

Table – 2

ANALYSIS OF VARIANCE OF PHYSICAL PERFORMANCE COMPONENTS AMONG MORPHOLOGICAL ASPECT OF PUNJAB STATE SCHOOL GIRLS

Variables	Sources of Variance	Sum of Squares	DF	Mean Square	F
Speed	Between Groups	11.252	3	3.751	25.222*
	Within Groups	1486.485	9996	.149	
	Total	1497.737	9999		
Muscular Endurance (upper extremities)	Between Groups	438.271	3	146.090	34.186*
	Within Groups	42716.430	9996	4.273	
	Total	43154.700	9999		
Abdominal Muscular Strength Endurance	Between Groups	685.484	3	228.495	56.809*
	Within Groups	40205.458	9996	4.022	
	Total	40890.942	9999		
Shoulder Power	Between Groups	16.252	3	5.417	12.125*
	Within Groups	4466.223	9996	.447	
	Total	4482.475	9999		
Leg Power	Between Groups	2.185	3	.728	42.002*
	Within Groups	173.332	9996	.017	
	Total	175.517	9999		

Cardio-respiratory Endurance	Between Groups	442863.283	3	147621.094	22.514*
	Within Groups	6.554E7	9996	6556.733	
	Total	6.598E7	9999		

$F_{0.05}(3, 9996) = 2.60$

Table – 2 revealed that endomorph, mesomorph, ectomorph and balanced meso-endomorph girls were significantly differed in all the physical performance components namely speed, muscular endurance (upper extremities), abdominal muscular strength endurance, shoulder power, leg power and cardio-respiratory endurance as their respective F-values of 25.222, 34.186, 56.809, 12.125, 42.002 and 22.514 were greater than the table value of F (2.60) at 0.05 levels.

As the F-values pertaining to all the physical performance components among morphological aspects were found to be statistically significant, hence, Scheffe’s post hoc test was carried out for multiple comparisons between paired means of physical performance components among morphological aspects of Punjab State school girls, which has been given in table – 3.

Table - 3

SCHEFFE’S POST HOC TEST FOR MULTIPLE COMPARISONS BETWEEN PAIRED MEANS OF PHYSICAL PERFORMANCE COMPONENTS AMONG MORPHOLOGICAL ASPECTS OF PUNJAB STATE SCHOOL GIRLS

Dependent Variables	Morphological Variables	Means		MD	Standard Error
Speed	Endomorph - Mesomorph	4.9080	4.7914	.11664	.07063
	Endomorph – Ectomorph	4.9080	4.7261	.18185	.07060
	Endomorph – Bal. Meso- Ectomorph	4.9080	4.7181	.18987	.09800
	Mesomorph - Ectomorph	4.7914	4.7261	.06521*	.00775
	Mesomorph - Bal. Meso- Ectomorph	4.7914	4.7181	.07324	.06840
	Ectomorph - Bal. Meso- Ectomorph	4.7261	4.7181	.00802	.06838
Muscular	Endomorph - Mesomorph	1.23	1.80	-.562	.379

Endurance (Upper Extremities)	Endomorph – Ectomorph	1.23	2.21	-.973	.378
	Endomorph - Bal. Meso- Ectomorph	1.23	1.78	-.548	.525
	Mesomorph - Ectomorph	1.80	2.21	-.411*	.042
	Mesomorph - Bal. Meso- Ectomorph	1.80	1.78	.014	.367
	Ectomorph - Bal. Meso- Ectomorph	2.21	1.78	.425	.367
Abdominal Muscular Strength Endurance	Endomorph - Mesomorph	9.37	10.48	-1.116*	.367
	Endomorph – Ectomorph	9.37	10.99	-1.620*	.367
	Endomorph - Bal. Meso- Ectomorph	9.37	10.72	-1.352	.510
	Mesomorph - Ectomorph	10.48	10.99	-.504*	.040
	Mesomorph - Bal. Meso- Ectomorph	10.48	10.72	-.236	.356
	Ectomorph - Bal. Meso- Ectomorph	10.99	10.72	.268	.356
Shoulder Power	Endomorph - Mesomorph	4.0027	3.3293	.67336*	.12243
	Endomorph – Ectomorph	4.0027	3.3018	.70088*	.12238
	Endomorph - Bal. Meso- Ectomorph	4.0027	3.2338	.76892*	.16987
	Mesomorph - Ectomorph	3.3293	3.3018	.02752	.01344
	Mesomorph - Bal. Meso- Ectomorph	3.3293	3.2338	.09556	.11857
	Ectomorph - Bal. Meso- Ectomorph	3.3018	3.2338	.06804	.11852
Leg Power	Endomorph - Mesomorph	1.1233	1.0878	.03555	.02412
	Endomorph – Ectomorph	1.1233	1.1173	.00602	.02411
	Endomorph - Bal. Meso- Ectomorph	1.1233	1.0806	.04271	.03346

	Mesomorph - Ectomorph	1.0878	1.1173	-.02953*	.00265
	Mesomorph - Bal. Meso-Ectomorph	1.0878	1.0806	.00716	.02336
	Ectomorph - Bal. Meso-Ectomorph	1.1173	1.0806	.03668	.02335
Cardio-respiratory Endurance	Endomorph - Mesomorph	837.41	861.19	-23.785	14.831
	Endomorph - Ectomorph	837.41	873.95	-36.540	14.825
	Endomorph - Bal. Meso-Ectomorph	837.41	887.65	-50.243	20.578
	Mesomorph - Ectomorph	861.19	873.95	-12.756*	1.628
	Mesomorph - Bal. Meso-Ectomorph	861.19	887.65	-26.459	14.364
	Ectomorph - Bal. Meso-Ectomorph	873.95	887.65	-13.703	14.357

* Significant at the 0.05 levels.

It may be observed from table – 3 that balanced meso-ectomorph girls were superior in speed and cardio-respiratory endurance than endomorph, mesomorph and ectomorph girls. Ectomorph girls were superior to other category girls in muscular endurance (upper extremities) and abdominal muscular strength endurance. Whereas, endomorph girls were superior to other category girls in shoulder power and leg power.

