

**RELATIONSHIP BETWEEN JOB STRESS AND PERSONALITY
DIMENSIONS OF EDUCATION, PHYSICAL EDUCATION
TEACHERS IN THE CITY OF PARS ABAD**

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ABSTRACT

The aim of this study was to determine the relationship between job stress and personality dimensions (Neuroticism, extraversion, agreeableness desire for new experiences, and responsibility) of physical education teachers in Pars Abad. The aim of this study used a descriptive and co-relational research. The study population included all physical education teachers in Pars Abad, Ardebil, according to the Center for Education Statistics in 1394, the number 253 is us. Due to the limited population size, using census of all individuals were chosen as sample. The data collected from questionnaires that job stress (1977) and the five personality traits Neo (1992). The face validity of the questionnaire validated by experts in the field of sport management and internal reliability through Cronbach's alpha reliability when they are higher than 0.7 and 0.8 respectively by Pyshtst and Pstst top. Hypotheses of this study was to assess the relationship between variables were analyzed using Pearson's correlation coefficient Which indicates that the relationship between job stress and the desire to experience new personality was significant inverse relationship and with other aspects of the character, there was no significant relationship.

Keywords: Stress, Personality dimensions, Physical Education Teachers

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INTRODUCTION

In the lives of all individuals in a society of different professions work stress and the pressure they bring different species. Job changes, including organizational changes, changes in wages, promotion, increase or decrease in human resources and social transformation issues that the person pushing him into confusion, anxiety, agitation and anxiety make (Robbins, 2004, translation by Parsaeian et al). But what is proposed in this study is that people who have the personality to the otherwise more or less job stress experience Because personality and psychological structure is the main dimension that helps to shape lifestyle If the aim of psychology to describe the behavior, personality characteristics as target structures involved in the operation will be successful(Matthews et al., 2003). Following the study is that the relationship between job stress and personality dimensions of physical education teachers there.

Job stress is an issue that must be considered by a strong staff and in the process of emotional and psychological issues arising from job to consider (Alvani,1997). Therefore, occupational stress factors may accumulate stress and related indicators of job stress that it knew more people to agree (Cooper,2003). In general, personal characteristics and professional training in the world is necessary Perhaps the most important issue that a boss or an employer or a teacher should be aware of the differences in people's personality traits. Based on personality traits that lead to the talent and potential capital flourish (quoted from Isaei Chesmeh Mahi, et al, 1389). The researcher of this study was to design a study to answer the question of whether the relationship between job stress and personality dimensions of physical education teachers there is the city of Pars Abad?

Stress is a common word, and almost all were familiar with the concept or have experienced it and due to the fact that it is undeniable physical and mental, behavior and work practices and irreparable negative effects of its Which is very costly to the individual or organization and organizational behavior management Bdyndlyl stress the importance and special place (Fakhimi,2004). A person employed in occupations such as teacher work closely with their clients to a service provider enters a high pressure and thus, provides individual stress and personality characteristics It depends (Jalali Farahani et al,2011). So studying the relationship between job stress and personality dimensions of physical education teachers in Tabriz city, upper managers can identify strengths and weaknesses in order to better serve the students help.

Faria and colleagues (2014) studied the personality factors, stress symptoms, coping strategies and public health: Young study concluded that Angola depressed and stressed there is a relationship between the characters. Huang et al. (2015) study as the link between personality and risk of psychological stress and burnout in physicians China showed that the effect on emotional exhaustion and cynicism character was more of a personal achievement. Introversion and neuroticism personality doctors with higher risk of suffering psychological stress.

METHODOLOGY

Sample:

The method used in this research is the goal of the applied research and the method of data collection, descriptive and co-relational study .

The study population included all physical education teachers PARSABAD based Center for Education Statistics Ardabil province in 1394. The number of subjects were 123. Due to the small population size and using whole numbers, all individuals were chosen as sample. The sample consisted of 123 subjects.

Instrumentation:

Job Stress questionnaire (Astaynmtz, 1977) and NEO Personality Inventory (Tabriz, 1992) were used for the purpose of data collection.. The questionnaire Job Stress Questionnaire (1977) contains 36 words about the work environment in stressful situations. Content and face validity of the questionnaire was confirmed by experts in the field of sport management. The reliability was confirmed through Cronbach's alpha coefficient in a group of 40 physical education teachers, which was 0.80.

According to Weiss et al, (2008), NEO-FFI (Tabriz, 1992) was to evaluate the personality structure, based on the perspective of factor analysis. The Inventory consisted of 60 questions and five dimensions of personality i.e. Neuroticism personality, .Extraversion, Personality desire for new experiences, Agreeableness personality and .the responsibility of personality. Content and face validity of the questionnaire was confirmed by experts in the field of sport management and reliability through Cronbach's alpha coefficient in a group of 40 physical education teachers, which was 0.80.

Statistical Techniques:

Mean, Standard deviation and Pearson Moment correlation Coefficient (r) were computed by using SPSS 19.0.

RESULTS

To assess the job stress as a dependent variable and five dimensions of personality as a independent variables of male and female physical education teachers, frequency, percentage, Pearson Moment Correlation Coefficient for all the subjects taken together were computed and data pertaining to this have been presented in table 1 and 2.

TABLE 1
SAMPLE STRUCTURE OF PHYSICAL EDUCATION TEACHERS
ACCORDING TO SEX AND QUALIFICATION

Sex	Men	Women		Total
Number	81	42		123
Percent (%)	(65.85 %)	(34.15)		100
Academic degree	Resource	BS	MA	Total
Number	32	84	7	123
Percent (%)	(26.02 %)	(68.29 %)	(5.69 %)	100

Table 1 clearly shows that most of the participants in the study were found to have higher educational degree. According to sex, physical education teachers consisted of 34.15 % females and 65.85 % males as mentioned in this table.

TABLE 2
RELATIONSHIP BETWEEN JOB STRESS AND FIVE DIMENSIONS OF
PERSONALITY AMONG PHYSICAL EDUCATION TEACHERS

S.No.	Variables Correlated	Correlation coefficient (r)
1.	Job Stress V/S Neuroticism	0.039
2.	Job Stress V/S Extraversion	-0.021
3.	Job Stress V/S Desire for new experiences	-0.148*
4.	Job Stress V/S Agreeableness	0.011
5.	Job Stress V/S Responsibility	0.039

* Significant at .05 level

$r_{.05}(244) = .113$

Table 2 indicates that significant correlation existed among male female physical education teachers between job stress –neuroticism followed by measure of extraversion, Agreeableness, and Responsibility dimensions of personality, as the obtained Pearson's Product Moment Correlation Coefficients r of .039, .021, .011 and .039 respectively were lesser than the required $r_{.05}(244) = .113$. But they had significant relationship between job stress and of personality desire for new experiences dimension, as the obtained Pearson's Product Moment Correlation Coefficients r of 0.148 was high than the required $r_{.05}(244) = .113$.

DISCUSSION

The results of study showed that physical education teachers did not have significant relationship between job stress and neuroticism dimension of personality. It indicates that physical education teachers do not feel stress in their work with neuroticism personality. With regard to job stress and personality stems from Msvvlytshnasy is unstable and the work ethic of his work does not feel job stress. In fact, it means that nervous fears and instability of the job does not arise, because it is out of work.

Non-significant negative correlation was found between job stress and measure of extraversion among physical education teachers. It means that PE teachers do not feel stress in their work with extraversion. Because the job stress with this type personality in physical education and physical activity are vitality enjoyed by students.

A significant negative correlation was observed between job stress and desire to new experiences dimension of personality among physical education teachers. It means that PE teachers have a desire to new experiences in terms of living events. According to the principle of Knjkavanhay, job stress to them is meaningless, because working with students and guide them attractive for such teachers do not feel anxiety.

Non significant negative correlation was existed among physical education teachers between job stress and agreeableness dimension of personality. It indicates that physical education teachers with agreeableness personality have a warm spirit. Mhrbananhay told that students have a positive intention, encouraging them to work, school and group assignments, Moreover, students also like him to assume, therefore, that managers by creating a friendly environment at school to reduce the job stress.

Non-significant negative correlation was also observed between job stress and responsibility of physical education teachers, This means that physical education teachers does their work logically at all time. It is technology to achieve learning objectives for students Since stress is something that may impede the achievement of the objectives of the persons carrying out the personality. Msvlytshnasy avoid it and try to finally have the necessary calm and concentration.

CONCLUSIONS

1. Similarity was observed among physical education teachers in the relationship between job stress and neuroticism followed by measure of extraversion, Agreeableness, and Responsibility dimensions of personality.
2. Physical education teachers were found to have different relationship between job stress and desire for new experiences dimension of personality.

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ISOLATED AND COMBINED EFFECT OF YOGIC PRACTICE AND AEROBIC TRAINING ON MUSCULAR ENDURANCE VARIABLE

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ABSTRACT

The objective of present study was to examine the isolated and combined effect of yogic practice and aerobic training on muscular endurance variable of adolescent boys in Puducherry. Total sixty subjects completed this prospective randomized study with 15 in the yoga group that were matched with the same number of subjects in the aerobic, combined training and control groups. Muscular endurance variable was determined at the beginning (baseline) and after the twelve weeks of training intervention. The subjects were subjected to the twelve weeks of yoga, aerobic and combined yoga & aerobic training program. The difference in the mean muscular endurance value of each group was tested for the significance of difference by ANCOVA test. The muscular endurance variable in the all three experimental groups was markedly improved compared with control group ($P > 0.05$). The results have shown the significant improvement in muscular endurance, since calculated $F (=19.25^*) \geq \text{tab } F .05 (2, 42) (= 4.14)$. But adjusted F ratio value (47.09^*) was significantly higher than the table value. The finding of study suggests that the twelve weeks of isolated and combined yogic practice and aerobic training have significantly improvement on muscular endurance variable. In all cases 0.05 levels has been fixed to test the significance which is considered to be an appropriate.

