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Editorial

Yoga has been an integral part of Indian heritage. We have been taught about a few Aasans in school and have always been made aware of its benefits. Yoga is a classic example of "when you experience it, you know how important it is". Just recently over the years Yoga has taken a centre stage on global platform. A day has been dedicated and recognized by U.N as Yoga Day and India couldn't be more proud about it.

Recently, the importance of Yoga in sports have been recognized and more and more athletes are including Yoga sessions as a part of their fitness programme. When Anil Kumble took over as Indian Cricket team's coach, his first session included a Yoga Session at Bengaluru for the entire team. His emphasis on importance of Yoga for Team India's young boys showcases the growing importance in an athlete's life. There have been numerous studies and research that has shown that Yoga helps in reducing stress, depression etc. The psychological aspect of the Sports is the most important one, and Yoga helps in mitigating the psychological threats. There has been plenty of athletes like Jonathan Trott , Monty panesar who have spoken about mental illness and whose careers have been greatly impacted due to it. This just underlines how important the psychological aspect of the game is. Not just psychological aspect of the body, but it also enhances the physical aspect. Yoga increases blood circulation, it enhances breathing, strength, stamina etc.

This just underlines the importance of Yoga not just on the psychological aspect of the game but also the physical aspect. A lot of awareness has already been spread about the importance of Yoga in sports and the more it grows and spreads the more it will help athletes endure the hardships of sports.

Yoga can be an instrumental tool in handling the pressure, stress, anxiety of sports in a better way. And due research is needed on how varied Aasans of Yoga can be beneficial on different aspects of different sports.

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The Effect of Acute Creatine Supplementation on Physiological Variables of Continuous and Intermittent Soccer Activities of Men Soccer Players

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Abstract

The aim of this study was studying the effect of acute creatine supplementation on physiological variables of continuous and intermittent soccer activities of men soccer players. 32 soccer players from Tarbiat Moalem university aged (22/3+-1/6) volunteered for this research and were divided into two groups randomly. Both experimental and control groups after 6 days taking supplementation were tested. For measuring height and weight meter and balance were used. Questionnaire for health background, lactate Electro, heart beat measuring Polar Electro, continuous and intermittent training program and time recorder were used for data collection. For data analysis descriptive statistical techniques, two-way ANOVA and F test were used. The result of this study showed increased significantly in heart rate in control group. For control group heart beat was (71/6 +- 3/5) and for experimental group it was (75/3 +- 4/9) . No significant differences were observed in player's weight after
taking creatine.

Key words: Heart beat, lactate Blood, Creatine ,Soccer players

Introduction

It is true that many physical and physiological characteristics of the athlete are determined by the genetic. But many elite athletes with exercise and nutritional strategies in the genetic background of his talent and favorable changes to improve body composition, physical fitness and athletic performance are conducive. Therefore; supplementation of specific nutrients in sports drinks, sports supplements and nutritional supplements before, during and after exercise is recommended.[2] Nutrition and exercise is one of the most important factors influencing the the performance of athletes and the importance and influence of nutrition on athletic performance is that athletes are tempted to eat the forbidden foods not approved.[3]

Creatine monohydrate (Cr) is perhaps one of the most widely used supplements taken in an attempt to improve athletic performance. Although in normal conditions, one kilogram of human body muscles, containing 25 mille moles of this substance, but the short-term loading through 20 to 50 percent will be increased. [5]

It is hypothesized that Cr can act though a number of possible mechanisms as a potential ergogenic aid but it appears to be most effective for activities that involve repeated short bouts of high-intensity physical activity. Additionally, investigators have studied a number of different Cr loading programmers; the most common programme involves an initial loading phase of 20 g/day for 5–7 days, followed by a maintenance phase of 3–5 g/day for differing periods of time (1 week to 6 months).[6]

Benefit from taking creatine to athletes who have intensive training or their practice is based on the severe and repeated. consumption Applicable creatine in physical activity during intense intermittent exercise and competition will increases and the recovery after such activities will accelerate.[4]

Storage Pcr, 30 seconds long (Salin 1992). In contrast, the PH level to compare PH level before fatigue takes 10 minutes. (Metz, and Fitzgerald 1987). Researchers have documentary evidence of beneficial effects of long-term use (4 weeks) and short-term (2 to 7 days) on the function of creatine filaments that are confirmed to have anaerobic power requirements [7,8,11].

Researchers have documentary evidence of beneficial effects of long-term use (4 weeks) and short-term (2 to 7 days) on the function of creatine filaments that are confirmed to have anaerobic power requirements.

Ostojic have studied taking short-term effects of creatine (30 grams a day, 7 days) for soccer players. In this research testes (Endurance power, Dribbling, vertical jump and 20 m multistage shuttle) was used. Significant relation was observed in body weight of consumers creatine groups (9/1 kg).[11]

Aserud et al (1998) showed the most effective way to increase of glycogen is consumption creatine or simple carbohydrates with protein. [1]

Hough Green et al (1994) showed that taking short-term creatine (20 to 25 grams daily, 4 to 7 days), increases creatine storage 15 to 30%.

Brenner et al. reported that creatine supplementation (20 g/day ▪ 7 days; 2 g/day ▪ 28 days) significantly improved upper-body strength gain and decreased percent body fat in 16 female college lacrosse players during pre-season training.[4]

Burke et al. Reported that low dose creatine supplementation (7.7 g/day ▪ 21 days) during training promoted greater gains in total work until fatigue, peak force, peak power, and fatigue resistance in 41 college athletes.[5] Volek et al. reported that creatine supplementation (25 g/day for 7 days) resulted in a significant increases in the amount of work performed during five sets of bench press and jump squats in comparison to a placebo group. Wiroth et al. reported that creatine supplementation (15 g/day for 5 days) significantly improved maximal power and work performed during 5 to 10-sec cycling sprints with 60-sec rest recovery in younger and older subjects.

Experimental Group

Age	Height	Weight	Resting heart rate (beat per minute)	Resting blood lactate (mg / L)
22.4±2.1	177.1±5.1	67.1± 6.2	74.8±2.7	4.2 ± 1.1

Control Group

Age	Height	Weight	Resting heart rate (beat per minute)	Resting blood lactate (mg / L)
22.01± 1.4	175.8± 4.6	77.4±6.3	75.06 ±3.55	5.3± 1.6

Tools of the research

Scales and meters are used for players' height and weight measurements.

The questionnaire of disease and health history of players

The blood lactate measurement set (lactate Electro model Scout)

The heart beat recorder (Polar Electro)

Intermittent and continuous training protocols for
Collecting data on the dependent variables consist of
1.Yo Yo Test 2. Running with high speed 3.Interval Test 4. Running

Design of the research

Experimental group were participated in a regular program of physical activity such as intermittent and continuing using creatine monohydrate (20 gr creatine +8 gr glucose) during 6 days. Control group were participated in a regular program of intermittent and continuing specific soccer activity with using drugs (20 gr corn flour +8 gr glucose) during 6 days.

Statistical tools of the research

To calculate average, mean and standard deviation descriptive statistics was used. Two-way analysis of variance and F test ($P<0.05$) was studied in two groups of players. Statistical software 15 SPSS / was used for data analysis.

Results

For analysis, all data was studied in two groups Experimental and Control group. The Results showed, significantly increase of heart rate after 6 days and with using periodic and regular exercise protocol in experimental group.

There was no significant difference in heart rate before and after exercise for control group. There was no significant increase in blood lactate levels before intermittent and continuous exercise for experimental group.

But doing 6 days of regular exercise training (intermittent and continuous) players showed a significant difference in blood lactate levels.

Table 1. Physiological and anthropometric characteristics of Soccer players

Variables	Experimental group (Mean + / - standard deviation)	Control group (Mean + / - standard deviation)
Age	22/4 +-2/1	22/1+-1/4
Height (cm)	177/1+-5/3	175/8+-4/6
Weight (kg)	67/1 +-6/2	77/4+-6/3
Resting heart rate	74/08 +-2/7	75/06+-3/55
Body mass index (kg / m)	21/35 +-5/18	21/67+-2/92
Body fat	23/92 +-8/12	24/35+-2/21
Resting blood lactate (mg / L)	4/2 +-1/1	5/3+-1/6

Table 2. Comparison of changes in heart rate (beats per minute) in Soccerplayers Experimental and control groups before conducting protocol training

Variables	Experimental group (Mean + / - standard deviation)	Control group (Mean + / - standard deviation)
Creatine - intermittent	74/1 2/2	69/3 3/8
Drug - intermittent	67/4 3/4	73/8 2/4
Creatine - continuative	67/4 3/4	71/6 3/5
Drug - continuative	75/6 2/8	75/3 4/9
The mean difference between groups	0/001	0/001

Conclusion:

According to the research results Creatine appears to be an effective and safe nutritional ergogenic aid to improve high intensity exercise performance and/or training adaptations in a variety of sports. Although more research on the potential ergogenic value of creatine for specific athletic populations may be useful, it is my view that the most promising area of future research will be to examine potential therapeutic benefit for various clinical populations.