DISCUSSION

From the findings it has been observed that balanced meso-ectomorph girls performed better in speed and cardio-respiratory endurance. Ectomorph girls performed better in muscular endurance (upper extremities) and abdominal muscular strength endurance. Whereas, endomorph girls performed better in shoulder power and leg power. Results showed that endomorph, mesomorph, ectomorph and balanced meso-endomorph girls were significantly differed in all the physical performance components namely speed, muscular endurance (upper extremities), abdominal muscular strength endurance, shoulder power, leg power and cardio-respiratory endurance. Results further revealed that balanced meso-ectomorph girls were superior in speed and cardio-respiratory endurance than endomorph, mesomorph and ectomorph girls. Ectomorph girls were

superior to other category girls in muscular endurance (upper extremities) and abdominal muscular strength endurance. Whereas, endomorph girls were superior to other category girls in shoulder power and leg power.

CONCLUSIONS

1. Balanced meso-ectomorph girls were superior in speed and cardio- respiratory endurance than other category girls.
2. Ectomorph girls were superior in muscular endurance (upper extremities) and abdominal muscular strength endurance than other category girls.
3. Endomorph girls were superior in shoulder power and leg power than other category girls.

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REVERSING THE ISCHEMIC HEART DISEASE THROUGH YOGIC LESSENING

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Introduction

Ischemic Heart disease is a disease of the heart itself, characterized by reduced blood supply to the heart. Because blood is not able to reach the cells of the heart, the cells do not receive the required amount of oxygen for cellular reactions. This causes cells to die, and it leads to heart disease. It is not a single disease, but a syndrome with multiple causes. In most of the cases the causes remain silent. According to a report by American College of Cardiology in 2008 it is estimated that 14 million people in the United States have ischemic heart disease. Of these, as many as 4 million have few or no symptoms and are unaware that they are at risk for angina (angina pectoris), heart attack (myocardial infarction), or sudden death.

The most common cause of ischemic heart disease is the buildup of plaque in the arteries, called atherosclerosis. The buildup restricts normal blood flow and reduces the amount of oxygen to the heart cells. It is of course due to the excessive tension and less relaxation. It is to be understood that ordinary sleep is not relaxation, for tensions cannot always be resolved completely in ordinary sleep. Yogic relaxation commonly known as Yoga Nidra is qualitatively different relaxation. It is a 'sleep' where all the burdens are thrown off to attain more blissful state of awareness, a relaxation much more intense than ordinary sleep. However Yoga nidra can be consider as a highly effective practice for reducing the cardiac work load of the aspirant.

Yoga Nidra is one such wonderful technique, not only for physical or mental relaxation but also for preparing the mind for yogic discipline. It concerns mainly with Pratyahara (the fifth state of Astanga Yoga) and Dharana (concentration). On the basis of the present study as Yoga nidra reduces the pulse rate respiration rate blood pressure and also releases the stress of the people, it can be concluded that Yoga nidra is an effective tool for reversing the Heart diseases.

The most interesting and challenging topics of research in the recent times have been focusing on the mysteries of human body. Apart from the scientists and researchers of the modern age, the ancient sages and seers had delved even deeper into the marvels and intricate workings of the inner realms of the living human organism. However, for a healthy functioning of all the tissues and organs as well as for a healthy mind Indian Yogis have given few wonderful techniques. Yogic relaxation technique Yoga Nidra is one of them.

Yoga nidra as a state of mind between wakefulness and dream. When someone practices yoga nidra he opens the deeper phases of the mind. During the practice of yoga nidra the consciousness is at different levels. Sometimes it is very close to the senses and at others, it is at a very remote distance. When the consciousness is at a remote distances, then it is only possible to understand through the auditory channels. During yoga nidra the consciousness is suspended for a few moments periodically, which means that it alternates between the subconscious and unconscious states.

Sw. Satyananda Saraswati (1975) explains Yoga nidra as a state of mind between wakefulness and dream. When someone practices Yoga nidra he opens the deeper phases of the mind. During the practice of Yoga nidra the consciousness is at different levels. Sometimes it is very close to the senses and at others, it is at a very remote distance.

Erskine-Milliss, J. & Schonell, M., (1981) states that, the future role of Yoga nidra in coronary care and management regimes appears to be a major one. The value of the practice of yogic relaxation in prevention of cardiovascular disease has been fairly well recognized and accepted.

Various studies have been done in different part of world for observing the effect of Yoga nidra. MJ. Cooper, (1979): in an important study at the University of Tel Aviv (Israel) says that Yoga nidra significantly lowered levels of serum cholesterol in cardiac patients.

In the other study conducted at the Stanford University school of Medicine (U.S.A.) W.S. Agras (PsychiatJ.): demonstrates that the drop in blood pressure induced by daily Yoga nidra practice has a far reaching effect, extending throughout the day, and is not merely a transient effect coincident with the practice session.

Another controlled study, which was conducted at the Langley Porter Neuropsychiatry institute in California, Lekh Raj Bali (1979): found that a reduction in blood pressure and anxiety levels in hypertensive patients continues for 12 months after Yoga nidra training.

Sannyasi Mangalteertham (1998) concluded on the basis of his study that the practice of yoga nidra brings alpha dominance in the brain, which is characterized by mental relaxation.

Pandya, Dr. Pranav and Kumar, Kamakhya (2007) states that practice of Yoga nidra is a tool of total relaxation. They observed a significant change in pulse rate, respiration rate, blood pressure and G S R to the subjects, after a six months study. They further states that Yoga nidra is able to improve the immunity of the practitioner.

Kumar, Kamakhya (2008) observed a significant change in the stress level in his study. Result shows that Yoga nidra positively decrease the stress level of the male and female subjects both. Several other studies prove that, Yoga nidra equally influences anxiety level significantly.

Kumar, Kamakhya & Joshi Bhanu (2009) observed a significant change in the Alpha EEG and GSR level in his study. Result shows that Yoga nidra and Pranakarshan Pranayama positively increase the Alpha EEG and GSR level of the practitioner.