Key words: Yoga, Aerobic, Muscular endurance, adolescent.

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INTRODUCTION

Participation in daily physical activities is vital for proper growth and maintenance of good health. Exercise is a form of physiological stimulation of the body. In this sense, exercise can be considered as any form of physical activity “involving movement, maintenance of posture or expression of force by muscles. The performance of exercise requires the response of a number of functions within the body. The physical education scientist has been trying to develop new method of training and techniques to attain higher level of performance in game and sports. Physical and physiological variable play a magnificent role in shaping the role of youth personality and physical development along with the improvement of the skills.

Aerobic exercise is exercise that involves or improves oxygen consumption by the body. The word aerobic means "with oxygen". Use of oxygen in the body's metabolic or energy-generating process to perform the work by muscles is referred as aerobics. Many types of exercise performed at moderate levels of intensity for extended periods of time are known as aerobic activity.

The truthful stand for the word yoga is ‘to yoke’. This deals that uniting of self spirit with the universal spirit, or God. The origin of word yoga is from the roots of Sanskrit word ‘Yuj’ which means to unite, to attach, to yoke, and to focus on thoughts within self. According to Patanjali, yoga is way of yoking of all the powers of body, the mind, the emotion which enables one to look at life in all its aspect evenly.

Ability of a muscle or group of muscles to contract against a sub maximal resistance for long duration to overcome the resistance is known as muscular endurance. The muscular endurance tests include the maximum number of pull-ups, push-ups, or sit-ups performed in fixed time unit. The bent-knee sit-up measures muscular endurance of the mid body, providing information on sport performance and possibly on the health of the lower back. Imbalance between the lower back and abdominal musculature may cause back problems as a result of abdominal weakness.

MATERIALS AND METHODS

Selection of the Subjects

The reason to conduct the study was to locate about the isolated and combined effect of yogic practices and aerobic exercise on muscular endurance variable. Sixty adolescence school boys were selected from New Mordern Higher Secondary School, Muthialpet, Puducherry. The chronological age of the selected subjects ranged from fourteen to seventeen years. The subjects were from different family background and homogeneous in their academic activities.

Experimental Design and Variable Testing

The participating subjects (N=60) were randomly distributed in four equal groups with fifteen in each group. Experimental group I was assigned with yoga practice, experimental group II with aerobic exercises, experimental Group III with combination of yoga practice & aerobic exercises. Prior to starting the training baseline tests of the muscular endurance variable was conducted for all the 60 subjects. The post test was measured after the experimental training. The subjects were given 12 weeks respective training for five days per week. Training duration was 45 minutes in the evening session from Monday to Friday. Bend knee sit ups test was used to measure the muscular endurance of the subjects.

The data collected from the four groups on the muscular endurance variable was statistically treated by Analysis of covariance (ANCOVA) to find out significant difference among the four groups. Scheffé's Post Hoc test was used to clarify the difference between adjusted pair wise means when F ratio was significant. The level of significance was fixed at 0.05 level of confidence. All the statistical calculation was carried out using Statistical Package for Social Sciences (SPSS 16.0).

TABLE 1
ANALYSIS OF COVARIANCE FOR PRE TEST AND POST TEST DATA ON
MUSCULAR ENDURANCE

S.No.	Yoga	Aerobic	Combine	Control	Source of variance	Sum of square	df	Mean Square	'F' ratio
Pre-test Mean	16.60	15.67	16.00	15.73	B:	8.13	3	2.71	0.78
S.D.	1.64	2.02	2.10	1.67	W:	195.87	56	3.50	
Post-test Mean	19.87	18.60	20.80	15.80	B:	212.60	3	70.87	19.25*
S.D.	1.77	1.50	2.46	1.82	W:	206.13	56	3.68	
Adjusted Mean	19.37	18.88	20.80	16.02	B:	179.33	3	59.78	47.09*
					W:	69.82	55	1.27	

*Significant at 0.05 level.

F.05 (3, 55/56) = 2.77

It is observed from Table 1 that the pre-test means on muscular endurance of the three experimental groups and control group are 16.60, 15.67, 16.00 and 15.73 respectively. The obtained 'F' ratio value 0.78 for the pre-test mean is lesser than the required table value 2.77 for 3 & 56 degrees of freedom at 0.05 level of confidence. This reveals that there is no significant difference among the four groups on muscular endurance before the commencement of the experimental training. It is inferred that the selection of the subjects for the four groups are successful.

The post test means on muscular endurance of the three experimental groups and control group are 19.87, 18.60, 20.80 and 15.80 respectively. The obtained 'F' ratio value 19.25 for the post test data is greater than the required table value 2.77 for 3 & 56 degrees of freedom at 0.05 levels of confidence. It discloses that there is a significant improvement among the experimental groups on muscular endurance after the experimental training.

The adjusted post test means on muscular endurance of the three experimental groups and control group are 19.37, 18.88, 20.80 and 16.02 respectively. The obtained 'F' ratio value 47.09 for the adjusted post test data is greater than the required table value 2.77 for 3 & 55 degrees of freedom at 0.05 level of confidence. It reveals that there is significant change on muscular endurance as a result of the experimental training and therefore the null hypothesis has been rejected.

TABLE 2
SCHEFFE'S POST HOC TEST ON ADJUSTED MEAN DIFFERENCES
ON MUSCULAR ENDURANCE

Yoga	Aerobic	Combined	Control	Mean differences	Required C.I.
19.37	18.88	-	-	0.49	1.19
19.37	-	20.80	-	1.43*	
19.37	-	-	16.02	3.35*	
-	18.88	20.80	-	1.92*	
-	18.88	-	16.02	2.86*	
-	-	20.80	16.02	4.78*	

*Significant at 0.05 level

Since significant differences are recorded, the Scheffe's Post hoc test is used to find out the paired means significant difference. The obtained results are presented in Table 2.

The above table shows that the Scheffe's post-hoc method of testing the significance for the differences between the paired means on muscular endurance. The paired mean difference between the yoga practice and control group 3.35, aerobic training and control group 2.86, combined group and control group 4.78, combined group and aerobic group 1.92, combined group and yoga group 1.43 are found to be significant at 0.05 level of confidence. Above findings indicate that the combined practice group had a better improvement on muscular endurance when compared to the aerobic group, yoga group and control group. The yoga group is better than the aerobic group and control group.

The differences in means of yogic practice group, aerobic group, combined group and control group are presented through line diagram for better understanding of the results.

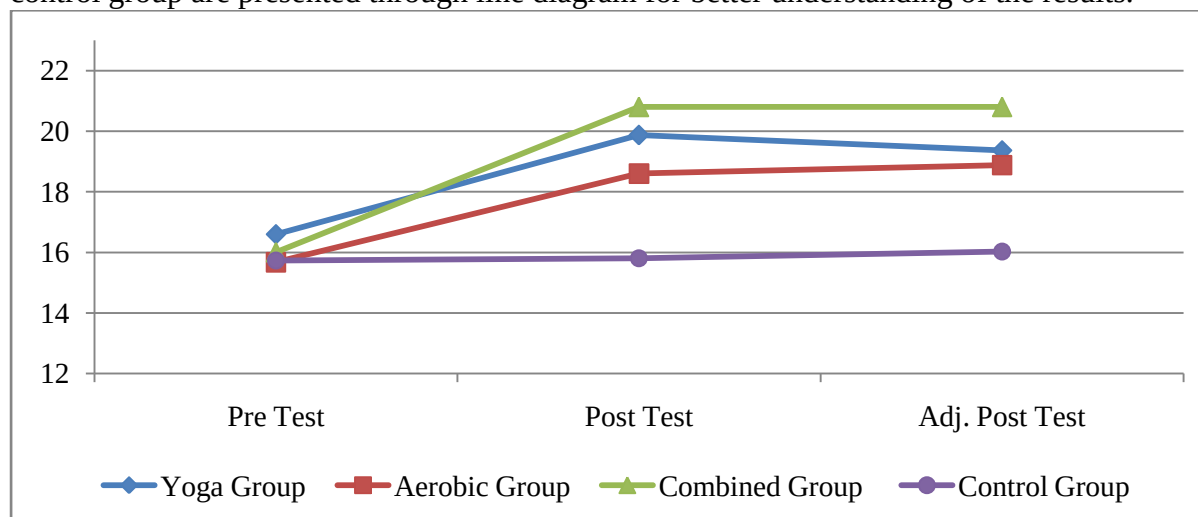


FIGURE- 1- THE PRE TEST, POST TEST AND ADJUSTED POST TEST MEAN VALUES OF EXPERIMENTAL GROUPS AND CONTROL GROUP ON MUSCULAR ENDURANCE

DISCUSSION

The result of the study indicated that muscular endurance variable improves significantly for three experimental groups when compare to control group, after twelve weeks of experimental training. There was no significant difference found in paired means of yoga and aerobic training group whereas significant difference was found in paired means of combined & aerobic training group and combined & yoga training group. It was inferred

from the result of the present study that independent variable has significant improvement on experimental groups due to their respective training programmes.

CONCLUSION

Findings of study concluded that the fitness variable such as muscular endurance may enhanced significantly due to continuous training of yogic practice and aerobic training. Among the experimental training groups, the combined training has better training effect to improve the muscular endurance than aerobic and yoga training groups.