Taking creatine with a regular exercise program, including alternative and continuative training on heart rate and blood lactate levels of male soccer players are so effective that increases heart rate and blood lactic acid levels.

References:

1. Aserud, R. et al. (1998) *Creatine supplementation delays onset of fatigue during repealed bouts of sprint running,* Scandinavian journal of medicine and science in sport, 8, 247-251.
2. Balsam, P. et at. (1994) *Creatine in humans with special reference to creatine supplementation,* Sports medicine 18(4),268-280
3. Bangsbo J. and Lindquist F. (1992) *Comparison of various exercise tests with endurance performance during soccer in professional players, Int. J. Sports Med.,* 13: 125-32.
4. Benardot D. (2000) *Training with supplements: determining which ergogenic aids can improve performance and performance nutrition plans: combined power and endurance sports,* in Nutrition for serious athletes; an advanced guide to foods, fluids and supplements for training and perfonnance (Eds. Benardot D.), Human kinetics, pp. 123-37 and pp. 273-88.
5. Burke L., Desbrow B. and Minehan M. (2002) *Dietary supplements and nutritional ergogenic auis In sport: summary of the research literature on common sports supplements,* in Clinical sports nutrition (Eds. Burke L. and Deakin V.), 2"" <dition, McGraw-Hill, pp. 455-512 and pp. 529-53. .
6. Greanharr. P. (1997) *The nutritional effects of creatine,* Journal of nutritional Biochemistry, 8, 610-118.
7. Greenhaff, P., Bodin, K., Soderlund, K. & Hultman, E. (1994) *Effect of oral creatine supplement on skeletal muscle phosphocreatine resysysthesis,* American journal of physiology, 266, E725- E730.
8. Kreider, R et al. (1998) *Effects of Creatine supplementation on body composition, strength and sprint performance,* Medicine and science in sports and exercise, 30, 73-82
9. Kreider, R. J:t al. (2004) *Molecular and cellular biochemistry,* CRC press
10. 0stojic, S. (2004) *Creatine supplementation in young soccer players,* International journal of sport nutrition and exercise metabolism 1495-103.
11. Powers 5K. and Howley ET. (1997) *Factors affecting performance,* in Exercise physiology: theory and application to fitness and performance (Eels. Powers SK. and Howley ET.), Brown & Benchmark publishers. PP.361-70.

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The Effect of Plyometric Training on Selected Agility and Leg Explosive Power Variables on Pondicherry University South Zone Inter University Volley Ball Men Team

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Abstract

The purpose of the study is to find out The Effect of Plyometric Training on Selected Agility and Leg Explosive Power Variables on Pondicherry university south zone inter university volley ball men team. Forty male subjects were selected randomly only Pondicherry university south zone inter university volley ball men team. The subject's age ranged from 18 to 25 years of respectively. The selected subjects were divided into two equal groups of 20 subjects each. Experimental group (Group I) Plyometric Training and Control group (Group II). Pre-test was conducted for the two groups on selected Agility and Leg Explosive Power variables. The experimental group underwent Plyometric Training for 6 weeks, per week for the duration of the training was given for 5 days per week 45 minutes every day. The control group did not undergo any training program. After 6 weeks of training period the post test was conducted for all the two groups. The data was analyzed by applying Analysis of Variance (ANOVA) Technique to find out the Effect of Plyometric Training on Selected Agility and Leg Explosive Power Variables on Pondicherry university south zone inter university volley ball men team. Then, the obtained 'f' ratio is tested at 0.05 level of significant.

Key words: Plyometric Training, Agility, Leg Explosive Power and volley ball men team

Introduction

Plyometric

Plyometrics is also known as jump training, plyometrics is a form of conditioning aimed at created controlled impact and maximum power and is used primarily by athletes. This method involves stretching the muscles prior to contracting them and done correctly it strengthens muscles, increases vertical jump and decreases impact forces on the joints. Consciously practicing the technique of landing from a jump in a controlled environment teaches your body how to "land" and your muscles memory will kick in when you cannot focus all your attention on your technique (because you are chasing a rebound or opposing team member). It is great for sports that involve jumping like basketball, volleyball and tennis, but is also really effective for training to ski moguls (especially jumping sideways onto or a "step"). Upper body plyometrics are used to condition for boxing (pack a power PUNCH) and pitching in all sports.

Methodology

The purpose of the study is to find out the Effect of Plyometric Training on Selected Agility and Leg Explosive Power Variables on Pondicherry university south zone inter university volley ball men team. Forty male subjects were selected randomly only Pondicherry university south zone inter university volley ball men team. The subject's age ranged from 40 to 45 years of respectively. The subject's age ranged from 18 to 25 years of respectively. The selected subjects were divided into two equal groups of 20 subjects each. Experimental group (Group I) Plyometric Training and Control group (Group II). Pre-test was conducted for the two groups on selected Agility and Leg Explosive Power Variables. The experimental group underwent Plyometric Training for 6 weeks, per week for the duration of the training was given for 5 days per week 45 minutes every day. The control group did not undergo any training program. After 6 weeks of training period the post test was conducted for all the two groups. The data was analyzed by applying Analysis of Variance (ANOVA) Technique to find out the effect of Plyometric Training on Selected Agility and Leg Explosive Power Variables on Pondicherry university south zone inter university volley ball men team. Then, the obtained 'f' ratio is tested at 0.05 level of significant.

TABLE – I
ANALYSIS OF CO VARIANCE FOR PRE AND POST TEST DATA ON AGILITY AND LEG EXPLOSIVE POWER OF EXPERIMENTAL GROUP AND CONTROL GROUP

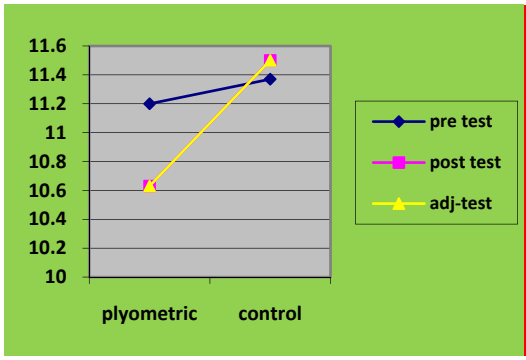
	Experimental Group	Control Group	SOV	Sum of Squares	df	Mean Square	'F'ratio
Pre-test Mean	11.20	11.37	B	0.296	1	0.296	1.669
			W	6.735	38	19.33	
Post-test Mean	10.63	11.50	B	7.405	1	7.405	5.975*
			W	5.520	38	16.18	
Adjusted Mean	10.63	11.50	B	5.286	1	5.286	82.630*
			W	2.367	37	0.064	
LEG EXPLOSIVE POWER							
Pre-test Mean	2.02	2.02	B	0.000	1	0.000	0.017
			W	0.569	38	0.015	
Post-test Mean	2.16	1.95	B	0.431	1	0.431	20.35*
			W	0.841	38	0.021	
Adjusted Mean	2.16	1.95	B	0.453	1	0.453	113.99*
			W	0.147	37	0.004	

Significant at 0.05 level. The table value for significance at 0.05 level with 1 & 38 and 1 & 37 degrees of freedom are = 4.41and 4.45 respectively.

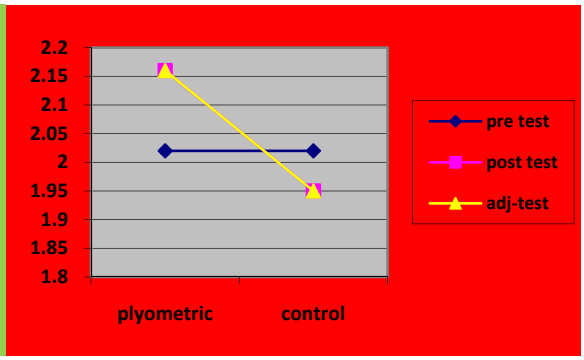
Table –I shows that the pre test means on Agility and Leg Explosive Power of the Yoga therapy and the control group was 11.20 + 11.37 and 2.02 + 2.02 respectively. The obtained 'F' ratio value 1.669 + 0.017 for the pre test scores of Plyometric Training and Control group on Agility and Leg Explosive Power is lesser than the required table value 4.41 for significance at 0.05 levels. Hence, it is not significant and it revealed that there is no significant difference between the Plyometric Training and Control group on Agility and Leg Explosive Power before the commencement of experimental group. It is inferred that the random selection of the subjects for the two groups are successful.