The brain is the linking mediator between the mind, body and emotions. In yoga nidra intensifying the awareness of the body stimulates the brain. When the awareness is rotated on the different body parts, it not only induces physical relaxation but also clears the nerve pathways to the brain. Each of the body parts has an existing centre in the cerebral white matter, named by researchers as 'motor homunculus' or 'little man'. The sequence of rotation of awareness in yoga nidra is in accordance with the map in the cerebral white matter of the brain. When the awareness is rotated in the same sequence again and again, it induces a flow of pranic energy within the neuronal circuit of the motor homunculus of the brain. This pranic flow brings in a subjective experience of relaxation in the brain.

In one of the stages of yoga nidra a pair of opposite feelings or sensations is intensified again and again in the practitioner. This continuous invocation of opposite feelings or sensations is in accordance with the electrophysiological operating principles of the brain. When a neuron fires, it produces a nerve impulse which is relayed and registered in the brain. But if the same neuron keeps on firing again and again, then its relayed impulse is no longer registered by the brain. Researchers have called this 'phenomenon habituation'.

When the brain becomes accustomed to the stimulus, then gradually it becomes relaxed. The state where the brain is completely relaxed results in mental relaxation. Sannyasi Mangalteertham (1998) concluded on the basis of his study that the practice of yoga nidra brings alpha dominance in the brain, which is characterized by mental relaxation.

Through the body mind relationship, relaxation of body relaxes the entire nervous system. Through the relaxation of central nervous system in Yoga Nidra relaxation in autonomic nervous system takes place, as it reduces the whole physical and mental activities. Reduction in the muscular and neural activities slows down the metabolic rate of the body. During the practice of Yoga Nidra due to the relaxed body and mind muscles become relaxed, arteries of the body become dilated as vasodilation occurs. Hence the cardiac output as well as cardiac work load reduces; the systolic and diastolic blood pressure with pulse rate becomes down which has been seen during the studies cited above. Due to the practice of Yoga Nidra relaxed body requires less

oxygen as per less metabolic activities. Need of the oxygen in the body becomes less; due to that reduction in the respiration rate can be observed.

Yoga nidra has preventive, promotive and curative value. It prevents stress and stress-related disorders by inducing deep physical, emotional and mental relaxation, by training the mind to remain calm and quiet and by rooting out the repressed desires and thoughts from the deeper realms of the mind. As a promotive science, yoga nidra awakens the inherent creativity and promotes the learning and memory abilities of the practitioner. Researches indicate that Yogic Relaxation can be used as a therapeutic technique to cure psychosomatic illnesses. The overall

effect of the Yogic relaxation is prevention as well as management of Ischemic Heart disease. In our present modern lifestyle, where psychological and psychosomatic problems are on the rise, the technique of Yogic relaxation may serve as a real boon for mankind.

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COMPARISON OF BLOOD PRESSURE (RESTING, PHYSICAL ACTIVITY & RECOVERY) OF PHYSICAL EDUCATION MAJORS

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Abstract

The purpose of this study was to compare blood pressure (resting, physical activity & recovery) of physical education majors. For this Fifty (N=50) male student, who were majoring in the physical education profession or joined physical education as profession for the session 2014-15 at undergraduate and postgraduate level were selected as subjects by using random sampling technique. The sample was selected from Shaheed Kanshi Ram College of Physical Education Bhagoo Majra (Kharar), Mohali, Punjab. Twenty five subjects were from undergraduate classes and twenty five subjects were from postgraduate classes.

Analysis of data was carried out by applying t-test. On the basis of results it was concluded under graduate physical education majors were having higher mean scores of selected physiological variable blood pressure -systolic (resting), blood pressure – systolic & diastolic (during physical activity) and blood pressure -diastolic (Recovery) (119.64, 147, 87.96 & 78.16) as compared post graduate physical education majors except blood pressure –diastolic (resting) and blood pressure –systolic (Recovery) (75.56 and 120.48). Under graduate and post graduate physical education majors were significantly differed in blood pressure systolic (during physical activity) and blood pressure diastolic (recovery) as their calculated values of $t = 2.17$ and 3.50 were greater than the table value of $t = 2.01$. Whereas, they did not show any statistically significant differences in blood pressure systolic (resting), blood pressure systolic (recovery), blood pressure diastolic (resting) and blood pressure diastolic (during physical activity) as the calculated values of $t = 1.78, 0.56, 0.11$ and 1.50 were less than the table value of $t = 2.01$ required to be significant at 0.05 level.

INTRODUCTION

Physical activities and games, though very crude, were in vogue in ancient times for the development of man. In those days, the emphasis was on increasing physical strength and life span, survival, ascendancy over the rival and exhibiting superiority in the Gladiatorial sports, i.e. demonstration of naked brutal force. With the passage of time, the concept of physical activity and games has undergone a tremendous change to meet the scientific needs of human endeavour. The modern age has influenced by the development of science and its application to make the human life more and more comfortable with the danger of deterioration in his physical abilities. Realising this

fact, the man has taken up the challenge to use the scientific development for his fitness and well being also. The development of physical education curriculum is so inclusive that it includes many of the scientific disciplines (dealing with the human activities and performance) such as Anatomy, Physiology, Kinesiology and Psychology.

Physiological variables may be defined as those variables which are directly linked with various physiological systems such as pulse rate, blood pressure, vital capacity, fat percentage, respiratory rate and haemoglobin.

Among all the factors, physiological variables play an important role for the attainment of high level performance. Physiological variables may be defined as those variables which are directly linked with various physiological systems such as heart rate, blood pressure, vital capacity, respiratory rate and haemoglobin. Physiological variables such as cardiovascular efficiency, percentage of fat, reaction time, vital capacity and other should be taken into consideration while selecting volleyball players. Cardio respiratory endurance denoted capacity of individual to work effectively with the help of oxygen which is collected, transported and utilized by lungs, blood and muscle respiratory. Any work is daily task or form of physical activity is directly related to energy supplying system which in turn is the cardio-respiratory endurance varies from individual to individual and one of the important variables for establishing top class performance in volleyball as the game involves work of long duration endurance type.

For the physiological system of the body, to be fit, the system must function well enough to support the specific activities that individual is performing. Moreover, different activities make different demands upon the organism with the respect of circulatory, respiratory, metabolic, neurological and temperature regulating functions. Physiological fitness is specific to activity. Physiological systems are highly adaptable to exercise. Each task requires different functioning of the appropriate systems.