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HEART RATE VARIABILITY OF ELITE SPRINTERS MIDDLE DISTANCE AND LONG DISTANCE RUNNERS

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ABSTRACT

The purpose of the present study was to compare and assess the Heart Rate Variability of elite sprinters middle distance and long distance runners of Maharashtra state. The total numbers of athletes of the track event were 30, who have taken part in national and international level tournaments organized time to time in the different coroners of India and out of India. The 30 Athletes were selected as a sample for the study in their performance order to complete and fulfill the aim of the study. High frequency and low frequency parameters of heart rate variability of the athletes were to be analyzed by an instrument called Biopac that was discovered by Jean Charcot in the Russian scientific research laboratory in 1995 (reliability=0.98 and validity=0.95). To assess the heart rate variability of the track athletes i.e. sprinters middle distance and long distance runners, ANOVA test with LSD Post Hoc test were computed from raw scores. The result of the study revealed that the Sprinters and middle distance runners had almost same HRV by comparing their MD (mean difference). Hence their fitness level, either physically or mentally are also same and it is only due to their conditioning and training that is almost same. Whereas long distance runners had higher HRV than the sprinters and long distance runners. Hence the fitness level of long distance runners is higher than sprinters and middle distance runner

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INTRODUCTION

The human heart is a bio-electrical pump beating at an ever changing rate: it is not like a clock that beats at a steady, unchanging rate. This variability in heart rate is an adaptive quality in a healthy body. Measuring Heart Rate Variability though long used in hospitals for treating heart patients, is a relatively new biofeedback concept for athletes. Soviet Union sports scientists started keeping track of their elite athletes' heart rate variability in 70s. In the past decade, college sports team and the world class athletes have been increasingly using HRV to monitor fatigue and recovery from work outs.

Heart rate variability is the degree of fluctuation in the length of the intervals between heart beats. HRV is mirroring the regularity of heart beats: bigger regularity - lowers HRV (and vice versa). Regularity of heartbeats is derived from a quantity of numbers; equal to the times elapsed between successive heartbeats. They are named R - R intervals and are measured in millisecond (ms).

The intrinsic heart rate (HR) generated by the senatorial node (SA node) in the absence of any neural or hormonal influence is about 100 to 120 beats per minute (BPM). However in healthy individual resting HR would never be that high. In a healthy individual(adult), the HR is ranging between 60 and 90 beats per minute(BPM) and the HR estimated at any given time represents the net effect of the parasympathetic (vague) nerves, which slow HR, and the sympathetic nerves, which accelerate it.

The physiological origins of HRV are the fluctuations of the activity of cardiovascular vasoconstrictors and vasodilatatory centers in brain. Normally these fluctuations are a result of blood pressure oscillation, respiration, thermoregulation and circadian biorhythm. All these factors can influence the length of beat-to-beat intervals, named R-R intervals.

Simple measures of the small changes in each beat of your heart can provide a wealth of information on the health of your heart & nervous system; such measures are called heart rate variability or HRV. Originally applied to assess the risks for patients who suffered a heart attack, HRV analysis is now becoming a standard tool in sports science research & coaching practice.

Since researchers first found significant changes in the nervous systems of athletes involved in hard training for the rowing world championships, a number of studies have tried to use HRV as a tool to monitor overtraining. In general such studies show that HRV is much lower in overt trained athletes than healthy ones.

The problem is, when you are over trained it is too late. It might take weeks or months to get back to full fitness, so what you need is a daily measure to tell you how well your nervous system is doing. Daily monitoring using standard HRV methods have shown that listening to heart via HRV can not only stop you overtraining but actually make your training more effective.

The idea is quite simple. Monitor your HRV every morning and train as normal. If your HRV drops significantly, take this as an early warning that you are overloading the system. A small drop is OK as long as you recover. Training is, after all, about stress and recovery and a hard session, especially on top of accumulated fatigue, will lower your HRV.

But if your HRV stays low even with rest you could be on the edge of trouble. In my opinion, using daily HRV to monitor training stress is the best thing you can do to make your training safe and effective. So listen to your heart.

Heart rate monitors provide important feedback about the intensity of exercise, but can't measure the cumulative fatigue of workouts or the subsequent training effects. However, new innovations using heart rate variability (HRV) data mean that's about to change.

Sports Scientist & Coach Eddie Fletcher has collected extensive data from a number of sports and endurance activities, and explains that, in general there is a tendency for training to be at the high end of extreme with a prevalence of over training and under recovery. There is a general belief amongst athletes that 'working hard' is a virtue when it comes to improving fitness. Equally at the social end of participation (charity running for example) many competitors are under prepared for the physiological effort required.

Simply put HRV is a measure of the time gap between individual heart beats while body is at rest. The heart, in fact, speeds up when we inhale, and slows down when we exhale. This difference is known as HRV [heart rate variability]. A healthy, well-rested body will produce a larger gap, and higher HRV than a stressed-out, over trained body.

Heart Rate Variability (usually known as HRV) is a relatively new method for assessing the effects of stress on the body. High HRV indicates good health, high level of physical fitness and less stress & tension. Whereas low HRV is linked to stress, fatigue and even burn out. Different athletes of track events are under stress either physically or mentally. Therefore, it was thought to assess physical fitness as well as mental fitness in terms of HRV of different runners objectively.

The objective of the study is to assess the variations in the heart rate among the athletes including; sprinters, middle distance and long distance runners in order to know their health and fitness level. It was also hypothesized that there may be significant difference in the beat to beat intervals of various elite runners including sprinters, middle distance and long distance runners.

METHODOLOGY

Selection of subject:

The population of the study was the male elite runners of Maharashtra state. The present study was conducted on a minimum of 30 athletes. Purposive sampling technique was applied for the selection of the sample. The athletes were sprinters, middle distance and long distance runners of Maharashtra state were included. The age ranged of the athletes was between 18 to 25 years.

Selection of Variable

The variable of the study was heart rate variability (HRV) in which the high and low frequency parameters were analyzed.

Tools used:

BIOPAC instrument was used to conduct this study. Instrument's reliability and validity were 0.98 and 0.95 respectively.

Research Design:

The present investigation is a survey study under descriptive research, which has been conducted with a view to measure and compares the HRV of the elite runners. There were total three groups viz., Group A(sprinters n=10), Group B (middle distance runners n=10), Group C(long distance runners n =10). Survey on the HRV of the subjects belongs to these three groups was conducted and the result was compared and correlated.

Statistical techniques:

ANOVA test was applied. In order to find out the significance differences between paired means, LSD test of Post-hoc comparison was applied. The level of significant was set at 0.05 level of confidence.

RESULTS AND DISCUSSION

To compare the level of heart rate variability of elite sprinters, middle distance and long distance runners the analysis of variance (ANOVA) was applied to find out the paired means significant difference. The level of significance fixed at 0.05. The analysis of the result and finding of the present study are exposed by the researcher in the following tables.

The following table illustrates the statistical result of the comparison among elite runners in relation to heart rate variability. Mean differences among the groups under study are also presented in the consecutive table.

TABLE 1
ANALYSIS OF THE VARIANCE OF THREE DIFFERENT TRACK EVENT
ATHLETES IN RELATION TO HEART
RATE VARIABILITY

Source of variance	df	SS	mss	f-ratio
Between	2	64.91201(SST)	32.456005	17.19*
With in	27	50.95369(SSE)	1.8871737	

*Significant at 0.05 level

F.05 (2, 27) =17.19

Table-1 reveals that the calculated “f” value is 17.19 which is greater than the table “f” value 3.35 at the degree of freedom of (2,27) at the level of significance 0.05 it means that there is a significance difference among the group in health related physical fitness.

As the ANOVA was significant then LSD post Hoc Test was applied to find out paired mean significance difference and the level of significance was 0.050.

TABLE 2
MEAN DIFFERENCE OF LSD POST HOC TEST FOR HEART RATE
VARIABILITY

S. No.	G1 (Sprinters)	G2 (Middle Distance Runners)	G3 (Long Distance Runners)	M.D	C.D
1	3.32	4.33		1.01	1.25
2	3.32		6.82	3.5	1.25
3		4.33	6.82	2.49	1.25

Significant at 0.05 level.

The mean scores of heart rate variability of sprinters, middle distance and long distance runners have been depicted in the following figure.

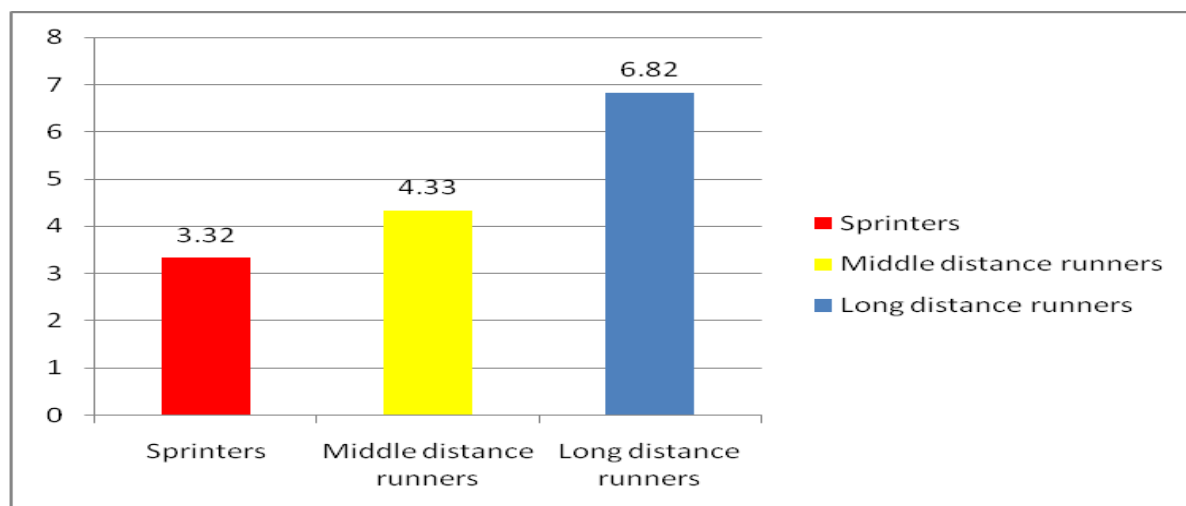


Fig-1. Graphical representation of heart rate variability of different track athletes.