The post test means on Agility and Leg Explosive Power of the Plyometric Training and Control group was 134.45 + 90.20 and 151.30 + 93.40 respectively. The obtained 'F' ratio value 175.38 + 20.92 for the post test score is greater than the required table value 4.41 for 1 & 38 degrees of freedom at 0.05 level of significant. It shows that there is a significant difference between the Plyometric Training and Control group on Agility and Leg Explosive Power.

The adjusted post test mean on the Agility and Leg Explosive Power of the Plyometric Training and Control group are 138.45 + 91.50 and 148.30 + 93.38 respectively. The obtained 'F' ratio value of 323.150 + 27.42 for the adjusted post test data is greater than the required table value 4.45 for 1 & 37 degrees of freedom at 0.05 level of significant. It shows that there is a significant change on the Agility and Leg Explosive Power as a result of the Plyometric Training of Pondicherry university south zone inter university volley ball men team. Since the result has revealed that there is significant difference between Plyometric Training and Control group group.fig-1&2.



AGILITY
Figure-1



LEG EXPLOSIVE POWER
Figure-2

Discussion

After the collection of data, appropriate statistical analysis has been done in order to present the discussion of findings. The results of the study showed that there was significant improvement on physical variables such as Agility and Leg Explosive Power due to the influence on Plyometric Training of Pondicherry university south zone inter university volley ball men team. The finding is in conformity with the results of **Kotzamanidis**, **C** (2006), **Markovic, G**.(2007) and **Martel, G.F** (2005).

Conclusions

Plyometric Training group increases Agility and Leg Explosive Power when compare to control group of Pondicherry university south zone inter university volley ball men team.

References

1. Kotzamanidis, C. "Effect of Plyometric Training on Running Performance and Vertical Jumping in Prepubertal Boys." Journal of Strength Conditioning Research 20(2), (May 2006).
2. Luebbers, P.E. et. al. "Effects of Plyometric Training and Recovery on Vertical Jump Performance and Anaerobic Power." Journal of Strength Conditioning Research 17(4), (November 2003).
3. Maffiuletti, N.A. et. al. "Effect of Combined Electrostimulation and Plyometric Training on Vertical Jump Height." Medical Science of Sports Exercises 34(10), (October 2002).
4. Markovic, G. et. al. "Effects of Sprint and Plyometric Training on Muscle Function and Athletic Performance." Journal of Strength Conditioning Research 21(2), (May 2007).
5. Markovic, G. "Does Plyometric Training Improve Vertical Jump Height A Meta-Analytical Review." British Journal of Sports Medicine 41(6), (June 2007).
6. Markovic, G. et. al. "Effects of Sprint and Plyometric Training on Muscle Function and Athletic Performance." Journal of Strength Conditioning Research 21(2), (May 2007).
7. Martel, G.F. et. al. "Aquatic Plyometric Training Increases Vertical Jump in Female Volleyball Players." Medical Science of Sports Exercises 37(10), (October 2005).
8. Matavulj, D. et. al. "Effects of Plyometric Training on Jumping Performance in Junior Basketball Players." Journal of Sports Medical Physical Fitness 41(2), (June 2001).
9. Meylan, C. and Malatesta, D. "Effects of In-Season Plyometric Training Within Soccer Practice on Explosive Actions of Young Players." Journal of Strength Conditioning Research 23(9), (December 2009).

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Comparative Analysis of Aggression and Self Confidence among Basket Ball and Volleyball Players

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Abstract

The propose of the present paper is to compare the aggressive behavior and self confidence of basketball and volleyball players, the research method was ex – post –fact and fulfill the purpose 100 male and female sportspersons (Basketball and Volleyball) were selected randomly who are studying in various colleges of Hyderabad Karnataka region and represented their Universities in South Zone All India Interuniversity tournaments and their age ranged from 18-25. They were administrated Aggression and Self Confidence questionnaires to collect data pertaining to research. The study was examined by using Mean, Sd and 't' test and it is concluded that there were significant differences found between dependent and independent variables and sample subgroups. So the hypothesized statement there would be differences in the aggression and self confidence among basket ball and volleyball players is accepted.

Key words:- Aggression, Self Confidence, Sportspersons

Introduction

Sport is one of the most enduring of all human activities. Virtually from the beginning of any written human records, in civilizations across the world, accounts of sports and sport-related activities are found. For less than the last century sport has been studied scientifically, and sport psychology is an important part of that scientific study. It is an international field, holding the promise of becoming important and only to the understanding of competitive athletic abilities, but to areas of behaviour that relate to many domains of human health and activity. Not withstanding its benefits to the individual and the society at large, competitive sport is a war of nerves as well as war on nerves. Since the revival of the Olympic Games, sports and games have increasingly become a war like phenomenon, requiring years and years of specialized training and practice with scientific and technological inputs. The rises of professionalism in sport and the human craze and quest for "winning" have transformed highly enjoyable sport into a complex behavioural conundrum. The athletes and coaches have to prepare themselves to face the extraordinary emotional and psychological situations to reach new horizons in performance. In sport, competition has gained ascendance over all its other worthily objectives-fitness, health, intellection, socialization, ethics and morality. The entire perspective of sports as a joyful social activity has changed for the worse with far reaching behavioural consequences.

The term aggression is employed to describe angry violent behavior with intent to hurt a person or cause damage to property. "**Aggressive**" behavior is also used to depict a strong and somewhat adventurous effort. Thus an aggressive sales person or athlete, for example, may be perceived as obnoxious or violent by some and motivated and hard working by others.

The maximal ability of a person to perform in any athletic event is obviously limited by his physical characteristics, but they broad restrictions psychological factors often play a decisive role. "**Self-confidence"** is one of the most frequently cited psychological factors thought to effect sport performance and has been a; primary focus of research conducted by sports psychologists.

Self confidence is the confidence one has in oneself confidence of the type: "I can do this" I have the ability to do this" self confidence is the one thing that is much more important than many other abilities and traits. If you do not have self- confidence what you do will never become fruitful at all the fruits of what you do without self - confidence are lost. Genuine self- confidence integrates the

powers of mind and body and focuses them towards the goal. any such a concentrates energy can reach the goal.

Self-confidence is the first step to progress, development, achievement and success Even if you have a lot of abilities and a lot of knowledge if you do not have self- confidence you cannot be a success. But on the contrary event you have only average abilities and knowledge, if you have an unfailingly true self confidence chances are that you achieve what you want to.

Limitations

The study is limited to test the effect of Aggression and Self-Confidence of the Basket Ball and Volleyball players

The study is limited to tests on interuniversity sportsmen persons.

Further the study is limited to male and female students of various colleges under Hyderabad Karnataka region only.

Delimitations

The study was delimited to sportspersons of Under Graduate degree courses.

Further the study was delimited to students of 18-25 years age.

Significance of the study

The applications of psychological principles in sports have far reaching consequences in the field of physical education and sports. The sports are played with an objective of winning the game. Therefore the psychological preparation of sports team is very important. Besides physical skills, the psychological factors are important as they are much related to winning of a game. Thus the mental readiness of the players needs to the aroused for active participation in sports' activities. Thus the knowledge of psychological factors makes the players more successful.

In this regard, the present study is more meaningful which attempts to explore Aggression and Self-Confidence of players. This knowledge would be of immense use in preparing the future strategies for training sports persons.

Methodology

Statement of the problem

The purpose of this study is to assess the comparison of Aggression and Self Confidence of Basket Ball and Volleyball players.

Objectives

The objectives of the present study are as under.

To know the role of Aggression and Self Confidence of the Basket Ball and Volleyball players.

To study the impact of Aggression and Self Confidence on Basket Ball and Volleyball players.

Hypothesis of the Study

There is significant influence of Aggression and Self Confidence among Basket Ball and Volleyball players.

There is a significant difference of Aggression and Self Confidence among Basket Ball and Volleyball players.

Sample Design

The appropriate sample design would be followed as per the objectives of the study. The sample of 100 Interuniversity Basketball and Volleyball players of both male and female category would be selected randomly from various colleges of Hyderbad Karnataka region the age level ranging from 18-25, on whom the tests of Aggression and Self Confidence would be administered. It is assumed that these variables would produce significant differences between sample subgroups. The following is the sample design of the study,

SAMPLE DESIGN

Sl. No.	Male	Female	Total
Basketball Players	25	25	50
Volleyball Players	25	25	50
Total	50	50	100

Tools

The self-confidence questionnaire (SCQ) developed by Basavanna (1975).