The physical education profession is an activity oriented profession. It has theoretical and practical parts. To attain professional competence or to score high in activities of physical education, one has to excel to perform well. But physical performance is based on many factors such as physiology, sociology, anthropometry, psychology etc. In physical performance, if two dominant factors are in favour and one essential factor is missing or viceversa, one cannot excel well or give optimum performance even.

The rationale of this study is to fill the existing gap in research that is important from the point of view of growth and development of professional physical education programmes. Therefore, the present study was designed to compare blood pressure (resting, physical activity & recovery) of physical education majors

METHOD AND PROCEDURE

Fifty (N=50) male student, who were majoring in the physical education profession or joined physical education as profession for the session 2014-15 at undergraduate and postgraduate level were selected as subjects by using random sampling technique. The sample was selected from Shaheed Kanshi Ram College of Physical Education Bhagoo Majra (Kharar), Mohali, Punjab. Twenty five subjects were from undergraduate classes and twenty five subjects were from postgraduate classes.

STATISTICAL PROCEDURE: - The obtained data were statistical analyzed to compare the blood pressure (resting, physical activity & recovery) of under graduate and post graduate male physical education majors by applying 't' test.

RESULTS

Descriptive statistics of blood pressure (resting, physical activity & recovery) of under graduate and post graduate physical education majors have been given in table no.1.

Table no. 1

DESCRIPTIVE STATISTICS OF BLOOD PRESSURE (RESTING, PHYSICAL ACTIVITY & RECOVERY) OF UNDER GRADUATE AND POST GRADUATE MAJORS

Variables	Groups	N	Mean	Standard Deviation	Standard Error
BP-Systolic (Resting)	Under Graduate	25	119.64	8.24	1.65
	Post Graduate	25	116.08	5.63	1.13
BP-diastolic (Resting)	Under Graduate	25	75.36	7.22	1.44
	Post Graduate	25	75.56	6.15	1.23
BP-Systolic (During Physical Activity)	Under Graduate	25	147	14.44	2.89
	Post Graduate	25	139.40	9.95	1.99
BP-Diastolic (During	Under Graduate	25	87.96	7.90	1.58

Physical Activity)	Post Graduate	25	84.28	9.38	1.88
	Under Graduate	25	119.28	8.85	1.77
BP-Systolic (Recovery)	Post Graduate	25	120.48	6.19	1.24
	Under Graduate	25	78.16	6.96	1.39
BP-Diastolic (Recovery)	Post Graduate	25	72.20	4.91	0.98
	Under Graduate	25	78.16	6.96	1.39

The results (Table no.1) revealed that under graduate physical education majors were having higher mean scores of selected physiological variable blood pressure -systolic (resting), blood pressure –systolic & diastolic (during physical activity) and blood pressure -diastolic (Recovery) (119.64, 147, 87.96 & 78.16) as compared post graduate physical education majors except blood pressure –diastolic (resting) and blood pressure –systolic (Recovery) (75.56 and 120.48).

Significance of mean differences of blood pressure (resting, physical activity & recovery) of under graduate and post graduate physical education majors have been given in table no. 2.

Table no. 2

**SIGNIFICANCE OF MEAN DIFFERENCES IN BLOOD PRESSURE
SYSTOLIC AND DIASTOLIC (RESTING, DURING PHYSICAL ACTIVITY &
RECOVERY) BETWEEN UNDER GRADUATE AND POST GRADUATE
PHYSICAL EDUCATION MAJORS**

Variable	Groups	Mean \pm SD	MD	SED	t value
BP-Systolic (Resting)	Under Graduate (N = 25)	119.64 \pm 8.24	3.56	2.00	1.78
	Post Graduate (N = 25)	116.08 \pm 5.63			
	Under Graduate	147 \pm 14.14			

BP-Systolic (During Physical Activity)	(N = 25)		7.60	3.51	2.17*
	Post Graduate (N = 25)	139.40 ± 9.95			
BP-Systolic (Recovery)	Under Graduate (N = 25)	119.28 ± 8.85	-1.20	2.16	0.56
	Post Graduate (N = 25)	120.48 ± 6.19			
BP-diastolic (Resting)	Under Graduate (N = 25)	75.36 ± 7.22	-0.20	1.90	0.11
	Post Graduate (N = 25)	75.56 ± 6.15			
BP-diastolic (During Physical Activity)	Under Graduate (N = 25)	87.96 ± 7.90	3.68	2.45	1.50
	Post Graduate (N = 25)	84.28 ± 9.38			
BP-diastolic (Recovery)	Under Graduate (N = 25)	78.16 ± 6.96	5.96	1.70	3.50*
	Post Graduate (N = 25)	72.20 ± 4.91			

t 0.05 (48) = 2.01

* Significant at 0.05 level

The results (Table no.2) revealed that under graduate and post graduate physical education majors were significantly differed in blood pressure systolic (during physical activity) and blood pressure diastolic (recovery) as their calculated values of t = 2.17 and 3.50 were greater than the table value of t = 2.01. Whereas, they did not show any statistically significant differences in blood pressure systolic (resting), blood pressure systolic (recovery), blood pressure diastolic (resting) and blood pressure

diastolic (during physical activity) as the calculated values of $t = 1.78, 0.56, 0.11$ and 1.50 were less than the table value of $t = 2.01$ required to be significant at 0.05 level.

DISCUSSION

From the findings it has been observed that under graduate physical education majors were having higher mean scores of selected physiological variable blood pressure - systolic (resting), blood pressure -systolic & diastolic (during physical activity) and blood pressure -diastolic (Recovery) as compared post graduate physical education majors except blood pressure -diastolic (resting) and blood pressure -systolic (Recovery). Results further revealed that under graduate and post graduate physical education majors were significantly differed in blood pressure systolic (during physical activity) and blood pressure diastolic (recovery). Whereas, they did not show any statistically significant differences in blood pressure systolic (resting), blood pressure systolic (recovery), blood pressure diastolic (resting) and blood pressure diastolic (during physical activity).

CONCLUSIONS

1. Under graduate physical education majors were having higher blood pressure - systolic (during physical activity) than post graduate physical education majors.
2. Under graduate physical education majors were having higher blood pressure - diastolic (recovery) than post graduate physical education majors.