Sprinters and middle distance runners had almost same HRV by comparing their MD (mean difference). Hence their fitness level, either physically or mentally are also same and it is only due to their conditioning and training that is almost same.

Whereas long distance runners had higher HRV than the sprinters and long distance runners. Hence the fitness level of long distance runners is higher than sprinters and middle distance runners.

DISCUSSION

The mean shows that sprinters and Middle distance runners have the same heart rate variability. It indicates that both sprinters and middle distance runners conditioning process are almost same.

The mean shows that long distance runners has more heart rate variability than sprinters, it may be due to the nature of their conditioning, practice and exercises as long distance runners perform hard and more exercises than the sprinters.

The mean shows that the long distance runners have slightly more heart rate variability than middle distance runners; it may be due to their training and conditioning process as long distance runners' training is slightly harder than the middle distance runners.

As we know, HRV is a relatively new method for assessing the effects of stress on the body. Earlier research evidence increasingly links high HRV to good health and high level of fitness while decreased HRV is linked to stress, fatigue and even burnout.

In the present study, all the athletes i.e. sprinters, middle distance long distance runners have high HRV then the normal range 0.064 to 0.196 Hz. But according to the purpose of the study which group has high level of fitness then the others. This study indicates that sprinters and middle distance runners have almost the same level of fitness because of their almost same HRV (middle distance runners have slightly higher than the sprinters). But the HRV of long distance runners has higher than the sprinters and middle distance runners. Therefore long distance runners group is more physically fit and psychologically sound than the sprinters and middle distance runners.

Earlier it was hypothesized that there was significant difference in the heart rate variability of elite sprinters, middle distance and long distance runners.

On the basis of the findings of the present study the hypothesis which was stated earlier that there was significant in the heart rate variability of elite sprinters, middle distance and long distance runners is rejected in regard to sprinters and middle distance runners.

Further the hypothesis there was significant difference in the heart rate variability of elite sprinters, middle distance and long distance runners is accepted in regard to sprinters and long distance runners and middle distance and long distance runners.

CONCLUSION

1. All the runners of different track events have high level of HRV than the normal range. Therefore all these athletes have high level of physical fitness.
2. Sprinters and middle distance runners have the same level of physical fitness because of their same level HRV.
3. Long distance runners have high level of HRV than sprinters therefore their fitness level is also higher than the sprinters.
4. Middle distance runners have low level of HRV than long distance runners, therefore the fitness level of middle distance runners is also lowest than the long distance runners.

RECOMMENDATIONS

1. A study may be conducted on female athletes.
2. A study may be conduct on comparison of HRV (heart rate variability) between male and female athletes.
3. A study may be conducted on collegiate students.
4. A study may conduct on different states, zonal wise and even at national and international level.
5. The study may recommend the coaches and athletes should select effective means to lower down the athletes' heart rate variability in order to achieve high level of fitness.

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A COMPARATIVE STUDY OF SELF-CONCEPT OF THE WOMEN PLAYERS IN KHO-KHO AND OTHER GAMES

Dr. Hema Ladha*

ABSTRACT

Success or Failure on the field often depends on mental factors as much as physical ones, sports psychologists recognize the dramatic impact of the athlete's mindset and focus on the field while boosting confidence for optimal performance. The purpose of the study was to compare the self-concept of the women players in Kho-Kho, Cricket, Handball and Badminton at random basis according to their feasibility was done from the affiliated colleges to Devi Ahilya University, Indore for this study. 180 subjects for the present study were selected. In which, 50 subjects from each game like Kho-Kho, Cricket and Handball and 30 subjects from Badminton. Self-Concept was measured by "Manual For Swatwa Bodh Prakashan" Questionnaire by Shery,.Verma, and Goswami. One Way Analysis of Variance (ANOVA) was used and level of significance was tested at .05 level. Result shows that insignificant differences were found among the four groups. of players.

Key words:- Self-Concept, Kho-Kho, Cricket, Handball, Badminton games.

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INTRODUCTION

Sports psychology is an interdisciplinary science that draws on knowledge from many related fields. how psychological factors affect performance and how participation in sport, exercise and physical activity affect.

Success or Failure on the field often depends on mental factors as much as physical ones, sports psychologists recognize the dramatic impact of the athlete's mindset and focus on the field while boosting confidence for optimal performance.

Today, a sports psychologist's role is more accepted as a part of the regular coaching staff for teams and for individual athletes. The roles of sports psychologists are numerous, but they primarily teach athletes mental game skills to improve their performance and learning.

Self-Concept is an important term for both social psychology and humanism. Self-Concept is a collection of beliefs about oneself that includes elements such as academic performance, gender roles and sexuality and racial identity. The individual's belief about himself or herself including the person's attributes and who and what the self is. Self-Concept the sense of being separate and distinct from others and the awareness of the constancy of the self (Aronson, Wilson and Akert, 2007).

Psychologists Carl Rogers and Abraham Maslow were the first to establish the notion of self-concept. According to Rogers, everyone strives to reach an 'ideal self'. Rogers also hypothesized that psychologically healthy people actively move away from roles created by others expectations and instead look within themselves for validation. On the other hand, neurotic people have 'self-concepts' that do not match their experiences as valid, so they distort them, either to protect themselves or to win approval from others. Carl Rogers believes that the Self-Concept has three different components:---

1. The view you have of yourself.
2. How much value you place on yourself.
3. What you wish you were really like.

A person's Self-concept may change with time as reassessment occurs, which in extreme cases can lead to identity crises. Researchers debate over when self-concept development begins? some assert that gender stereotypes and expectations set by parents for their children impact. Children's understanding of themselves by approximately age 3. others suggest that self-concept develops later, around age 7 or 8, when children are developmentally prepared to interpret their own feelings and abilities, as well as feedback they receive from parents, teachers and peers.

Self-Concept, strictly defined, is the totality of our beliefs, preferences, opinions and attitudes organized in a systematic manner, towards our personal existence, simply put it is how we think of ourselves and how we should think, behave and act out our various life roles. Self-concept is the image that we have of ourselves. How exactly does this self image form and change over time? this image develops in a number of ways, but is particularly influenced by our interactions with important people in our lives. Self-Concept is our perception or image of our abilities and our uniqueness. At first one's self-concept is very general and changeable--as we grow older, these self perceptions become much more organized, detailed and specific. Your self-concept is your mental picture of yourself.

METHODOLOGY

Selection of Subjects:

There has been random selection done of colleges affiliated to Devi Ahilya University, Indore for this study. The selection of the women players of kho-kho, Cricket, Handball and Badminton is done on the basis of their feasibility. 180 subjects of the present study were selected. 50 each from Kho-kho, Cricket, and Handball and 30 from Badminton. .

Tool Used:

Self-Concept was measured- "Manual For Swatwa Bodh Prakashan" Questionnaire by Dr. Shery, Dr. Verma, Dr. Goswami.

Statistical Procedure:

To calculate the level of significant difference among the groups of Kho-Kho, Cricket, Handball and Badminton, one way analysis of variance was used and level of significance was tested on 0.05% reliability level.

RESULTS AND DISCUSSION

The analysis of variance on the data concluded have been presented in the table 1 and depicted in Figure 1.

TABLE 1
ANALYSIS OF VARIANCE OF SELF-CONCEPT AMONG GROUPS OF WOMEN
PLAYERS OF BADMINTON, HANDBALL, CRICKET
AND KHO-KHO

Source of variance	df	Sum of Square	Mean Squares	F. Ratio
Between groups	3	39.520	13.173	.495
Within groups	176	4684.280	26.615	
Total	179	4723.800		

*Significant at .05 level, $F_{.05}(3, 176) = 2.66$

It is observed from table 1 that there was no significant difference in Self-Concept among the groups because F.Ratio amounts to .495. However, the needed value of level of significance which is .05 comes to 2.66.

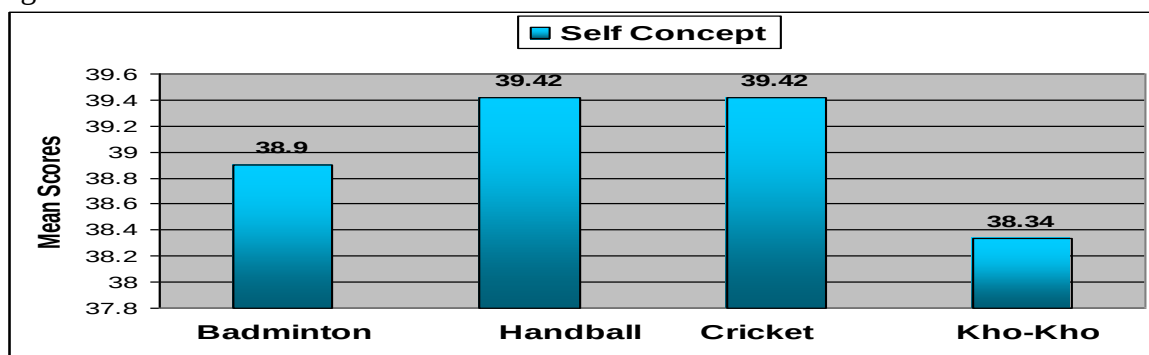


Figure.1: mean scores of Self-Concept in Badminton, Handball, cricket and Kho-Kho are presented in the graph.

DISCUSSION

The results of Self-Concept. shows that there is no significance difference among Kho-Kho, Cricket, Handball and Badminton groups, which means that all of them have same level of Self-concept.

Sport is not just a physical activity but also a mental activity. Training program for players is set up in such a way that they develop mutual understanding, helpful attitude, reaction time, analysis capacity etc. in them. Environment is the important component of self-concept. probably all the players got almost similar environment, since beginning, so their self-concept remained the same.