Sports Aggressive Inventory developed by Kumar and Shukla (1988)

Statistical Analysis

To meet the objective of the study and to verify the formulated hypotheses the data will be analyzed. The Mean, SD and 't' test will calculate for the present study and result presented in next part.

Results and Discussion

This part consists of the analysis of the data through statistical calculations .The sample was assessed in terms of the mean scores on categorized groups on independent variables of the study. The data so arranged were presented in the tables.

Table No.1

Variables		Aggression		Self Confidence	
		Male	**Female**	**Male**	**Female**
Basketball Players	**M**	18.58	16.23	35.49	40.01
	SD	4.26	3.48	14.88	17.03
Volleyball Players	***M***	15.32	14.15	45.25	50.11
	SD	2.90	2.23	17.08	19.02
t-value		**4.47****	**3.53****	**3.05****	**2.80***

Mean, SD and t-values of Aggression and Self Confidence on Basket Ball and Volleyball players (N=100)

* *Significant at 0.05 level

** Significant at 0.01 level

The above table shows the Mean, SD and t-values of Aggression and Self Confidence on Basket Ball and Volleyball players. The table also reveals the significant difference of variables and sample subgroups. The presented mean scores say that basket ball players (male-18.58 female-16.23) are more aggressive than the volleyball players (male-15.32, female-14.15) in both male and female categories; the t-value male-4.47, female-3.53 is significant at 0.01 level. It may because of the nature of the game i.e., basketball is contact game where as the volleyball is non-contact game. So the aggression of the both game is differ from each other, in basketball the players may show their aggression one opponent player directly but in volley ball players should show their aggression on the ball only.

The table also speaks that the self confidence of basket ball players is higher (male-35.49 female-45.25) than the volleyball players (male-45.25, female-50.11) in both categories; the t-value male-3.05, female-2.80 is significant. The present result also because of nature of the game, in basket ball the target of the goal will be very small (basket ring) so the player should play very confidently to get score where as in the volley ball the target will be very wide (opponent's full court) so the player will play in low self confidence level.

Finally the table explains that the basketball players are more aggressive and have high self

confidence than the volleyball players.

Conclusions

There is significant difference found in aggression among basketball and volleyball players, basketball players are have more aggression than the volleyball players in both male and female categories.

There is significant difference found in self confidence among basketball and volleyball players, basketball players are have high self confidence than the volleyball players in both male and female categories.

There is a significant role and impact psychological variables i.e., Aggression and Self Confidence on Basket Ball and Volleyball players.

BIBLIOGRAPHY

1. Kjormo,-Odd; Halvari,-Hallgeir, Two ways related to performance in elite sport: The path of self-confidence and competitive anxiety and the path of group cohesion and group goal-clarity.2002
2. Miguel-Tobal,-F; Navlet-Salvatierra,-Maria-R; Martin-Diaz,-Maria-D,in Niveles de ansiedad en distintas modalidades deportivas (Anxiety levels in different sport modalities). U Complutense de Madrid, Facultad de Medicina, Madrid, Spain in Ansiedad-y-Estres. 2001; Vol 7(1): 57-68.
3. Cox,-Richard-H; Robb,-Marshall; Russell,-William-D,in Construct validity of the Revised Anxiety Rating Scale (ARS-2)., U Missouri, Dept of Educational and Counseling Psychology, Columbia, MO, US in Journal-of-Sport-Behaviour. 2001 Mar; Vol 24(1): 10-18
4. Bushman,-Brad-J; Wells,-Gary-L., Trait aggressiveness and hockey penalties: Predicting hot tempers on the ice.,Iowa State U, Dept of Psychology, Ames, IA, US Journal-of-Applied-Psychology. 1998 Dec; Vol 83(6): 969-974
5. Hammermeister,-Jon; Burton,-Damon., Stress, appraisal, and coping revisited: Examining the antecedents of competitive state anxiety with endurance athletes, Eastern Washington U, Dept of PE, Health and Recreation, Cheney, WA, US In Sport-Psychologist. 2001 Mar; Vol 15(1): 66-90.
6. Feldman,-Melinda,The relationship of anxiety regulation and optimal performance in high school track athletes, Hofstra U., US a Dissertation-Abstracts-International:-Section-B:-The-Sciences-and-Engineering. 2000 Apr; Vol 60(9-B): 4886.

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Athlete Recruitment, Retention and Transition Pathways on Sports Development in Sri Lanka

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Abstract

The purpose of this research is to identify effectiveness of the Athlete Development Programmes (ADP) in Sri Lanka from Governmental perspective The main source of information considered as the secondary data was the annual performance statements and reports provided by the Ministry of Sport of Sri Lanka (Department of Sports Development's performance annual reports) from the past five years between 2008 and 2013. This research has focused on the significance to provide deeper explanations, an identify effects of ADP through a qualitative analysis and propose a set of constructive structure to improve the quality of ADP achievements. The 'Grounded Theory' is used in the study as a qualitative research approach formulated by Glaser and Strauss (1967), by examining Annual Performance Report, published by the Ministry of Sport in Sri Lanka. The approach methodology has benchmark Sotiriadou, Shilbury, and Quick (2008) provided an ideal structure for data collection and analysis in a similar study to examine the recruitment, retention, and transition. The research highlights that the gaps in funding related to recruitment, retention, and transition. In developing elite athletes in Sri Lanka, lack of programs development approaches, lack of stakeholder participation, lack of makeup completions and events, lack of need assessment approaches are the reasons adhere to the present situation in Department of Sports Development (DSD) program model.

Key words: Recruitment, Retention, Transition, Elite Athlete Development Programs (EADP)

Introduction

Athlete Development Programmes should be driven by processes, which need to have strong pathways for success. This encourages mass participation in sport, enhance their performance, and contribute community sport development. Assuring quality of Sports Development Processes (SDP) is vital for any country to embrace success in sport. Quality of SDP is built upon in consideration of the athletes' needs and wants. The Sport has been a part of social life from ancient time, however at present the sport has become an integral part of the daily life of the Sri Lankans due number of reasons. The majority of urbanize population consider sport as 'healthy life style', leisure and recreation and major institute treat as an image. The majority of the people live in remote areas still do not have the opportunity to enjoy sports and the benefits they bring along. The government institutes play greater role in creating active life style by providing, facilities, opportunities, knowledge and leadership in this process. The Ministry of Sports in Sri Lanka has stated four main priorities in the development process: policy implementation; development of sports and public recreation through execution of plans and programs; enhancement of sport development; growth of sport and education at different levels; and widespread expansion of recreational facilities (p. 148).

The present sport development is for "sports for a healthy, active society and productive nation" and the objectives set out by the Ministry of Sports in Sri Lanka are focused on creating healthy generation, promoting national harmony, enhancing an international image, integrating as a part of education, developing human and other resources and fostering young talents. In 1973, the government of Sri Lanka established its firm footing in sport development by establishing a separate ministry to be in charge of sports in Sri Lanka. At the present, the Ministry of Sports and its Department of Sport Development provides support to promote and develop sports of the 47 registered sports governing federations in Sri Lanka (PR 2012: 19).This study addresses the practice of vital components elite athlete development the recruitment, retention and transition and the current practices and how strong is the pathways created in achieving quality elite development process.

Literature Review

Evidently, for the last ten years, many academics in the field of sport management have considered sport development process to be an important research topic. Therefore, the number of recent research concerns has prompted substantial research interest in the effective pathways of the sport development process. Sport scholars have been more concerned about topics of participation, performance, processes, and preparations for international sport success. Chalip (1995) examined that the unpredictability of sport participation, fluctuation of a country's national and international performance, and health, social and economic issues relating to sport. Green (2005) stressed on two main intentions in general sport development: (a) to increase the number of sports participants and (b) enhance the quality of athletes' performance. When considering the first objective, it is important to mention that sport success is only achieved in a society that practices sport. In this regard, to increase the number of active participants in sport also increases the possibilities of enrolling the best options for achieving a medal in the international sport domains.

Some scholars like Bramham et al. (2001) have demanded for the clarification of the sport development term. Watt (1988) also said that defining sport development "is inevitably difficult and it does mean different things to different societies" (p. 64). However, he recommended that the term is "used to describe the process, policies and practices that form an integral feature of the work involved in providing sport opportunities" (p.1). Scholars have explored diverse explanations and definitions of sport development. According to Watt's (1998) definition, sport development is about "driving forward new initiatives and getting different emphases to various considerations within the sporting fraternity" (p. 66). Eady (1993) added an additional aspect about sport development. Eady divided sport development and transformational processes into two categories: organizational transformation and personal transformation. He defined sport development as "the promotion and implementation of positive change in organizational and personal behavior, which is planned, structured and achievement oriented" (p.5). Exploring this argument, he pointed out the importance of (a) the individual within the sport, and (b) the sport organizations to better provide for the sport. Furthermore, he explained, "sport development is providing and improving opportunities for people to participate in sport at whatever level to the best of their ability and in fulfillment of their interest" (Watt, 1998, p. 64).