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YOGA AND HEALTHY LIFE STYLE

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Introduction:

Yoga is not only the physical postures, breathing exercises or concentrating for few minutes, what we understand normally, it is a comprehensive and precisely live tuned process of uniting the individual consciousness with the omnipresent cosmic consciousness. Understanding the spiritual nature and philosophy of yoga is certainly more important than its gross applications.

Yoga can be understood by the words given in Bhagvadgeeta as: YogahKarmashuKaushalam, i.e. perfection inaction is Yoga.

One who is endowed with the 'samatvabuddhi, sameness of mind, gives up both punya and . paapa here, in this world. Therefore commit yourself to karma-yoga. Yoga is discrimination in action. With reference to the results of your actions, there is sameness samatva, in. your

response. With reference to action itself, because there is a choice involved, a karma yogi always chooses to follow the rules of dharma, basic ethics and morality.

Yoga is a lifestyle which regulates ones Thoughtpattern, Character, and Behavior and it reflects into our attitude, personality and Designs. It is a total science of strengthening and improving the physical, mental, and spiritual state of being.

if we define Health, it is also not only the absence of disease or infirmity it's a state of complete Physical, Mental Spiritual and Social well-being. Health is very nicely defined in ancient AyurvedictextSusrut Samhita in fifteenth chapter verses 41 as:-

SamdoshaSamagnischaSamdhdtumalakriyah /
PrassandmdendriyamanahSwasthalyabhidhiyate// '

Meaning Only that person is healthy, whose doshasdhatumal and agni (the basic elements and

functional energy streams as per one's natural constitution) are balanced and free from all defects and disorders and whose mind and soul are in perfect harmony.

True health is a state of wholeness where all organ systems of the body function at optimum levels 100% of the time. Health is not simply the absence of Sickness. What is the true definition of Healthy Living? It sounds silly that we need to define Healthy Living. After all, we know what Healthy is and we also know what Living is.

According to the World Health Organization (WHO), Health is a state of complete physical, mental, and social well-being. Interestingly enough, health is not simply defined as just the absence of disease. The actual definition of Healthy Living is the steps, actions and strategies one 'puts in place to achieve optimum health. Healthy Living is about taking responsibility and making smart health choices for today and for the future. Eating right, getting physically fit, emotional wellness, spiritual wellness and prevention are all apart of creating a healthy lifestyle. Since the entire YOU, meaning all aspects of one '5 self, must work' In harmony to achieve wellness, you need to put balanced energy into each aspect of yourself

The body_ or Physical You requires good nutrition, appropriate weight, beneficial exercise, adequate rest and proper stress management. The mind or Emotional You needs self-supportive attitudes, positive thoughts and viewpoints and a positive self-image. You also need to give and receive forgiveness, love and compassion; you need to laugh and experience happiness; you need joyful relationships with yourself and others. The Spiritual You requires inner calmness, openness to your creativity, and trust in your inner knowing. And for some it requires having a relationship with a higher power.

We all know when the Physical You is out of balance. Our body tells us right away. We feel fatigue or catch a cold or maybe become chronically ill. But how do we know when the Emotional You or Spiritual You are out of balance?

Sit down and outline your definition of Healthy Living. List all your negative habits, the ones that contribute to your unhealthy lifestyle (i.e. smoking, excessive alcohol consumption). You may even want to consider your sexual habits and ask yourself if you are practicing unsafe sex. Then take the time to list your current health conditions. Taking the Wellness Quiz will help identify other significant areas that you need to include while outlining your definition of Healthy Living. Once you have all your information written down it's time to create your Healthy Living Plan. Below is an outline adapted from the American Holistic Health Association. You may find this helpful in listing your goals.

Add as many goals as you need to this outline. Once you have completed your definition of Healthy Living and have turned that into a concrete plan, it's time to prioritize. Pick a few of the goals that you feel are most important to your overall health and happiness and start with those. Don't try to do them all at once that's a sure fire way to fail! Start with 2-3 for a month and then add one per month until you have achieved all your goals. Achieving total health requires taking 'responsibility, making a commitment to yourself, creating a plan and then taking action. If you can follow these simple steps you will be on your way to living a healthier life.

Forty Yogic Tips for Healthy living

- Bring all the Positivity in and let all the Negativity out
- Live with the 3 E's-Energy, Enthusiasm and Empathy

Make time to pray.

Play more games Read more books than you did in last years

Sit in silence for at least 10 minutes each day

'Sleep for 7 hours.

Drink plenty of water. .

' ' Eat breakfast like a king. lunch like a prince and dinner like a beggar.

Eat more foods that grow on trees and-plants and eat less food. that is manufactured in plants ' '

Take a 10-30 minutes walk daily. 'And while you walk, smile. Don't compare your life to others. You have no idea what their journey is all about.

Don't have negative thoughts or things you cannot control. Instead invest your energy in the positive present moment.

Don't over do. Keep your limits.

Don't take yourself so seriously. No one else does. Don't waste your precious energy on gossip. Dream more while you are awake

Envy is a waste of time. You already have all you need.

Forget issues of the past. Don't remind your partner with His/her mistakes of the past. That will ruin your present happiness. '

Life is too short to waste time hating anyone. Don't hate others. '

Make peace with your past so it won't spoil the present. No one is in charge of your happiness except you.

Smile and laugh more.

You don't have to win every argument. Agree to disagree...

Call your family often. '

Each day give something good to others. Forgive everyone for everything.

Spend time w/ people over the age of 70 & under the age of 6.

Try to make at least three people smile each day. o What other people think of you is none of your business.

- Your job won't take care of you when you are sick. Your friends will. Stay in touch
- Do the right thing!
- Get rid of anything that isn't useful, beautiful or joyful.
- GOD heals everything.
- However good or bad a situation is, it will change.
- No matter how you feel, get up, dress up and show up.
- The best is yet to come..
- When you awake alive in the morning, thank GOD for it.
- Your innermost is always happy. So, be happy.

Health is a natural facet of liveliness both by definition and realization. The ancient Indians had attributed the secret of "jivemshardahshatam" hundred years of vigorous, healthy, happy and creative life to the total harmony of the mode of living with the Nature and the spiritual inheritance of life. The yoga aims for healthy tuning of all the three bodies (physical, subtle and causal) of a person.