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SPORT OF MALLAKHAMB : A TRADITIONAL GAME OF INDIAN CULTURE

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ABSTRACT

Mallakhamb is combination of Yoga, Gymnastics, and Martial Arts. The Exercises of poles of mallakhamb and rope are played against the Gravity during upward and downward movement. Mallakhamb is the name given to a little known style of physical culture practiced in India. Mallakhamb developed in the state of Maharashtra in India and the first reference to it is in the Manasollasa (1135 AD). In 17th century Shri. Balambhatta Dada Deodhar introduced this game to others. There are many types of Mallakhamb as Pole, Rope, Hanging, Niradhar (without support), on cane, on floating platform, Mallakhamb with weapons etc. Mr. Takejamal was the first performer to demonstrate the art of Mallkhamb to Sir. Elphinston (British Resident of Pune). Saptashringi Wani, Nashik & Kothure were the birth place of Mallkhamb. Mallakhamb was originally practiced to develop the strength, agility and flexibility of wrestlers and has now developed into a National Sport of India.

In 1962, Gymnastics Federation of India organized the official First National Championships of Mallakhamb at Gwalior (M.P.) as apart of National Gymnastic Championships. The National Championships of Mallakhamb were organized until 1976 due dissociation of Mallakhamb from GFI, In 1968-69, the game of Mallakhamb was introduced in the All India Inter-university Gymnastic Championship. During this Mallkhamb championships, they instituted the “Mallakhamb Federation of India on January 29, 1981. Since then, different state associations of Mallakhamb affiliated to MFI are organizing the National Mallakhamb championships in different age groups of Boys, Girls, Men and women. Mallakhamb was included by SGFI in National School Games in 2008-09 .

A total of 35 national championships had been organized by different state of India for different age groups Mallakhamb players up to 2015. Maximum number of national Mallakhamb championships were organized in the state of Maharastra followed by Madhya Pradesh., Andhra Pradesh, Uttar Pradesh, U.T (Goa), Rajasthan, Madras, Punjab, Gujrat, Pondichery and Tamilnaidu.

Practicing the exercise on Mallakhamb helps to develop flexibility, grace, swiftness and rhythm, endurance, strength and stamina, speed, reflexes, concentration and coordination of individual, and combat game's player i.e. wrestling, judo, gymnastics, athletics, horse Riding, tennis tennis and badminton etc. But with the phenomenal and ever increasing popularity of mallakhamb in the past few years, there is a surprising lack of research in this specific area.

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INTRODUCTION

Mallakhamb is known as “The mother sport of ancient India.” Mallakhamb is the most scientific ancient art of making the body swift, supple, agile and healthy. Mallakhamb is no exception for this Indian Traditional culture. At present, 5th generation of Mallakhamb is carrying forward and resulting in even growing popularity not only in India but also throughout the world. The literatures of Mallakhamb were published in Encyclopedia of Indian Culture, souvenir of different competitions, Vyayam magazines, some Journals and books earlier in India., the Vyayamdnayankosh, a incomplete book on mallakhamb was written & published in Vadodara city in 20th century. This sport requires the agility, suppleness of body, quickness of reflexes, coordination of different muscles, strength, flexibility for the performers to execute turn, twist, stretch, balance exercises on the pole of Mallakhamb during training and competition.

Mallakhamb needs concentration, speed and flexibility. It is the only game which is played against gravity. It is a good exercise to our body especially for backbone. Our whole body gets a message while performing on Mallakhamb.

Mallakhamb is a pure Indian game. It is a sport that combines various exercises that improve speed, flexibility, strength, concentration, coordination and agility. Along with neuromuscular development, areas of personal character, discipline and self-motivation will be strongly enhanced. Becoming top player isn't for everyone. It improves the concentration, helps enhancing immunity power, increases the competitive spirit, and to fight the stress levels in an organized and better ways.

Mallakhamb is combination of Yoga, Gymnastics, and Martial Arts. The Exercises of poles of mallakhamb and rope are played against the Gravity during upward and downward movement. This Sport provides the maximum exercises in minimum period of time for maximum muscles of mallakhamb players. Sport makes the player agile. Mallakhamb is a anaerobic type of activity. Strength endurance play a vital role in the game of mallakhamb. Mallakhamb strengthened the sport muscles of human body. Mallakhamb imparts proper tone and form to every muscle and perfect control over each part of the body. It stimulates the mind and builds the body. The controlled and rhythmic breathing and smooth balanced movements in mallakhamb help in the development of the mental and physical faculties of our body. Mallakhamb training improve the speed of movement, vital capacity and peak expiratory flow rate, enhance concentration based performance and voluntary control of breathing of players.

ORIGIN, HISTORY AND DEVELOPMENT OF MALLAKHAMB IN INDIA

The origin of mallakhamb can be traced to the 12th century, where it is mentioned in Manas-Olhas - a classic by Chalukya in 1135 A.D. In 17th century Shri. Balambhatta Dada Deodhar introduced this game to others. There are many types of mallakhamb as Pole, Rope, Hanging, Niradhar (without support), on cane, on floating platform, Mallakhamb with weapons etc. But at competitive level only pole, rope and hanging mallakhamb are being performed by mallakhamb players. The boys are performing on pole, rope and hanging mallakhamb and girls on rope mallakhamb. For seven centuries, the art lay dormant, till it was revived by Balambhatta Dada Deodhar, the sports and fitness instructor to Peshwa Bajirao II, who reigned during the first half of the 19th century Deodhar was wrestler from the Peshwa court in Pune. He developed mallakhamb as a training aid for wrestlers over the years, He was involved in gymnastics.

There are references to Indian wrestling in Vedic texts that date back to 1700 B.C, in the Rig Veda (Avari 2007), and also in the classic Indian epics, the Ramayana and the Mahabharata. Wrestling in India is a synthesis of two distinct forms. The indigenous Indian form, malla- yuddha , is described in the Mahabharata which was written between 500-300BC, and then later references to wrestlers exercising on wooden poles occur in the Manasollasa (1135AD), which is a detailed instruction manual on the scholarship and military training of young Chalukyan princes written by the Western Chalukya king Somesvara III (Ghoshal 1962, Alter 1994). It was from malla-yuddha, or the indigenous wrestling form, that mallakhamb historically traces its origins in the 12th century. The next reference to mallakhamb does not appear until the early 18th century. This lack of any historical documentation about mallakhamb for a period of more than six centuries is remarkable.

By the early 18th century, the Peshwas , who were Brahmin prime ministers appointed by the Marathi king, had seized control of the Maratha Empire. These coned mallakhamb revival happened during the reign of the last Peshwa ruler, Bajirao Peshwa II, who was later defeated and annexed by the British in 1819 (Ferguson 2004). In the interweaving of legend and history that is a distinctive part of Indian culture, a legend describes Hanuman appearing before the great warrior.

Uday Deshpande, a mallakhamb expert said, "Malla as in wrestler, khamb as in pole, evolved as a game, where the pole became the opponent for the wrestler. Mallakhamb's own name entwines Sanskrit and Hindi to literally mean "pole wrestling." The climbing, joyfulness, and irreverence of mallakhamb are said to be informed by the spirit of Hanuman, the Hindu monkey god, and its strange apparatus reflect his anatomy: the pole is his phallus and the rope is his tail. Hanuman is said to have appeared to the famed physical trainer of the Marathi kingdom's royal Prime Minister, Balambhatta Dada Deodhar, in the late 18th century, after he was challenged to a wrestling match by sinister outsiders. The trainer watches Hanuman climb a tree and acquires the monkey-god's skills, learning to mimic Hanuman's strength and agility.

. Mr. Takejamal was the first performer to demonstrate the art of Mallakhamb to the foreigner Sir. Elphinstone. He was the British resident of Pune . He was also the trainer of mallakhamb to kings of Vadodara. and Sir Jummadada of Indian Military. Saptashringi Wani, Nashik & Kothure were the birth place of mallakhamb. Sir Balambhatt Dada Deodhar was the founder of mallakhamb from Kothure. Afghan wrestler challenged Bajirao to fight with him, This challenge was accepted by Balambhatta Dada Deodhar. He practiced wrestling tricks on mallakhamb and defeated Afghan wrestler. In the 19th century, Ali and Gulab wrestlers from the Nizam of Hyderabad came to the Darbar of Shrimant Bajirao Peshwa and threw open challenge to the State wrestlers for a bout. 18 year young Guru Balambhattdada Deodhar accepted their challenge. He started practice practicing yoga and tricks of wrestling. During the deep meditation, he saw a vision of Lord Hanuman demonstrating a few tricks on a wooden pole. He rigorously practiced the tricks from his vision on the wooden pole and defeated his opponents easily.

During the First National Gymnastics Championships was held at the Pahadganj Stadium, Delhi, in the year 1958. Gymnastic Federation of India proposed to recognize and include game of mallakhamb in subsequent National Gymnastics Championships. In 1962, Gymnastics Federation of India organized the official First National Championships of mallakhamb at Gwalior (M.P.) as apart of National Gymnastic Championships. However, in

the year 1968-69, The game of mallakhamb was included and introduced in the All India Inter-university Gymnastic Championship. The National Championships of mallakhamb were organized until 1976. After dissociation of mallakhamb from GFI, recognized National Championships of mallakhamb were not organized from 1977 to 1980.

Mr. Rajesh and Rakesh Shrivastava, Dr. Bamshankar Joshi and some other lovers of Mallakhamb at Ujjain (M.P.) instituted an All India Level Association on 21/11/1980, which was later called Mallakhamb Federation of India. First All India Invitational National Mallakhamb Championships were held at Ujjain from 27- 29 January, 1981. During this Mallakhamb championships, they instituted the "Mallakhamb Federation of India on January 29, 1981. Since then, different state associations of mallakhamb affiliated to MFI are organizing the national mallakhamb championships in different age groups of Boys, Girls, Men and women.

