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RESEARCH ARTICLE

COMPARISON OF LEVEL OF HEMOGLOBIN AMONGST DYNAMIC EXERCISES PRACTITIONERS, YOGIC PRACTITIONERS AND SEDENTARY ADULTS

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Abstract

As the hemoglobin is transport operator of gases. Researcher would like to find out the role of exercises in maintenance of hemoglobin level amongst higher age group ranges form 51-62. The studies in the gerontology had indicated that exercises delays the aging process and had impact on certain physiological aspects. The present study was undertaken to examine the differences in Hemoglobin amongst the physically active (Dynamic exercises practitioners), Yogic practitioners and Sedentary (inactive) adults. Total number of subjects selected for the study was 120, out of which 40 each were Dynamic exercises practitioners, Yogic practitioners and 40 were sedentary adults in the age group of age ranges from 51-62 years. All the subjects were tested for hemoglobin with the help of Shalli's Hellis hemoglobin meter. The hemoglobin level of physically active (Dynamic exercises practitioners) and Yogic practitioners were at normal range as compared to the Sedentary (inactive) adults. The level of hemoglobin amongst Active and Inactive adults; Inactive and Yogic Practitioners; differs. Both active adults and Yogic Practitioners were better in hemoglobin. Though the adults does not have the normal range of level of hemoglobin, but activities in any form dynamic exercise and yogic practices had the better impact in the improvement of hemoglobin.

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Introduction:-

As the hemoglobin is the transport operator of gases. Researcher would like to find out the role of exercises in the maintenance of hemoglobin level amongst higher age group ranges form 51-62. The studies in the gerontology had indicated that exercises delays the aging process and had impact on certain physiological aspects. The present study was undertaken to examine the differences in Hemoglobin amongst the physically active (Dynamic exercises practitioners), Yogic practitioners and Sedentary (inactive) adults. Total number of subjects selected for the study was 120, out of which 40 each were Dynamic exercises practitioners, Yogic practitioners and 40 were sedentary adults in the age group of age ranges from 51-62 years. All the subjects were tested for hemoglobin with the help of Shalli's Hellis hemoglobin meter.

Design of Study:

In the present study research scholar has described the method of conducting the study. The Study had been divided under following subheadings for clear explanation.

1. Sources of data

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2. Method of sampling
3. Selection of the subjects and the formation of groups
4. Research tools and apparatus reliability
5. Criterion measures and administration of test

Sources of Data:

For the present study, subjects were selected under the following three heads.

1. Inactive subject
2. Active subjects and
3. Yogic practitioners

Method of Sampling:-

Simple random sampling method of lottery system used to select the subject for this study, from a group of subjects; those were willing to participate actively in this study.

Selection of the Subjects:

Inactive subjects (Sedentary Adults):

The research scholar wants to the office staff and traders through the personal relations and taking the help of neighbors and colleagues. While selection of subjects the research scholar got advantage of the world-renowned institute Hanuman Vyayam Prasarak Mandal, Amravati, Maharashtra India where the research scholar was working as lecturer in the past time.

Active subjects:

The active subjects were selected from 19th Veterans National Athletics Championship 1997. At the time of inaugural function the announcement was made on loudspeaker and requested the athletes to remain present in the same assembly after completion of inaugural ceremony. The purpose of study was discussed among these subjects. There were many subjects who responded positively. These subjects were divided into four age groups.

Yoga Practitioners:

The yoga practitioners were selected from Deeparchan Yoga Center Rajapeth Amravati, Yoga Bhavan and Research Center Maltekadi, Amravati and Janardhan Swami Yoga Bhavan Ram Nagar Nagpur. The purpose of study was discussed amongst these subjects. There were many subjects responding positively. These subjects were divided into four age groups. The date of birth was confirmed from their board certificates. These subjects were selected by the simple random method of sampling with the help of lottery system. The duration of yoga practices was confirmed by their entries in the institutes or yoga centers.

Thus total 120 male subjects were selected for the study, which includes 40 inactive subjects, 40 active subjects and 40 yoga practitioners.

Formation of the Groups:

The subjects for the research were 120. They were divided into four equal groups i.e. each group consists of 30 subjects of same age category includes 10 inactive adults 10 dynamic exercise practitioners and 10 yoga practitioners. The group according to age was distributed as follows.

Table No.1:- Age wise groups of inactive subjects, dynamic exercise practitioners and yoga practitioners.

AGE GROUP	INACTIVE ADULTS	DYNAMIC EXERCISE PRACTITIONERS	YOGA PRACTITIONERS
51-53	10	10	10
54-56	10	10	10
57-59	10	10	10
60-62	10	10	10

Table No.2:- Age wise group level of Hemoglobin of inactive subjects, dynamic exercise practitioners and yoga practitioners.

AGE GROUP	INACTIVE	DYNAMIC EXERCISE	YOGIC PRACTITIONERS
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	ADULTS	PRACTITIONERS	
51-53	12.91	13.52	13.08
54-56	12.34	13.09	13.46
57-59	11.88	13.05	13.14
60-62	12.47	13.03	13.27

Above table indicates that the mean hemoglobin level of the subjects. The normal hemoglobin level for men ranges from 14gm/100cc to 16gm/100cc of blood. Both yogic practitioners and dynamic exercises practitioners had near to normal range. Whereas their counterparts inactive adults were varies in level of hemoglobin and below the normal range. In the age group 57-59 it was below the average. The level of hemoglobin in the sedentary adults was subject of discussion and it might be the subject to worry. The sedentary adults must be consulted to their Physician and must be health conscious to develop the sound physical and physiological health.