One of the key themes weaving through the Gita is the relationship between the path of action in the world, karma-yoga, and the path of sannyasa, the renunciation of the world to pursue self-knowledge. Karma is any action performed and also the results of those actions and in this verse, Krishna presents the definition of Yoga:

yogasthah kurukarmaanisangamtyaktvaadhananjaya/

siddhyasiddhyohsamobhutaasamatvam yoga ucyate//

Remaining steadfast in yoga, oh Dhananjaya (Arjuna), perform actions, abandoning attachment, remaining the same to success and failure alike. This evenness of mind is called yoga.

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YOGA IS AN ANCIENT LIFE STYLE SUITABLE FOR MODERN MAN

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Introduction:

The word Yoga has firmly entrenched itself in the global vocabulary. From Pretoria to Moscow, from Beijing to Rio de Janerio, mention the word 'Yoga' and people's eyes light up with recognition and a dim awareness that Yoga is indeed something of great value.

But what is the value of Yoga? And what values have become associated with this ancient Sanskrit word? The majority believe Yoga is valuable because it cures or prevents disease, making it a superb keep fit exercise. Others will only value its effectiveness in weight reduction. Some, a few, will concede that Yoga practice bestows peace of mind and a feeling of well being, even of increased energy levels. Of course no one will deny that Yoga does indeed produce all these good things. But! This is not and never has been the goal of Yoga. All these results are merely side benefits. The real purpose of Yoga was, is and shall always be Moksha, liberation, the achievement of the Highest Goal of Human Life, oneness with the Universal Self.

Yoga is a methodology that has developed over millennia of experimentation by the great Rishis of India aimed at achieving the ultimate perfection of the human spirit. Yoga transforms the lower animal nature to a human one, and the human nature to a God-like Being, radiating Sat (Reality) Chit (Consciousness) and Anandam (Bliss).

Yoga is not a magic pill. It is not a technique, a trick, a convenient button which can be pressed to accomplish a mundane goal. Yoga is a Way of Life, Yoga is the lifestyle of the Rishis of India who "Saw Reality" and who were compassionate enough to return to lower levels of consciousness to show a path to these less developed themselves, enabling them to achieve the same pinnacle of unfoldment of spirit.

Yoga is a holistic way of life that encompasses all aspects of human existence: physical, mental, moral, ethical, emotional, material and spiritual. Yoga shows us how the human incarnation may be lived according to Dharma, the Cosmic Law.

Yoga is the Science of Right-Use-Ness: a methodology for using body, mind and emotions in the right manner. This involves a whole way of moving, non-moving, thinking, non-thinking, feeling, emoting, speaking, eating, working, sleeping, contemplating and even breathing. Yoga teaches us the correct manner to use all these aspects of our human life.

Yoga is a lifestyle which evolved in the hermitages of the Rishis of Bharat. Yet, it is pertinent even today. It is a lifestyle rooted in restraint of the animal impulses (Yama) and cultivation of humane virtues (Niyama). It is discipline of body (Asana) and control of breath / Prana movement (Pranayama). Yoga advocates conscious use (not misuse) of the sensory organs both the Jnanendriyas as well as the Karmendriyas (Pratyahara). It teaches the correct use of mind in a non-personal, objective, positive, directed manner (Dharana). All these aspects of controlled living are woven into a natural, non-harmful, non-acquisitive, sensitive, simple, regulated life style which is guided by the high ideas of Dharma and Moksha.

Yoga, that most popular modern word, is a sound like an atomic bomb, which when penetrated deeply releases energy powerful enough to lift all its practitioners into higher realms of consciousness, propelling the Jiva far, far beyond the puny personality into the grand vision and life style of a true Universality.

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YOGIC MANAGEMENT OF LIFESTYLE RELATED DISORDERS

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Introduction

Various lifestyles related psycho-somatic disorders or disturbances can be understood as "stress related disorders". There are no specific drugs or medicines. Most of the treatment procedures are symptomatic. Importance is given to lifestyle modifications in relation to diet, exercise, rest and relaxation, recreation and change in attitudes and values in life. Traditional yoga literature has classified various parameters which decide and influence our lifestyle and lifestyle related disorders under the following heads:

- a) Different kinds of inputs reaching the consciousness (ahara).
- b) Lack of inputs helping the consciousness (individual) to rest and recuperate (nidra). 0 Different kinds of fears, phobias and complexes (bhaya).
- c) Indulgences to fulfill and satisfy sexual needs, urges and desires (maithuna).

Developing "discriminative intelligence" (vivekabuddhi) is strongly advocated to modify our actions and behaviors to overcome sufferings.

Different overt or covert efforts made by us right from the birth till death has been classified in the following way:

- d) Struggle for existence and survival (dharma).
- e) Looking after material security, stability and well being (artha).
- f) Efforts to satisfy various aspirations, interests and desires (kama).
- g) An urge to get freedom and emancipation from bondages in due course of time (moksha).

Effort to maintain good health (swasthya), stabilized mind (sthirabuddhi), right type of wakefulness (samadhi) and wisdom (rtambharaprajna) has been recognized as important contributing factors to achieve various goals of life and to fulfill different aspirations and ambitions without lot of suffering.

Human sufferings have been divided into two main headings:

"Agantukavyadhi" i.e. due to extraneous factors and parameters, and

. "Nijavyadhi" i.e. psycho-somatic conditions or sufferings due to the factors related with the self.

Yoga is supposed to be the best type of medicine (paramashadhi) for nijavyadhis which could be equated with lifestyle related disorders for our purpose.

Patanjala Yoga Sutras help us to understand the subject of "an0 vyadhis" in the following way:

There are inborn "kleshas" i.e. irritating factors.

'Kleshas give rise to "antarayas", "vikshepas" and "vikshepasahabhuvas" i.e. impediments which keep on distracting the individual (mind) from reaching the desired goal.