MALLAKHAMB AT INTERNATIONAL PLATEFORM

After that, mallakhamb gained wide publicity and extensive popularity among the youth of India. This sport is slowly accepted in the USA, Germany, and Japan as well. In the US, every year players perform demonstrations and conduct summer camps to promote this great sport. Nicoleta (Greece) and Fred (America) have performed in several circus and acrobatic shows around the world, but it was the ancient sport of mallakhamb that brought them to India. Fred Norman (gymnast) also suggested that the mallakhamb should be propelled into Olympics movement.

International Mallakhamb Championships are being conducted for last 5 years in different countries viz. Argentina, Brazil, Portugal, Spain and Italy and recently, the International Mallakhamb Federation has also been formed. In 1936, a troupe of 35 acrobats from a small town in Central India traveled to the Berlin Olympic Games to demonstrate the ancient sport of mallakhamb.

Asian Mallakhamb Federation was constituted on 1 January 2011 and its head quarter situated in Pune, Maharashtra, India. The federation was incorporated by Govt. of India under [Pursuant to sub-section (2) of section 7 of the Companies Act, 2013 and rule 8 of the Companies (Incorporation) Rules, 2014] in 3/11/2014 and its head quarter situated in Pune, Maharashtra, India.

Mallakhamb Confederation of World, Asian Mallakhamb Federation, and South Asian Mallakhamb Federation, were founded by Dr. Jaydeepsinh Jadhav as president, Uday Deshpande as secretary general, Vinayak Rajmachikar as technical committee chairman, Dr. Ashish Mehta as treasurer and Geetanjali Shitole as member.

Deshpande has almost single-handedly been responsible for getting mallakhamb international exposure in recent years, through demonstrations and training camps in over a dozen countries around the world since 1997. Despite this, it was only recently that the Indian government started to change its attitude towards mallakhamb and recognised it as a legitimate national sport. Mallakhamb is now a growing sport in India. It will be included as a showcase sport in the 2010 Commonwealth Games in Delhi and new associations are springing up all over India.

MALLAKHAMB FOR SPORTS

Training on mallakhamb helps to develop speed, reflexes, concentration and coordination in the players of Wrestling, Judo, Gymnastics, Athletics, Horse Riding and Tennis etc. Most of the wrestlers use the shoulder vault on mallakhamb as a shadow

practice in the game. Training on mallakhamb will strengthen a gymnast's shoulder girdle for Roman Ring and also helps to develop the flexibility, grace, swiftness and rhythm of a successful gymnast. Mallakhamb increases the endurance, strength and stamina of the athlete needed for athletic events. Training on mallakhamb will strengthen the muscle of the shoulder girdle as well as forearm and increases the flexibility of the wrist joint of Tennis and badminton players. To save a goal in Cricket, Hockey and Football games, side dive catch on the mallakhamb will help the players of these games. The basic grip on mallakhamb helps a horse rider very much, as the grip is similar in both the cases. The horse mount on the mallakhamb is exactly similar to the literal horse mount. But with the phenomenal and ever increasing popularity of mallakhamb in the past few years, there is a surprising lack of research in this specific area.

Bal, Kaur, and Singh (2012) indicated the significant effect of 6-week rope mallakhamb training on speed of movement, vital capacity and peak expiratory flow rate. The results of this study showed that rope mallakhamb training lasting 6 weeks significantly. Our findings are supported by (Telles, et al. 1993) reported that after only 10 days of practicing asanas significantly improved static motor performance (eye-hand coordination). Thus, such mallakhamb training may be recommended to improve speed of movement, vital capacity and peak expiratory flow rate may contribute to enhance concentration based performance and voluntary control of breathing. Jayasinghe (2004) indicated that the yogic exercises on mallakhamb improves muscle strength and endurance, flexibility and cardiopulmonary endurance.

Mallakhamb is the name given to a little known style of physical culture practiced in India. Mallakhamb developed in the state of Maharashtra in India and the first reference to it is in the Manasollasa (1135 AD), a detailed instruction manual on the scholarship and military training of young Chalukyan princes written by the Chalukyan King Somesvara III. Mallakhamb was originally practiced to develop the strength, agility and flexibility of wrestlers and has now developed into a national sport with championships held annually at district, state and national levels throughout India. Mallakhamb involves an unusual mix of wrestling strength training and yoga postures practiced on apparatus including a wooden pole and a cotton rope (Jon burtt, Skadada, and Quebec)

MALLAKHAMB FOR HEALTH

Mallakhamb proves to be of immense value of diseases or disorders like insomnia, anemia, chronic pains in the body, abdominal problems, kidney troubles, E.N.T. problems, headache, migraine, chronic bronchitis, chest pain, respiratory or lung troubles, rheumatism and other types of irregularities of hygienic disturbances, Mallakhamb proves to be of immense value (<http://www.fitternity.com>)

Mallakhamb is a systematic and scientific mode of physical exercise. The controlled and rhythmic breathing and smooth balanced movements help to develop the mental and physical faculties of our body. The arm-holds and the upper handgrips help to develop powerful wrists, strong forearms and muscular biceps and triceps. The clinging grips of the fingers, palms and toes render the nerves and muscles strong and powerful. The acrobatic nature of the feats improves the sense of judgment and the hectic swings, jumps or somersaults promote toughness and fearlessness. By the hanging and swinging actions, neuromuscular co-ordination is enhanced. The light jerks and jumps gradually tone the lungs and improve the efficiency of the respiratory organs. The forward and backward bends during

the display help to accomplish the healthy functioning of the kidney, spleen, liver pancreas and urinary systems. The balancing activities like lifting and resting the body at various angles tone the ligaments of the spine, vertebral column, knees, elbows, ankles, neck and shoulders. (www.mallakhambindia.com)

CODE OF MALLAKHAMB

The Mallakhamb pole is firmly fixed into the playground. Castor oil is applied to it, in order to reduce friction and prevent abrasive injuries to the body of the player. The player mounts over the tower, performing numerous poses and postures, which cover various awkward twists, turns, hooks, grips, catches and hanging positions. Besides these, a number of asana postures and aerobatic feats are also performed.

Mallakhamb player perform 90-second routines packed with intricate skill combinations as a panel of three judges assesses each competitor's speed, grace, and difficulty on one of the sport's three apparatuses: pole mallakhamb, hanging mallakhamb, or rope mallakhamb. Mallakhamb Federation of India organizes the national competitions each year.

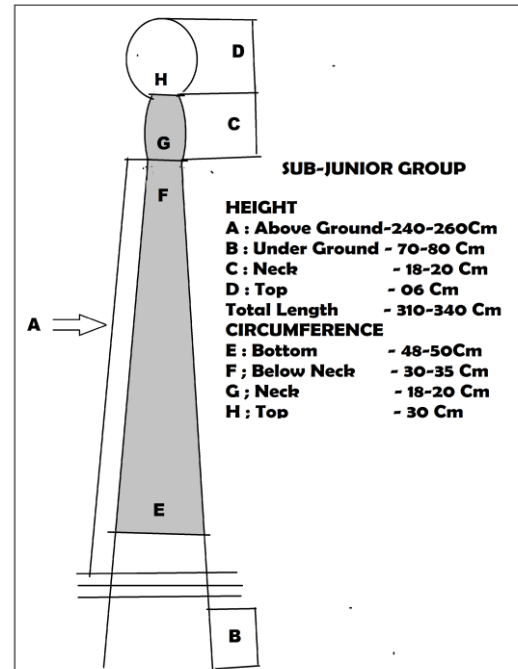
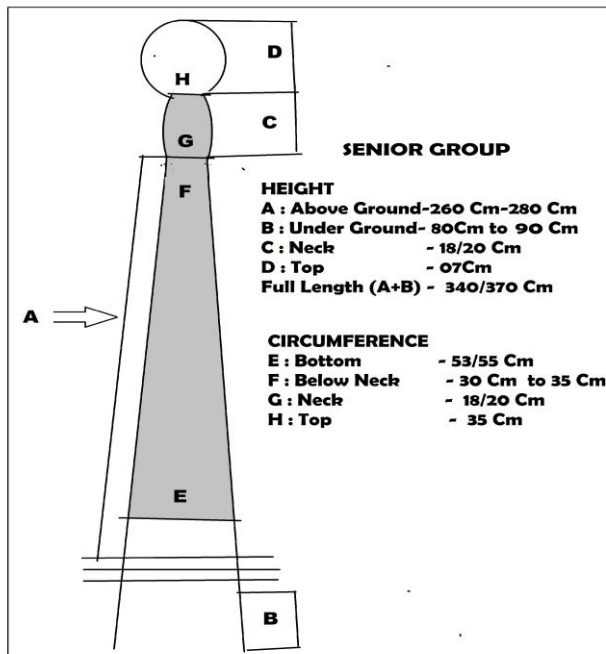
KINDS OF COMPETITIVE MALLAKHAMB

1. **Pole Mallakhamb** : A vertical wooden pole is fixed in the ground. The wood used is usually teakwood or sheeshum, preferred because of its twin characteristics of toughness and smoothness. The pole stands 225 cm above ground level. It has a circumference of 55 cm at its lower end, 45 cm in the middle, and 30 cm at the upper end. The height of the neck is 20 cm, and its circumference is 15 cm, and radius of the upper knobe is 13 cm. The pole mallakhamb form involves grappling movements executed on a smooth oiled teak pole which is fixed to the ground. The pole is tapered from roughly the size of a wrestler's thigh at the bottom to the size of a forearm at the top, with a narrower high neck above that. At the very top of the neck is a rounded knob the size of a clenched fist and the shape of the apparatus is in fact very phallic. The pole itself is very heavy and weighted with a heavy metal base with outriggers for stability. It is stable enough to support group pyramid formations. The oiling of the wood gives the pole a smooth surface which reduces changing on the body and allows the body to follow smoothly around the apparatus.
2. **Hanging Mallakhamb** : A smaller version of the fixed mallakhamb, it is suspended with the aid of hooks and chains. The swinging and revolving motion of this type of mallakhamb renders the exercises quite difficult and exacting. The hanging mallakhamb is generally only practiced as an advanced variation as it is very difficult due to the effect of the pole continually swinging away from the bodyweight of the practitioner. This form, as a variation of the pole form, is again only practiced by men. As a sport, the choreography of Indian mallakhamb routines has to conform to competition rules. Competition sequences follow a Western gymnastic model of set skills and time limits. This requires the athlete to complete as many separate postures or skills as possible in a two minute period .
3. **Rope Mallakhamb**: A cotton rope which is 2.5 cm thick, replaces the wooden pole. The performers are expected to strike various yogic poses, without knotting the rope in any way. Rope mallakhamb is the form practiced by females but which is also practiced by some men and boys. The mallakhamb rope is symbolically viewed as the god Hanuman 's tail.