Moreover, based on Watt's definitions about sport development, Eady (1993) derived another explanation. Eady stated that enhancing opportunities for all, increasing interest and accessibility will help increase their talent and performance at sporting events. Eady's (1993) statement about sport development touches upon the very core of sports management, which is about providing for all levels of interests, abilities and desires. Sport development should be driven by processes, which need to have strong pathways for success. This encourages people who do not participate to engage in sport, enhance their performance, and contribute to community sport development. Collins, cited in Eady (1993, p.8), suggests that proper opportunities, systems, structures and processes need to be established in the sport development processes. This will facilitate special pathways and empower specific groups of people to participate in sport and recreation or enhance their performance to their desired level.

Method

The main source of information considered as the secondary data was the Annual Performance Statements and reports provided by the Department of Sports Development's performance Annual Reports 2008 and 2013 of the Ministry of Sports, Sri Lanka. The report for 2009 was not used in this study, as it was not published. The sport development process of other successful countries in the sport in terms of participation and performance was also taken into consideration to identify best sport development processes. The data collection process involved Grounded Theory (Glaser, 1978; Green 1997) and research application of Kalliopi, Shilbury and Quick (2008) were benched marked to define the development process: a) attraction, b) retention/transition, and c) nurturing. In order collect necessary data four elements were identified in the structure of the current sport development program by the DSD of MS in Sri Lanka: 1) Sport development stakeholders; (2) Sport development strategies;

(3) Sport development processes; and (4) Sport development pathways.

Findings

On the surface one ADP focused on recruitment objectives: mainly to identify talent of young sports men and women. The Kreeda Shakthi programme ('power of sport') was launched in 2012 with a new focus on encouraging the participation of children and youth in sport. Under 'Recruitment' pathway of sport development Ministry of Education (ME) conducts Junior and Senior level national sports competitions based competitions, which encourages school level youth involvement promising limited athletes involvement due to structure of the competition process. The improvement process of athletes' talent, future career support, enhancement of national and international performance and promoting sport for a betterment of the society is given least priority. There are four main strategies for retention and transition. The four major strategies are: financial assistance, training incentives for athletes, incentives for coaches, and infrastructure development at national and regional level. The Ministry of Sports, ADP is related to the transition of athletes: improving athletes' talent, athletes' future career support, and the enhancement of national and international performance. After an athlete successfully performs at a national competition, is it then the respective national federation's responsibility to nurture the athlete at the elite level. The Ministry of Sport provides foreign training, scholarships, and food allowances to the successfully performing athletes (AR 2013, p.225). This helps to enhance athletes actively participate in international competitions. Even though objectives for the nurturing athletes could be seen in the performance reports, not enough detail on this process was available for further analyze.

First, there is strong government support for sport development in Sri Lanka and the Ministry of Support is the main body responsible for executing the development of sport. This research found that there is very little stakeholder participation in sport development. Second, sport development pathways exist in the processes of attraction, retention/transition, and nurturing of athletes. The strength and effectiveness of different pathways vary. Some pathways seem nonexistent or extremely weak. Moreover, it was also found that connecting these three processes may strengthen and enhance the sport development processes. Three main sport development strategies were observed: (1) building new sports facilities, (2) talent identification through competitions and (3) financial incentives and other benefits for athletes and coaches who performed well in national and international competitions. The Ministry of Sport sets a very wide range of objectives. However, sufficient strategies and programs were not created to achieve them. Programs were intended to develop athletes, coaches, sport administrative staff, facilities and sport infrastructure. At the school level, competition and talent identification are the main objectives. At the national level, athletes are supported to compete in national and international competitions.

Conclusions

This research study focused on analyzing the sport development in Sri Lanka by explaining development pathways and processes. In this respect, effective sport development in Sri Lanka requires a comprehensive understanding of the current state and the flexibility to adapt to the changing needs of the athletes and stakeholders. Sport development should take into consideration the unique characteristics and state of each sport when developing processes and pathways. In Sri Lanka, conceptual tools for sports development are recognized, but are not applied and practiced. Each development process should also be considered separately, but also as a part of the whole. Supporting one process more than the other might result in fragmented outcomes. More attention should be given to the attraction, retention/transition, and nurturing processes in sport development as well as the expansion of their connecting pathways, advanced strategies and stakeholder involvement in order to achieve successful sport development processes in Sri Lanka.

References

1. Bramham, P., HyltoK., Jackson, D., & Nesti M. (2001 a). Introduction. In K.Hylton, Bramham, P., Jackson, D., & Nesti M. (Ed.), Sport development: Policy, process and practice (pp.1-6). London: Routeldge..

2. Cashman, R., & Hughes, A. (1998). Sydney 2000: Cargo cult of Australian sport? In Tourism, Leisure, Sport: Critical Perspectives (pp. 210-225). Rydalmere, NSW: Hodder, Sydney.
3. Chalip, L., Johnson, A., & Stachura, L. (Eds.). (1996 c). National sport policies: An international handbook.Wesport, CT: Greenwood.
4. Chalip, L. (1995). Policy analysis in sport management. Journal of Sport Management, 9, 1-13.
5. Chalip, L. (1996). Critical policy analysis: The illustrative case of New Z ealand sport policy development. Journal of Sport Management, 10 (3), 310-324
6. De Bosscher, V., Bingham, J., Shilbli, S., van Bottenburg, M., & De Knop, P. (2008). The global Sporting Arms Race. An international comparative study on sports policy factors leading to international sporting success. Aachen: Meyer & Meyer.
7. Eady, J. (1993). Practical sports development. London: Pitman.
8. Glaser, B., & Strauss A. (1967). The discovery of grounded theory: Strategies for qualitative research.
9. Glaser, B. & Strauss A. (1967). The discovery of grounded theory: Strategies for qualitative research.
10. Glaser, B. (1978 a). Theoretical sensitivity: Advances in the methodology of grounded theory. Mill Valley, Calif.: Sociology Press. (p.36)
11. Green, B.C. (2005). Building sport programs to optimize athlete recruitment, retention, and transition: Toward a normative theory of sport development. Journal of Sport Management, 19, 233-253
12. Green, B.C. (1997a). Action research in youth soccer: Assessing the acceptability of an alternative program. Journal of Sport Management, 11, 29-44.
13. Hassard, J. (1990). Multiple paradigms and organizational analysis: A case study. Organisational Studies, 12 (2), 275-299.
14. Jones, T.M. (1995). Instrumental stakeholder theory: A synthesis of ethics and economics. Academy of Management Review, 24, 206-221.
15. Kalliopi, S., David, S, & Shayne, Q. (2008), the attraction, retention/transition, and nurturing process of Sport Development: Some Australian evidence, journal of Sport Management, 22 (3), 247-272.
16. Shilbury, D., Sotiriadou, P., & Green, C. (2008). Sport development. Systems, policies and pathways: An introduction to the special issue. Sport Management Review, 11 (3), 217-233.
17. Stotlar, D.K, & Wnders, A. (2006). Developing elite athletes: A content analysis of US national governing body systems. International Journal of Applied Sport Sciences, 18, 121-144.
18. Strauss, A., & Corbin, J. (1994). Grounded theory methodology: An overview. In N.K.Denzin, & Lincoln, Y.S.(Ed.), Handbook of qualitative research, 273-285.
19. Watt, D.C. (1998). Sports management and administration. London: Routledge.

Reports

1. Department of Sports Development. (2008). Performance Report. Ministry of Sport, Sri Lanka.
2. http://www.parliament.lk/papers_presented/06122012/performance_report_department_of_sports_development_2012.pdf
3. Department of Sports Development. (2010). Performance Report. Ministry of Sport, Sri Lanka.
4. http://www.parliament.lk/papers_presented/06122012/performance_report_department_of_sports_development_2010.pdf
5. Department of Sports Development. (2011). Performance Report. Ministry of Sport, Sri Lanka.