Patanjali has advocated "cittavrttinirodha" through "abhyasa" and "vairagya" to tackle these disorders and/or disturbances. He has mentioned the stages of "samprajnata", "anyah" or "asamprajnantasamadhi", "samqua", "vibhuti" and different types of "samapattis" till one can get to "rtambharaprajna" and "kaivalya" while travelling on the path of yoga understood as "citta-vrttinirodha" through "citta-prasadana" and "ishvara-pranidhana".

Patanjala yoga sutras also refer to the use of medicines and mantras to tackle psycho-somatic disturbances.

Vedic savants have stressed the importance of developing awareness of the five sheaths (pancakoshas) of the individualized consciousness (Individual or self or "atma"). As "individuals" we continue working in the external world of objects, events, happenings and phenomena (Nature or Environment) as "jivatma" (through sensory-motor activities i.e. "indriyas" and 'indriyavrttf') and get disturbed (vyutthita) from time-to-time. Thus the need to work with these five sheaths or bodies with the motivation and intention to purify "self-awareness" (atmo-shuddhi) is emphasized. This purification of "self awareness" is expected to take the individual to the firsthand knowledge (rtajnana) and understanding of the "universal nature of the self" (Visvatmaka or paramatma) by transcending the awareness of the limited self (atma).

Hathayoga talks of the importance and the need of uniting and balancing the solar and the lunar aspects of the individual through "vayusadhana" and "pranayama" related with the v'ta activity of breath and breathing. importance is given to open blocked nadis using different asanas and cleansing process for the effective practice of "nadi-shuddhi pranayama", "kumbhaka pranayama" and "Ioma-viloma pranayama". Help of "mudras", "ndhas", "nadanusandhana" and suitable external environment including place, to . soc'goa'tc. is taken to reach transcendental states of consciousness.

Tantrik tradition recognizes the importance of developing the experiential knowledge of the working of the life energy (kundalinishakti) from "muladharacakra" to "ajnacakm" inside the body and to help it to transcend its psycho-physical functioning in order to become aware of its meeting and merging with "shiva" in the area of the crown (sahasraracakra). Tantra has rightly recognized and accepted the role of the sexual aspect of human life in disturbing and maintaining psycho-physical balance in the individual. This can be tackled individually and/or in couple related behaviors. It has emphasized the need to work with different lotuses and cakras related with pranayama, mantras and meditation (dhyana) involving breath and breathing.

Important Guiding Principles of Practical Nature to Work with Oneself:

Getting connected with different sheaths or bodies with a view to recognize and deal with impurities:

- Annamaya kosha (experiencing physical body as structural basis of our existence),
- Pranamaya kosha (experiencing and working with breath and breathing as vital function),
- Manomaya kosha (developing awareness of feelings and emotions), o Vijnanamaya kosha (developing awareness of one's thoughts and thinking process),
- Anandamaya kosha (developing awareness of the state of consciousness in different situations): ‘
- To work with lotuses:
- To work with the channels of vayus and prana: o To work with nadishuddhi pranayama:
- To work with kumbhaka pranayama:
- To work with Ioma-viloma pranayama:
- To learn and get educated to work understand, realize and to modify relationships; the nature ofvarious
- In family situation, o In work situation,
- In social life, o In relation to hobbies and recreational activities
- To understand the influence of Nature (climate, seasons, food etc) on one's consciousness:

- To work with cakras:
- To work with cittavrttis:

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TECHNOSTRESS AND YOGA

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Stress related to work where human computer interaction occurs has physiological, biochemical, somatic and psychological manifestations (Smith, Conway and Karsh, 1999). This has come to be known as 'technostress'. When twenty companies in Bangalore, India were contacted to understand the degree to which the human resource personnel were aware of technostress and associated health risks, the results were surprising and encouraging (Bawa, 1996). Seventeen out of twenty HR managers were aware of the health risks. They listed the most likely complaints as (i) visual strain, (ii) back pain, and (iii) other musculoskeletal pains. Interestingly only two (out of twenty) mentioned psychological strain as a possible health hazard. Among the seventeen HR managers who were aware of risks, ten of them had introduced lifestyle modification strategies such as indoor and outdoor games, health checkups, health advice, recreational activities, and (interesting for the present article), yoga including meditation.

The health problems identified by the HR managers are indeed important components of technostress. Eye problems are the single most common complaint (Collins, Brown and Bowman, 1998). The main visual symptoms being eye strain, irritation, tired eyes, burning sensation in the eyes, redness, blurred vision, and double vision (Cole, Maddocks and Sharpe, 1996). An attempt was made to assess whether yoga practice could reduce the subjectively rated discomfort with 'dry eye' or computer vision syndrome.

Two hundred and ninety one persons working in a software company (Bangalore, India), who used a computer for at least six hours a day, for 5 days in a week participated in the trial. Their ages ranged between 21 and 29 years. The participants were randomized prior to assessment into two groups, a yoga group (n = 146) and a wait list control group (n = 145). Both groups were comparable with respect to their ages and computer usage.

Both groups were assessed at baseline and after sixty days. The assessments examined (i) self rated symptoms of computer vision syndrome, (ii) motor functions & musculoskeletal discomfort, and (iii) somatization of mental stress.

The sixty minute yoga program included yoga postures (asanas, 15 minutes), regulated breathing (pranayamas, 10 minutes), exercises for the joints (sithilikaranavyayama, 10 minutes), visual cleansing exercises (trataka, 10 minutes), and guided relaxation (15 minutes).

Visual discomfort, including dryness, irritation, burning, redness, photo sensitivity and possible remedies (e.g., lubricating eye drops) were assessed with a standard, 12 item questionnaire (Bandeem-Roche, Munoz, Tielsch, West and Schein, 1997) While both STOUPS had comparable scores at baseline, after sixty days, the yoga group had reduced scores, whereas the control group had increased scores (Telles, Naveen, Dash, Deginal and Manjunath, 2006).

Motor functions were assessed based on hand grip strength, tapping speed, and low back and hamstring flexibility, in the same group of 291 computer professionals (Telles, Dash and Naveen, 2008). Musculoskeletal and hand discomfort were assessed using the Cornell Musculoskeletal Discomfort questionnaire.

At the end of sixty days the yoga group showed a decrease in musculoskeletal discomfort, along with an increase in bilateral hand grip strength, right hand tapping speed, and flexibility (Telles, Dash and Naveen, 2008). In contrast the control group showed an increase in musculoskeletal discomfort and a decrease in left hand tapping speed.