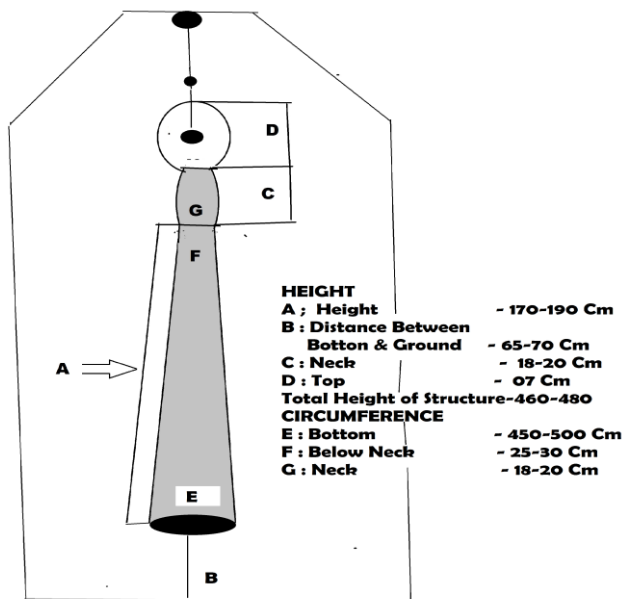
The rope sequences feature the extreme use of flexibility, daring falls and catches. A unique toe grip is employed which issued for climbing and holding the rope. This is because the sole of the foot is forbidden to touch the rope at any time as this would be considered disrespectful to Hanuman .At the end of the apparatus or “tail” the inner core of the rope is exposed and plaited to actually resemble a monkey’s tail and this is a symbolic visual reference to Hanuman.

DIMENSIONS OF COMPETITIVE MALLAKHAMB

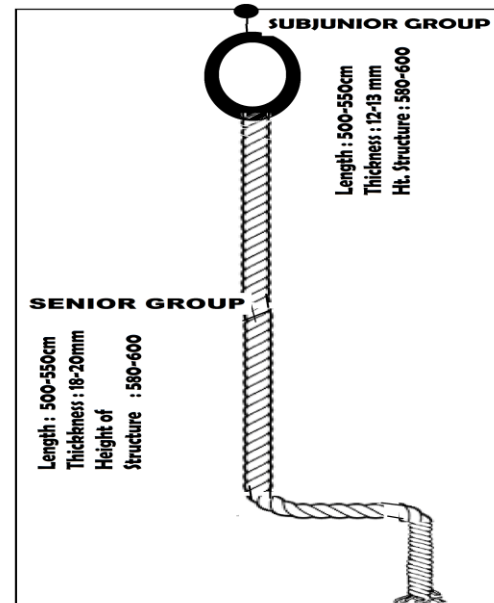
1. FIXED MALLAKHAMB



2. HANGING MALLAKHAMB



3. ROPE MALLAKHAMB



NATIONAL MALLAKHAMB CHAMPIONSHIPS FROM 1981 TO 2015

S.No	Year	Month	Place	State	Organized National Championships
1	1981	January	Ujjain	M.P.	1st national Championships
2	1982	February	Ujjain	M.P.	2 nd national Championships
3	1983		Not held		
4	1984	January	Mumbai	Maharashtra	3 rd national Championships
5	1985	January	Baroda	Gujarat	4 th national Championships
6	1985	December	Jhansi	U. P.	5 th national Championships
	1986		Not held		
7	1987	December	Dharwad	Karnataka	6 th national Championships
8	1988		Not held		
9	1989	January	Dawargiri	Karnataka	7 th national Championships
10	1990	December	Pune	Maharashtra	8 th national Championships
11	1991	December	Jhansi	U. P.	9 th national Championships
12	1992		Not held		
13	1993	February	Kanyakumari	Tamilnadu	10 th national Championships
14	1994	March	Mumbai	Maharashtra	11 th national Championships
15	1995	January	Ujjain	M.P.	12 th national Championships
16	1996	March	Mumbai	Maharashtra	13 th national Championships
17	1997	March	Mumbai	Maharashtra	14 th national Championships
18	1998		Not held		15 th not organized
19	1999	March	Mumbai	Maharashtra	16 th national Championships
20	2000	February	Sangli	Maharashtra	17 th national Championships
21	2001	December	Jhansi	U. P.	18 th SubJunior, Junior, Senior
22	2002	23-25 March	Bhusawal	Maharashtra	19 th SubJunior, Junior, Senior
23	2003	12-14 Jan.	Satara	Maharashtra	20 th national SubJunior, Junior, Senior
24	2003	21-23 December	Bharatpur	Rajasthan	21st national SubJunior, Junior, Senior
25	2004				
26	2005	11-13 Feb.	Dadar- Mumbai	Maharashtra	22 nd National SubJunior, Junior, Senior
27	2006	16-18 Jan.	Amritsar	Punjab	23 rd National SubJunior, Junior, Senior
28	2007	02-04 Feb.	Chennai	Madras	24 th National SubJunior, Junior, Senior
	2007	26-28 Nov.	Ponda, Goa	U.T.	25 th Mini, SubJunior, Junior, Senior
28	2008	27-28 Dec.	Bhimavaram	A.P.	22 nd Mini and SubJunior Boys and 21 th mini ,subjunior Grls
	2009	18-20 Jan	Sangli	Maharashtra	26 th Senior & 25 th Junior boys and 22 nd Senior & junior Girls
30	2009	26-27 Dec.	Khachrout(Ujjain)	M.P.	Junior 23 rd Girls and 26 th Boys
	2009	5-6 Nov.	Gwalior	M.P.	Senior 27 th Boys and 23 rd girls
	2009	26-27 Dec.	Khachrout-Ujjain	M.P.	26 th boys junior, 23 rd girls
31	2010	26-28 Feb.	Hyderabad	A.P.	23 rd Mini and Subjunior Boys and 22 nd Girls
	2010	26-28 Dec.	Miraj -Sangli	Maharashtra	24 th Mini and SubJunior Boys and 23 rd mini subjunior Gils
	2011	28-30 jan.	Haveri	Karnataka	27 th Jr. Boys, 24 th Jr Girls, 28 th Sr. Boys, 24 th Sr. Girls

S, No.	Year	Month	Place	State	Participated Teams
32	2012	24-26 Nov.	Mardol, (Goa)	U.T.	Senior & Junior Boys and Girls
33	2013	16-17 March	Uppalam	pondicherry	26 th mini and Subjunior Boys, 25 th Mini Subjunior Girls
	2014	28-30 March	Ujjain	M.P.	Senior & Junior Boys and Girls
34	2015	31Jan-2Feb.	Khachroud(Ujjain)	M.P.	(Senior: Men and Women), Junior (Boys and Girls)
35	2015	21-23March	Bhopal	M.P.	. (Sub-Junior, Mini Boys and Girls)

Mallakhamb was included in by SGFI in National School Games wide letter No. SGFT/011/07/Dated22/06/2007 in 2008-09 Sport calendar of SGFI. Grant started by Cenral Govt in 2007-2008 of Rs. 4 lakh during Goa Championship. 2008-2009 Championship divided into two parts 1. Mini Subjunior n Bhimavaram, 2. Junior and Senior in Sangli After that no grant proposal was sent to Central Govt. First School national games of Mallakhamb was held at Warna nagar Kolhapur (Maharastra 7-8 December 2008 under 17 and under 19 age group. 33 states affiliated to the MFI. Of the sea affiliated states, 14 put forward teams to compete in the 2008 Mallakhamb National Championships ,and 18 entered teams for the 2009 championships which were held in Goa.

KINDS OF RECREATIONAL MALLAKHAMB

1. Revolving Bottle Mallakhamb: This is a recent innovation, and consists of 32 glass bottles placed on a wooden platform, with the mallakhamb balanced on top. Presently, it is used for demonstration purpose.
2. Grease Mallakhamb: On the occasion of Janmastmi-A Hindu festival, it is used for the entertainment purpose in some states of India. A lubricant, called Grease is applied on the Iron Pole and prepare for climbing a person on it. A pot made up of soil filled with some fruits, rupees, coins etc is hanged at the top of Iron pole. Person can climb in any fashion at the top of the pole and win prize from the organizer.

CLASSIFICATION OF ELEMENTS

A, B, C class elements are performed on Pole Mallakhamb (Boys &Men), Hanging Mallakhamb (Boys & Men) and Rope Mallakhamb (Boys and Men, Girls and Women). These three class elements are chosen from the five groups of exercise i.e. mounts, hold parts, acrobatic elements, catches and dismounts by all mallakhamb players.

KIND OF CHAMPIONSHIPS

1. Competition N0.IA: Compulsory Set of exercises decided by M.F.I,
2. Competition N0.IB: Optional Set of exercises decided by competitive players,
3. Competition II- Individual All round Championship,
4. Competition II- Apparatus Championship.
5. Pyramid Competition-Optional for All tea

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A STUDY OF LEADERSHIP BEHAVIOR PREFERRED BY VOLLEY BALL AND BADMINTON PLAYERS.