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Advancement of Research in Sports Medicine & Physical Education through Stem Cell Therapy use for Physiology of Sports Injuries & Repair Processes

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Abstract

With improved understanding of tissue healing and regeneration, stem cell Prolotherapy is gaining significant clinical importance and potential. Using Prolotherapy technique, with ultrasound guidance, placement of a living bioscaffold of autologous adipose (fat) tissue and its mesenchymal stem/stromal cell population, mixed with critically important high-density PRP (defined as a minimum concentration of >4 times circulating baseline platelet levels), provides enhanced musculoskeletal healing, shifting the clinical paradigm. The protocol described within this paper for stem cell Prolotherapy can be done in the physician's office, at the point-of-care, within the same procedure on the same day, and without violation of current FDA regulations. It has been demonstrated that damaged tissues produce signals which induce the migration of mesenchymal stem cells into the damaged tissue and probably play a role in regeneration of the respective tissue. Therefore, a lot of research emphasis is put into the newly evolving field of human regenerative medicine. Despite the plethora of published studies, up to now evidence is still lacking and clinical implication of stem cell therapy is actually limited in humans. However, published studies have demonstrated key issues that still need to be addressed in order to put experimental studies into clinical practice.

Key Words : Prolotherapy, mesenchymal, MSCs, clinical t

Introduction

Stem cells are cells that go to any tissue in the body and help repair an injury. They can become different tissue, they can become heart cells, and they can become muscle cells, tendon cells, ligament cells, bone cells, hair cells. These are the working cells in your body that go and repair injuries. Now, how do we get them is the question. Well, they're found in the circulation so we can get them by isolating platelet rich plasma which is done by a simple blood draw. We draw blood, we spin it down in a special centrifuge and this isolates the platelets. When platelets are injected they release growth factors that tell stem cells that are in the circulation to come in and heal or to make the tissue thicker, if it's hair or if it's, like I said, a sports injury, to help heal it fast. Imagine if you could get a concentrated amount of stem cells, not just the ones found in the circulation, what that would do, how that would amplify the healing. Well, we can do that. Stem cells are basically concentrated in your fat cells adipose cells, or in bone marrow so we take it from the fat cells. It's a little easier to get from the belly and it involves a simple procedure of numbing a little area about the size of my palm and then basically aspirating out fat cells, about two tablespoons full of fat cells. We then centrifuge it and that spins down and isolates the stem cells from the adipose cells, from the fat cells. Now, we can mix that with what I just told you about the blood draw, with the platelet rich plasma. By injecting both, the combination has an amplified effect. The platelet rich factor, which releases the growth factors and basically tell these stem cells what to do. They're the directors of this repair job. And there are only so many stem cells in circulation, so imagine if they have a whole amplified amount, a whole concentrated amount. They have more workers then so you get an amplified healing.

Stem Cells

When most people think about the often-controversial practice of stem cell research, they tend to think first about the use of stem cells from aborted fetuses to do research on paralyzed rats in a lab. While this may be somewhat true, stem cells have many other uses. Some call stem cells "immature cells with life changing potential."4 Despite sounding like the description of ateenager who has yet to

realize their full potential, this may be the most simple and most accurate way to explain what stem cells are. The human body is composed of hundreds of specialized cells that perform specific functions according to the tissue or organ they compose.5 Once these cells mature and have a specific function, they cannot change into a different type of cell.6 Stem cells are simply cells that have not yet matured and received a specialized function in the body. There are several known types of stem cells—embryonic stem cells, fetal stem cells, stem cells found in the umbilical cord, induced pluripotent stem (iPS) cells, and adult stem cells

Stem Cell Therapy for Athletes

As explained below, when determining whether a player should receive stem cell treatment, the physician should consider four factors: (1) the age of the player, (2) the availability of alternative treatments, (3) the severity of the player's injury, and (4) the recovery success of similar injuries treated using stem cell therapy. First, considering the age of the player is important to determine the potential remaining length of the athlete's career. Second, the availability of alternative treatments is important to determine if other measures can help before resorting to stem cell therapy. Third, the severity of the player's injury is significant in determining if stem cell treatment alone will make a difference. Fourth, it is important to look at the success of recovery from similar injuries treated using stem cell therapy in order to gauge the success of stem cell therapy with that particular type of injury. Finally, leagues should restrict athletes to the use of mesenchymal stem cells, which come from their own body. In Part I, this article describes the five known types of stem cells: embryonic stem cells, fetal stem cells, stem cells found in the umbilical cord, induced pluripotent stem (iPS) cells, and adult stem cells. Part II then explains the nature of the stem cell therapy that most athletes currently receive. Part III examines the sudden expansion of stem cell therapy throughout the world of professional sports. Part IV looks at how current rules and regulations affect the use of stem cell treatments in professional sports. Finally, Part V recommends guidelines for policing this growing phenomenon. These guidelines include only allowing stem cell treatment with the approval of a team physician or league appointed physician in good faith and restricting stem cell treatments to using only mesenchymal stem cells.

Stem Cell Therapy for Athletes

One type of adult stem cell is the mesenchymal stem cell. This type of adult stem cell is found in a number of tissues andcan produce bone, cartilage, and fat.These cells may also aid in the regeneration of tissue. This is the most common type of stem cell used in stem cell treatment in athletes. Doctors involved in sports medicine are particularly interested in mesenchymal stem cells because they come from fat and bone marrow in large quantities. Bone marrow is the best location to find these cells. These cells might be able to repair injured cartilage, bones, tendons, and muscles when properly cultivated and injected into the damaged area. Additionally, if they are able to repair the battered and bruised body, the process can happen much more quickly than conventional surgical methods done with plates and screws. All stem cells are either allogeneic, meaning they come from a donor or other source, or they are autologous, meaning they come from one's own body.The best type of stem cells for regenerative treatment are autologous cells because they are the most likely to be received by one's body since they come from one's own fat or bone marrow. Conversely, the body is likely to reject allogeneic stem cells because it recognizes them as a foreign substance, and this can lead to major health risks

ii. Stem Cell Therapy

Bone marrow transplants and skin grafting may be vaguely familiar topics; however, one may not realize that these both involve types of stem cell therapy. Bone marrow transplants are the removal of stem cells from a donor's marrow which doctors then inject into the body of the donee in order to replace the unhealthy blood cells.37 With skin grafting, usually performed on burn victims, doctors graft the new skin cells onto the injured patient with the hope that the healthy cells will integrate into the patient's body and function as his own cells.38 While cells are vital to the internal functions of the human body, they can function outside of the body as well. They can live and divide in special test

tubes and petri dishes known as "cultures."39

Scientists can then identify the stem cells and control them in order to prepare them for injection into an injured area of the body.

Mesenchymal Stem Cells

Although many types of stem cell exist, they all possess 2 distinct properties. First, the ability to self-replicate (proliferate), and second, their potency or ability to differentiate (transform into mature adult tissue). Stem cells derived from and returned to the donor are termed "autologous," whereas those administered to a non–tissue-matched recipient are called as "allogeneic" stem cells. Mesenchymal stem cells are derived from stromal tissue and described as multipotent, having the capacity to differentiate into mesodermal and endodermal types of cells potential for influencing musculoskeletal tissue regeneration and enhancement rather than fundamental repair, as would occur in simple scar formation.15–17 Therefore, MSCs have a potential regenerative influence on tissues damaged by repetitive overuse or through age-related degeneration. The preprogramming of MSCs to form a specific tissue has intriguing theoretical consequences for tissue regeneration and potential enhancement. Given their low numbers, MSC populations for therapeutic use need to be expanded as outlined earlier. The ideal prerequisites for a satisfactory graft are large numbers of viable MSCs that do not age prematurely, and with the capacity to differentiate accurately into the correct cell type of the target site. Some consider that before clinical trials proceed it is important to determine that the success of the graft as the consequence of MSC activity rather than the paracrine effects of the grafted material.18 There are still many unresolved challenges to the therapeutic use of MSC's

Clinical Trails and Mesenchymal Stem Cell Therapies

There is no evidence in the contemporary literature of any MSC therapy for use in musculoskeletal conditions having successfully completed a full clinical trial in accordance with the steps mandated by the International Society for Stem Cell Research.20 This protocol strictly adheres to a 4-phase model of clinical trial necessary for any novel therapeutic intervention. Consequently, current variants of MSC therapy advanced by clinicians throughout Australasia have limited scientific credibility, may not meet the requirements for evidence-based clinical practice nor satisfy the criteria for patient safety.

The Fundamental Steps of the Widely Accepted Clinical Trial ProcessInclude

Phase I

Researchers test the safety and assess adverse effects ofan intervention in a small cohort of participants.

Phase II

The intervention is administered to a larger group toassess efficacy and to further evaluate safety.

Phase III

The treatment is administered to large identifiedgroups of participants to confirm effectiveness, monitor side effects, provide comparisons with commonly used treatments, and to collect information that will inform future safe treatment.