Like visual strain, and motor functions, somatization of stress (or the conversion of stress to somatic symptoms), also reduced after yoga (Telles and Naveen, 2006).

The present results suggest that yoga as an ancient Indian science and way of life, as well as a behavioral, mind body intervention can reduce various aspects of technostress. Hence it was considered important to understand awareness about the impact of yoga on health, in medical professionals. The (unpublished) results of a recently completed survey on approximately 1000 doctors drawn from various streams of medicine will be presented.

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YOGIC MANAGEMENT OF LIFE STYLE RELATED DISORDER

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Human beings are the small units of universe. When one is in proper tuning with the rest of the world he remains healthy and happy and when there is any disturbance in this harmony, disease appears. In this life style plays a very important role.

Life Style

A way of life or style of living that reflects the attitudes and values of a person or group. It decides a lot about our relationship with rest of the universe as what we do is a reaction to our surroundings. According to the third law of Newton every action has a reaction and same happens with the body.

Life Style Related Health Disorder

- A Variety of life style or health related habits (behaviour factors) and psycho social factors can have major impact on the health of a person.
- Behaviour and social issues that impact on health of a person include smoking, diet, alcohol, poor diet leading to obesity or alternatively malnutrition, lack of physical exercise, sexual behaviour and other problems resulted from drug intake.
- Smoking-Smoking is a major cause of lung cancer, cardiovascular disease and COPD.
- Alcohol Alcohol related problems can lead to ill health and premature death especially through cirrhosis of liver and through alcohol related violence resulting in emergency admission to hospitals.

Obesity

Being overweight can contribute to range of health problems such as heart disease, high blood pressure, diabetes, indigestion. Adult and child obesity levels are becoming an increasing issues for the health services. As greater number of people put on extra weight through over diet or insufficient exercise.

Depression

Depression may occur because of social environmental occupation and dietary habits excess intake of refined sugar via sweet foods and or from junk food can aggravate depression The combination of caffeine and refined sugar is even worse for depression. Nutritional deficiencies can also aggravate the depression.

Arthritis

Osteoarthritis mostly occurs in females. Major cause of occurrence of CA. in females is obesity found involve in CA. is knee point. it is the weight bearing point of the body. It occurs because of poor dietary habits and lack of exercise. Over dietary habit lead to obesity and decrease in the flexibility of body and increase in deposition of fat in the body.

Basic fitness in daily life is a common need of everyone. Yoga can fulfill this need irrespective of the type of work you do. Yoga should be practiced on empty stomach except Vajra Asana. You can do it at any time during day. It will benefit you irrespective of whether you are young old, rich or poor. Yoga is often described as the rest from of health Insurance for all from the age of seven to seventy or more.

Two main advantages of Yoga (1) Prevention of disorders and ailments. (2) Maintenance of health and fitness in daily life.

- Other advantages include flexible muscle, supple joints, relaxed and tension free mind and efficiently working vital organs such as heart, lungs, liver etc. and good balance between various functions such as neuromuscular co-ordination etc.
- Although yoga can be practiced in all the age groups. Some techniques are more suited and desirable for specific age groups.
- E' Forward and backward bending asanas are good for children aged 5-10 years.
- © it is desirable that older people avoid asanas that involve excessive stretching, halasanas, shirsha asanas etc.
- 1' Shuddhi kriyas should not be practiced everyday. They should be performed when required for the removal of impurities from the body.
- Yoga is related to body and mind. in recent years scientific research on yoga has proven that yoga certainly cures many diseases like diabetes, asthma etc.
- There is pranayama for various breathing related and mental problems and for increasing concentration.
- Yoga is effective in every aspect like help in removing addictions, curing diseases, increasing vital energy and increasing resistance power of the body.
- Practice of yoga brings good positive changes in mental frame and makes mind stable, peaceful and happy.

Yoga takes care of both our physical and mental health. But it should be practiced regularly for 30-45 minutes. Yoga should be learnt scientifically then only the required results can be achieved.

Yoga thus can be called as complete solution of most of our problems. it is complete science of personality development and touches all aspects of our existence.

Pawan Muktasana is divided into three distinct groups of asanas. The anti rheumatic group, the digestive group and shakti bandh group intend to release energy blocks. All three groups supplement each other.

Anti rheumatic Group

This group includes Padanguli naman gulf naman gulf chakra, Saneer naman, Sanu Chakra, Ardha Titli Shroni Chakra, Poorna Titali, Mushtika Bandhana. Skandha Chakra and Greeva Sanchalana. This group of asanas for those debilitated by rheumatism, arthritis, high blood pressure or other ailments where vigorous physical exercise is not advised.

Digestive Group Asanas

This group comprises of Padottan asana, Padachakrasana, Supta Pawan Muktasana, Supta udarakarshan asana, Naukasana. This group of asanas is concerned specially with strengthening the digestive system. It is excellent for people with indigestion, constipation, acidity, excess wind or gas, lack of appetite, diabetes, disorder of male and female reproductive system.

Shakti Bandha Group

Chakki Chalanasana, Nauka Sanchalan asana, Namaskarasana, Udarakarshanasana. This group of asanas is concerned with improving the energy flow within the body and breaking down neuromuscular knots. They also eliminate energy blockages in the spine, activate the lungs and heart and improve endocrine functions. This series is useful for those with reduced vitality and stiff back and is especially useful for menstrual problems and toning the pelvic organs and muscles. It can be practiced after pregnancy for retoning flaccid muscles.

Shuddhi Kriya

Neti

Sutra Neti

Vastra Dhauti

Vaman Dhauti

Kapal Bhati

Trataka

Shankhprakashana

Jal neti may be practiced daily once or twice a week or as required.

Once a week is sufficient.

This practice may be done at any time of the day but it is most useful just before meal. It should not be done after meals. This may be performed once a week.

This may be performed at any time of the day except after meal.

This practice makes the eyes clear and bright, balances the nervous system and relieves nervous tension. It improves the memory and helps develop good concentration and strong will power.

It should not be performed when the weather conditions are extreme. The best time to practice is at the change over of seasons. This practice should not be performed more than twice a year.

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