Fig 1:-The level of hemoglobin ages ranges from 51-62 of inactive subjects, dynamic exercise practitioners and yoga practitioners.

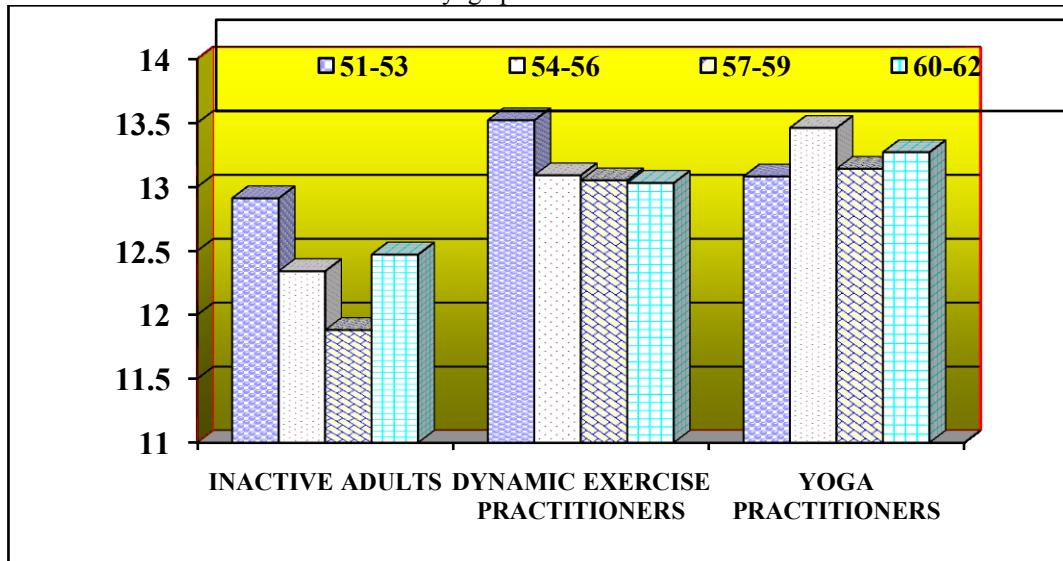


Table No.3:- Age wise groups differences of level of Hemoglobin of inactive subjects, dynamic exercise practitioners (Active) and yogic practitioners.

Age Group	Active	Inactive	t cal	Yogic	Inactive	t cal	Active	Yogic	t cal	t tab
51-53	135.20	129.10	1.71	130.80	129.10	0.50	135.20	130.80	1.26	1.96
	13.52	12.10		13.08	12.91		13.52	13.08		
54-56	130.90	123.40	2.09	134.60	123.40	3.16	130.90	134.60	1.06	
Mean	13.09	12.34		13.46	12.34		13.09	13.46		
57-59	130.50	118.80	2.45	131.40	118.80	2.28	130.50	131.40	0.21	
Mean	13.05	11.88		13.14	11.88		13.05	13.14		
60-62	130.30	124.70	1.28	132.70	124.70	1.78	130.30	132.70	0.66	
Mean	13.03	12.47		13.27	12.47		13.03	13.27		

t_{tab} at 0.05 level of =1.96 t_{cal}= 1.71; 0.50 ; 1.26; 1.06; 0.21;1.28; 1.78and 0.66 all the values are less than tabulated values. There was no significant difference.

Age Group 51- 53:

H₀:- Null Hypothesis:- By one tailed t test there is no difference between the Active and Inactive adults; Inactive and Yogic Practitioners; Yogic Practitioners and Active Adults in the age group of range 51-53.

H₁:-Alternative Hypothesis:- By one tailed t test there is Significant difference between the Active and Inactive adults; Inactive and Yogic Practitioners; Yogic Practitioners and Active Adults in the age group of range 51-53. t_{tab} at 0.05 level of =**1.96** t_{cal} = 1.71; 0.50 and 1.26 all the values are less than tabulated values.

Thus the null hypothesis is accepted. :- By one tailed t test it could be stated that there is no significant difference between the Active and Inactive adults; Inactive and Yogic Practitioners; Yogic Practitioners and Active Adults in the age group of range 51-53. Active adults and yogic practitioners were better in level of hemoglobin compared to inactive adults.

In the age groups **54-56 and 57-59** Active and Inactive adults; Inactive and Yogic Practitioners; t calculated were **2.09; 3.16; 2.45 and 2.28** respectively which is **greater than t tabulated** value. Thus the null hypothesis was rejected. Yogic Practitioners and Active Adults in both the groups were **1.06 and 0.21** which is less than t table values. Thus the null hypothesis accepted. In the age group of 60-62, t calculated values are less than the tabulated values in all the subjects that is Active and Inactive adults; Inactive and Yogic Practitioners; Yogic Practitioners and Active adults. Thus there is no significant difference in these groups.

Conclusion:-

From the statistical inferences and graphical representation it could be concluded that the level of hemoglobin amongst Active and Inactive adults; Inactive and Yogic Practitioners; differs. Both active adults and Yogic Practitioners were better in hemoglobin. Though the adults does not have the normal range of level of hemoglobin, but activities in any form dynamic exercise and yogic practices had the better impact in the improvement of hemoglobin.

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