Phase IV

Post market surveillance is undertaken (after the introduction of the therapy to clinical practice) to assess any adverse effects associated with long-term use. There have been a number of concerns raised about the use of MSCs in clinical practice in the absence of evidence of clinical efficacy. This article will address the scientific and ethical concerns. "adipose-derived stem/stromal cells" (AD-SC's

Conclusion

While there will always be players who, regardless of the rules, try to enhance their performance or exploit the benefits of innovative treatment, professional sports leagues should allow

the use of stem cell therapy. These innovative treatments can allow players to recover from injuries quickly, prolong their athletic careers, provide greater entertainment for sports fans, and help players avoid surgeries that, as they grow older, could have complex, adverse effects. Professional sports leagues should do their best to regulate which players receive treatment by requiring athletes to get the permission of a physician before receiving any type of stem cell therapy. In turn, physicians should allow treatment only for healing injuries and not for performance enhancement. When considering which players may receive treatment, physicians should consider the age of the player, alternative treatments, the seriousness of the injury, and the success of stem cell therapy in treating similar injuries. Also, professional sports leagues should only allow players to undergo stem cell treatments that use stem cells from their own body because using embryonic stem cells or even adult stem cells from a donor pose additional risks and are more controversial.

References

1. Alderman D. Prolotherapy: platelet rich plasma in prolotherapy. *Practical Pain Management.* Jan/Feb 2009.Vol 9(1).
2. Hauser R, et al. Prolotherapy: platelet rich plasma prolotherapy as first-line treatment for meniscal pathology. *Practical PainManagement*. Jul/Aug 2010.
3. Alderman D. The new age of prolotherapy. *Practical Pain Management.* May 2010;Vol. 10(4).
4. Harman R, et al. A retrospective review of 62 cases of suspensory ligament injury in sport horses treated with adiposederived stem and regenerative cell therapy. *Proc. Vet. Orthop. Soc*.,2006.
5. Dahlgren LA. Use of adipose derived stem cells in tendon and ligament injuries. *Am Coll Vet Surg Symp Equine Small Anim Proc.* 2006;150-151.
6. Black LL, et al. Effect of adipose-derived mesenchymal stem cell and regenerative cells on lameness in dogs with chronic osteoarthritis of the coxo-femoral joints: A randomized, double-blinded, multicenter, controlled trial. *Vet Ther*. 2007;8(4): 272-284.
7. Zuk P. The Adipose-derived stem cell: Looking back and ahead. *Molecular Biology of the Cell*. June 2010;21:1783-1787.
8. Little D, et al. Ligament-derived matrix stimulates a ligamentous phenotype in human adipose-derived stem cells. *Tissue Engineering: Part A.* 2009;16(7):2307-23190
9. Chen X, et al. Tendon tissue engineering with mesenchymal stem cells and biografts: an option for large tendon defects? *Front Biosci (School Ed).* 2009;Jun 1:1:23-32.
10. Uysal AC, et al. Tendon regeneration and repair with adipose derived stem cells. *Curr Stem Cell Res Ther.* 2010;Jun;5(2):161-7.
11. Uysal AC, et al. Differentiation of adipose-derived stem cells fortendon repair. *Methods Mol. Biol*. 2011;702:443-51. tendon repair. *Methods Mol. Biol*. 2011;702:443-51.

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A Comparison of Motor Coordination Ability between Male and Female Kabaddi Players on Different Playing Surfaces

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Abstract

The purpose of the present investigation was to compared the motor coordination ability of male and female kabaddi players on different playing surfaces. For this purpose, 50 male kabaddi players from top four places in National Kabaddi Tournament. were selected as a sample. Average age of males and females was 22.73 yrs. and 23.92 yrs. respectively. Comparative research design was employed in this investigation. The agility has been chosen as motor coordinative ability, acted as dependent variable. Clay and mat have been chosen as playing surface, acted as independent variables. To assess agility of the selected kabaddi players, Cooper's JCR test (1963) was employed. The agility of the selected subjects was assessed by shuttle run item of this test. To compare the motor coordination ability between male and female kabaddi players, mean, standard deviation, and t-ratio were computed. The statistical analysis of data concluded that the agility of male kabaddi on clay surface was found to be significantly better as compared to mat surface, but the . agility of female kabaddi on clay surface was found to be significantly better as compared to mat surface . It clearly indicates that the agility of both sex players was found to be equally affected due to nature of playing surface.

Keywords: Playing surface, Mat, Clay, Sex, Kabbadi, Senior national

Introduction

It is believed that the origin of kabaddi dates back to pre-historic times. Kabaddi was played all over India with different forms. The game kabaddi was invented to thwart attacks of individuals. Kabaddi is very popular sport in southern Asia where it has been played under different names. A dramatized version of the great Indian epic, the "Mahabharata", has made an analogy of the game to a tight situation faced by Abhimaneu, the heir of ' the Pandava kings when he is surrounded on all sides by the enemy. Buddhist literature speaks of the Gautam Buddha playing Kabaddi for recreation. History also reveals that princes of Yore played Kabaddi to display their strength and win their brides.

Coordination is the quality, which enables the person to integrate all the powers, and capacities he/she has into the effective doing of an act. It is the ability to move and organize oneself around his/her own physical body. Coordinative abilities differ from technical skills in that they exist as prerequisites for subsequent motor actions.

Playing surface is a complex one which is based on friction and traction. Friction can be defined as the resistance to motion of two moving objects or surfaces that touch. Sports floor has to perform in many ways. It has to absorb shocks in order to minimize the risk of injury. But it can't be too soft, as it becomes tiring for the athletes. The floors friction is possibly the most important factor which influence sports performance.

Another important aspect is Ground reaction force (GRF). It refers to the equal and opposite force the ground has on the foot. GRFs include a vertical component, which refers to the amount of force with which our foot is pushing straight down. GRFs include friction, which stops our foot from slipping. When the heals first make ground contact, foot is moving forward, and the ground helps to stop the foot via friction.

The surfaces on which athletes run on can play a vital role in determining how well they perform. So one of the important aspects in construction of sports surfaces is to improve athletic performance. (Baroud et. al. 1999). It has been documented that skill acquisition on different playing

surface requires a lot of practice (Meyers and Barnhill, 2004). The expertise in performing various game specific motor or basic fundamental skills are dependent upon properties of playing surface. Different surface properties have different effects on the dynamics and mechanics of movement (Ferris et. al. 1999).

Mukesh (2013) concluded that the Kho-kho players possessed better balance ability as compared to the kabaddi player. McMahon and Greene (1979) predicted a slight speed enhancement on tracks of intermediate compliance by comparison with running on a hard surface. Bosco et al. (1997) reported that the reuse of elastic energy increases the muscular work efficiency in jumping. Lejeune et al. (1998) found that running on sand increases energy expenditure compared to running on hard surfaces, grass and force platform. Dixon et al. (2000) suggested that it is not possible to generalize the effects of sports surfaces on lower extremity kinematics.Kerdok et al. (2002) postulated that an increased energy rebound from the compliant surfaces contributes to the enhanced running economy.Tillman et al. (2002) found that the kind of surface have no significant effect on lower extremity kinematics in running. Andersson, Ekblom, & Krustrup (2007) stated that the playing surface had neither positive nor negative effects on physical demands, ball control, or ball movement in game of soccer. Anderson et al. (2008) observed that players exhibited better technical skills on artificial compared to natural grass.Anderson et al. (2008) showed that players technical skills are far superior on artificial surface as compared to natural grass. Girard et al. (2009) demonstrated that playing surface affects plantar loading in tennis: Greenset induced higher loading in the hallux and lesser toes areas but lower relative load on the medial and lateral midfoot than clay.Zanetti (2009) found that soccer players in Italy preferred artificial turf surfaces except in the case of abrasions from turf or hot playing environments.Khan and Ali (2013) indicated that clay surface and grass surface can be used to improve the athletes' performances.

A critical analysis of previous scientific work conducted upon kabaddi performance as well as effect of playing surface on sports performance, it was observed that motor coordinative and skill related abilities of kabaddi players of India have not been assessed in relation to different playing surfaces. Hence the researcher compared the motor coordination ability of male and female kabaddi players on different playing surfaces.

Methodology

Selection of Subjects :

For present study, 50 male kabaddi players (Average age 22.73 yrs.) and 50 female kabaddi players (Average age 23.92 yrs.) , who took part in national level kabaddi tournaments were selected as sample. The selection of subjects was done from players of such teams who stood in top four places in National Kabaddi Tournament. The sample was collected through convenience sampling method.

Research Design:

To assess the effect of playing surface i.e. clay and mat upon motor coordinative ability of male and female kabaddi players, comparative research design was followed.

Selection of Variables:

Out of these seven coordinative abilities i.e. combinatory ability, orientation, differential ability, agility, balance, reactive ability, adaptive ability, rhythmic sense and balance, the agility has been chosen as motor coordinative ability in the present study acted as dependent variable. Clay and mat have been chosen as playing surface, acted as independent variables.