Dr. Yuwraj Shrivastava* & Ganesh khandekar **

ABSTRACT

The purpose of the present study was to investigate and compare the leadership preferred for the set of five leader behavior dimensions i.e. training and instruction (TI), democratic behavior (DB), autocratic behavior(AB), social support (SS) and Positive feedback (PF) of Female volleyball and badminton Players. Thirty (30) Female Volley ball and Badminton of Dr. C.V. Raman University Kota – Bilaspur, who volunteered to participate in this study, were selected to serve as subjects for this study. The subjects were in age ranged from 17 to 25 years. To find out the significance of difference between means of preferences on leader behavior dimension of female Volleyball and Badminton Players, mean, standard deviation and t-ratio were computed. Results of the study indicated the similarity between volleyball and badminton players in their preferences for the set of five dimensions of preferred leader behavior from their coaches. Further, it is suggested that the sample should be increased to know the real fact of actual leader behaviour of the players from their coaches to fulfill their expectations.

Keyword:- Leadership. Behavior female Intramural competition .

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INTRODUCTION

Two dimension social Support, positive feedback of coaching behavior involve complex and from time to time controversial relations between the Players & Coach to the which is expected of the coach toward his & her Players.. Coach works basically on relationship with his & her Players and coaches has always been considered to be determinant factor of sports performance for behavioral, cognitive and emotional aspects. Because of the importance given by the Players to the relationship with their coaches. They report important view and thoughts centered in the coaches. However this Players and coaches relationship may be disturbed by a number of factors, such as incompatibilities between their personalities. The co-operation between the Players and the Coach is the psychological basis of coaching individualization. Indeed, coach's decision depends on their interpretation and cognition but they deeply interfere in sport and personal life of their Players with positive or negative effects. In fact the coaches working methods and interpersonal style have impact upon their Players stage of these ones' evolution. The Structuring of their adaptive skills will have expression in their performance and everyday life.

Schliesman (1987) found that perceived democratic behavior and social support were positively related to general satisfaction with leadership. Also discrepancy scores in training and instruction, social support, and positive feedback were also significantly related to satisfaction. Terry (1981) found that there were no differences in preferred leadership among different nationalities. He noted that "the three viable subject groups (Canada, United States, and Great Britain)" all share similar cultural backgrounds and sporting ideologies. Chelladurai and Saleh (1980) found that the congruence between preferred and actual behavior in the dimensions of autocratic behavior and positive feedback effected satisfaction with the coach in a curvilinear manner. Chelladurai (1994) found that among basketball players, discrepancy scores in all dimensions were significantly related to satisfaction with leadership. Corroborating these findings, Horne and Carron (1985) reported that discrepancies in training and instruction, social support and positive feedback were significant predictors of satisfaction with leadership. The higher the ratings of the coach's behavior in these dimensions related to preferences, the higher the satisfaction with leadership. .

Present study was to assess and compare the leadership preferences of female volleyball and badminton Players.. It was also hypothesized that female volleyball and badminton Players may differ significantly in their leadership preferences.

MATERIALS AND METHODS

Sample:

Twenty nine (29) female Volley ball & Badminton Players from Dr. C. V .Raman University Kota- Bilaspur during Intramural competition held in 2013-14 were selected to serve as subjects for this study. The subjects were in age ranged from 17 to 25 years. The subjects were selected randomly from Intramural competition in the university.

.Instrument :

Leadership Scale for Sports developed by P. Chelladurai was selected as a criterion tool to measure leadership preferences of female Volleyball and Badminton players of different team games. The Leadership Scale for Sports (L.S.S.) is a valid and reliable instrument. The scale consists of 40 items for athlete's perception of coach's behavior and 40 items for preference version consisted of five dimensions of leadership behavior i.e.

training and instruction, social supports and positive feedback democratic behavior, autocratic behavior,

Statistical Analysis:

To assess the preferences on five dimensions of leader behavior of female volleyball and badminton players, mean and standard deviation, and t-ratio on five dimensions of preferred leader behavior

RESULTS

To find out the significant differences in the preferences on five dimensions of leader behavior of female volleyball and badminton players, mean and standard deviation, and t-ratio on five dimensions of preferred leader behavior with total subjects were calculated and data pertaining to this have been presented in Table 1 and 2 and depicted in Figure 1.

TABLE 1
DESCRIPTIVE STATISTICS OF FIVE DIMENSIONS OF PREFERRED LEADERSHIP BEHAVIOUR OF FEMALE PLAYERS BELONG TO VOLLEYBALL AND BADMINTON GAMES

Leader Behaviour Dimensions	Volleyball Players (N=15)		Badminton Players (N=14)	
	M	SD	M	SD
Training & Instruction	4.336	0.543	4.346	0.513
Social Support	3.580	0.595	3.825	0.538
Positive Feedback	3.269	0.870	2.946	0.794
Autocratic Behaviour	3.714	0.528	3.790	0.417
Democratic Behaviour	4.240	0.616	4.213	0.548

The mean scores of five dimensions of leader behavior as preferred by Intramural competition Volley ball and Badminton players have been depicted in figures 1.

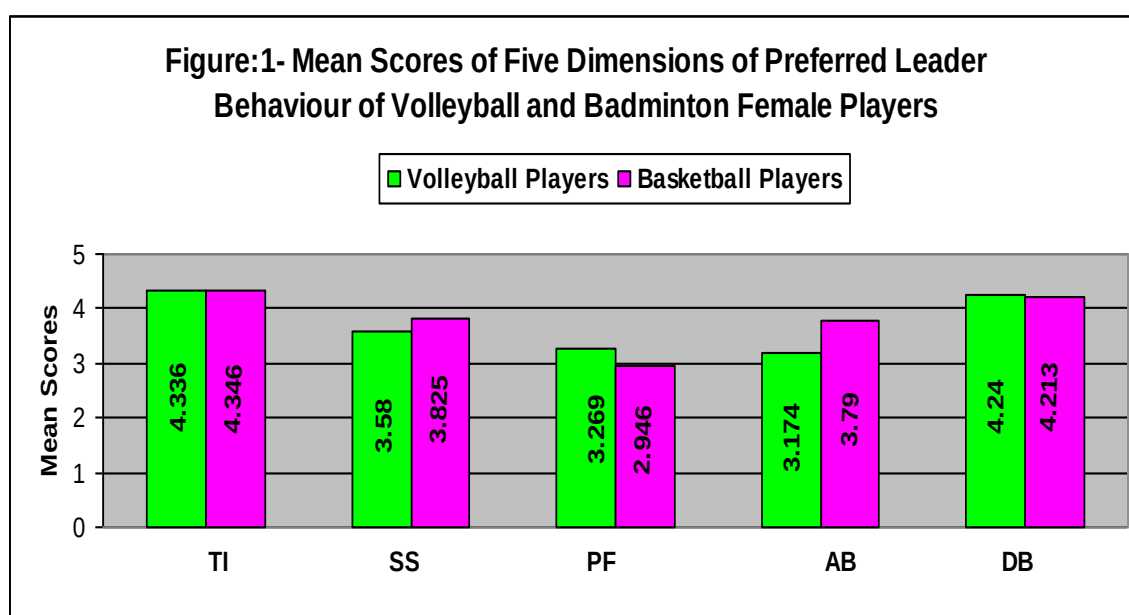


TABLE 2
SIGNIFICANCE OF DIFFERENCES BETWEEN MEAN SCORES ON FIVE
DIMENSIONS OF PREFERRED LEADERSHIP OF FEMALE
PLAYERS BELONG TO VOLLEYBALL AND
BADMINTON GAMES

Leader Behaviour Dimensions	Games	Mean	MD	σ DM	t-value
Training& Instruction	Volleyball	4.336	0.02	0.19	0.05
	Badminton	4.346			
Social Support	Volleyball	3.580	0.245	0.21	1.14
	Badminton	3.825			
Positive Feedback	Volleyball	3.269	0.323	0.30	1.06
	Badminton	2.946			
Democratic Behavior	Volleyball	3.714	0.076	0.17	0.44
	Badminton	3.790			
Autocratic Behavior	Volleyball	4.240	0.027	0.21	0.12
	Badminton	4.421			

Non-significant at 0 .05 level

t .05 (27) =2.04

It is evident from table 2, that there were statistically no significant difference between the preferences of female volleyball and badminton players in training and instruction, autocratic behaviour, democratic behaviour, social support and positive feedback dimensions of preferred leader behavior, as the obtained t-values of 0.05, 1.14, 1.06, 0.44 and 0.12 respectively were lower than the required t-value of t.05 (27) = 2.04.

DISCUSSION

Descriptive analysis of data on five dimensions of Preferred leadership behavior indicated that volleyball players preferred more social Support, positive feedback and democratic behavior from their coaches than their counter parts. In case of badminton players, they preferred more training and instruction and autocratic behavior from their coaches than volleyball players. The results of t-ratio indicated the insignificant differences between volleyball and badminton female players in their five dimension of actual leader behaviour from their coaches. Kim et al (1990) found that Korean athletes involved in individual sports, combative sports, and team sports differed among themselves in all dimensions except in preferred training and instruction. It means, the female volleyball players preferred more of personal needs (SS), positive feedback on their performances to maintain motivation .and involvement in decision making style of the coach. But female badminton players focused more on training process to improve athlete's performance and involvement in decision making style of the coach in important matters of them.

CONCLUSIONS

1. Female volleyball and badminton players did not have any significant difference in their five dimensions of actual leader behaviour.
2. Volleyball players preferred more of social support, positive feedback and democratic behaviour dimensions of actual leader behaviour from their coaches.
3. Badminton players preferred more on training process to improve athlete's performance and involvement in decision making style of the coach in important matters of them.

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