Instrumentation:

To assess agility of the selected kabaddi players, Cooper's JCR test (1963) was employed. This is the modified, well-known JCR test. The agility of the selected subjects was assessed by shuttle run item of this test. This test is highly reliable and valid. The motor coordinative ability scores of subjects was ascertained by their shuttle run timings, hence lower the timing, higher the motor coordinative ability formula is used.

Results and Discussion

To compare the motor coordination ability between male and female kabaddi players, mean, standard deviation, and t-ratio were computed and data pertaining to this have presented in Table 1 to 4.

TABLE 1
DESCRIPTIVE STATISTICS OF SHUTTLE RUN TEST AMONG MALE AND FEMALE KABADDI PLAYERS IN RELATION TO PLAYING SURFACES

Groups	N	Shuttle Run Scores on				Gain Score (Clay-Mat)
		Clay Surface		Mat Surface		
		Mean	S.D.	Mean	S.D.	
Male Kabaddi Player	50	15.34	1.52	16.09	1.49	-0.75
Female Kabaddi Player	50	17.83	1.15	18.25	1.31	-0.42

The mean scores of shuttle run test obtained on clay and mat surfaces of male and female Kabaddi players have been depicted in figure 1 and 2.

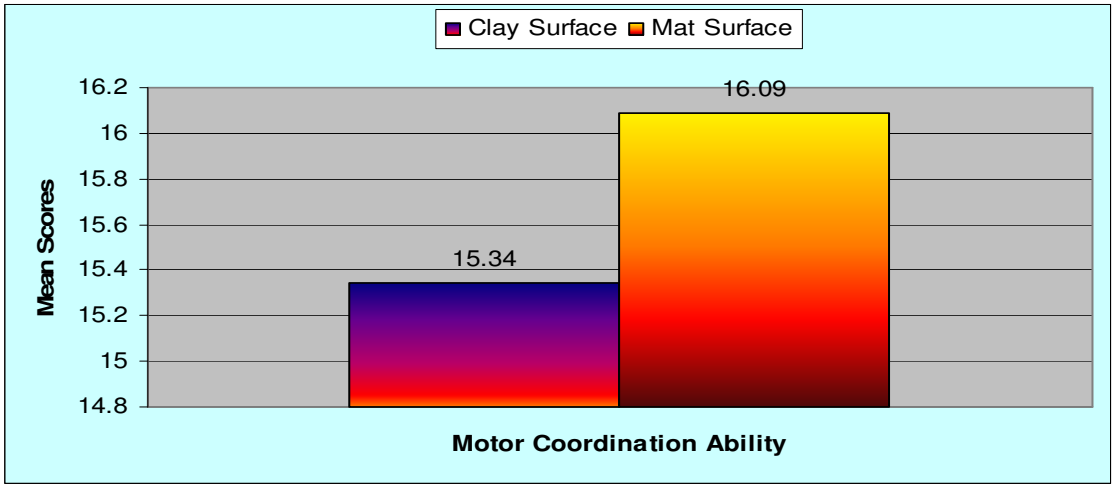

Figure:1. Mean Scores of Motor Coordination Ability on Clay and Mat Surface of Male Kabaddi Players.

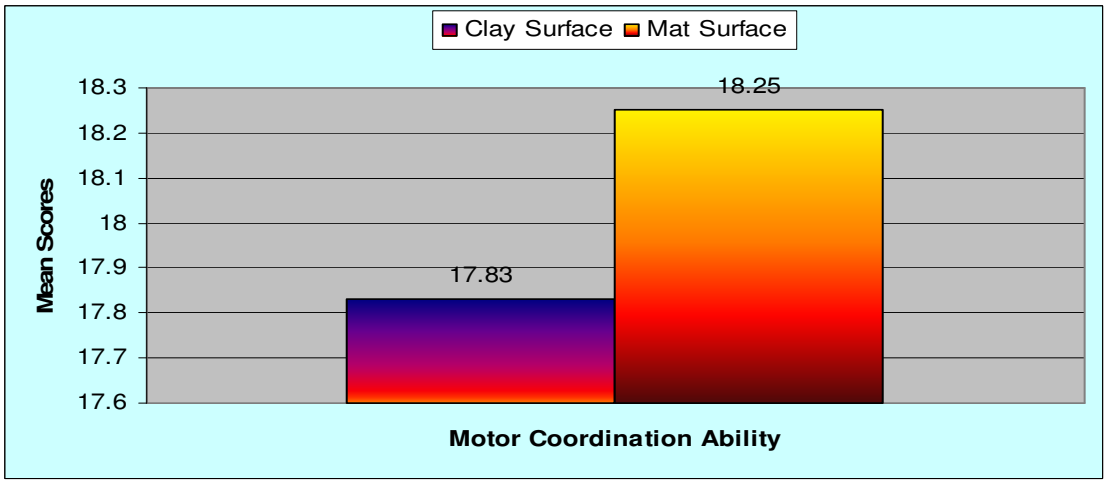

Figure:2. Mean Scores of Motor Coordination Ability on Clay and Mat Surface of Female Kabaddi Players.

TABLE 2
COMPARISON OF SHUTTLE RUN TIMINGS OF MALE KABADDI PLAYERS ON CLAY AND MAT SURFACES

Variable	Performance of Male Kabaddi Players				Mean Diff.	't'
	Clay Surface		Mat Surface			
	M	S.D.	M	S.D.		
Shuttle Run	15.34	1.52	16.09	1.49	0.75	2.62*

* Significant at .01 level

A perusal of statistical entries reported in table 2 shows that mean shuttle run timings of male kabaddi players on clay surface was 15.34 while mean time on mat surface was 16.09. The mean difference of 0.75 on clay and mat surface on shuttle run performance indicate that agility of male kabaddi on clay surface was significantly better as compared to mat surface at .01 level of statistical significance (t=2.62, p<.01). Statistical analysis of data clearly indicate a statistically significant impact of playing surface i.e. clay and mat upon agility of male Kabaddi players.

TABLE 3
COMPARISON OF SHUTTLE RUN TIMINGS OF FEMALE KABADDI PLAYERS ON CLAY AND MAT SURFACES

Variable	Performance of Female Kabaddi Players				Mean Diff.	't'
	Clay Surface		Mat Surface			
	M	S.D.	M	S.D.		
Shuttle Run	17.83	1.15	18.25	1.31	0.42	2.26*

* Significant at .05 level

A perusal of statistical entries reported in table 10 shows that mean shuttle run timings of female kabaddi players on clay surface was 17.83 while mean time on mat surface was 18.25. The mean difference of 0.42 on clay and mat surface on shuttle run performance indicate that agility of female kabaddi players on clay surface was significantly better as compared to mat surface at .05 level of statistical significance (t=2.26, p<.05). Statistical analysis of data for the verification of differential hypothesis 6 clearly indicate a statistically significant impact of playing surface i.e. clay and mat upon agility of female Kabaddi players.

TABLE 4
COMPARISON OF GAIN SCORES (CLAY-MAT SURFACE) ON SHUTTLE RUN TIMINGS OF MALE AND FEMALE KABADDI PLAYERS

Groups	Mean	SD	MD	σ DM	t-value
Male Kabaddi Player	0.75	2.01	0.33	0.344	0.96
Female Kabaddi Player	0.42	1.31			

Insignificant at .05 level

A perusal of table 4 indicate that mean difference in shuttle run timings on clay and mat surface in a group of male kabaddi players was -0.75 while it was -0.42 in a group of female kabaddi players. When mean difference of there two groups was compared, the calculated t=0.96 indicate that statistically there was no significant difference in gain scores (Mean scores on clay - Mean scores on mat) on shuttle run timing between male and female kabaddi players. Since agility of male and female players was equally affected due to nature of playing surface i.e. clay and mat.

Conclusions

1. Agility of male kabaddi on clay surface was found to be significantly better as compared to mat surface .
2. Agility of female kabaddi on clay surface was found to be significantly better as compared to mat surface at .01 level of statistical significance.
3. Agility of male and female players was found to be equally affected due to nature of playing surface i.e. clay and mat.

Bibliography

1. Baroud, G., Nigg, B. M. and Stefanyshyn D. (1999) Energy storage and return in sport surfaces. Sports Engin. 2, 173-180.
2. Cooper Motor Fitness Test "Measurement in Physical Education", Carlton R. Meyers, 2nd Edition, The Ronald Press Company, New York, 1974.
3. Ferris, D.P., Liang, K., & Farley, C.T. (1999). Runners adjust leg stiffness for their first step on a new running surface. Journal of Biomechanics, 32, 787–794.
4. Girard, O., Eicher, F., Fourcher, F., Micallef, J.P. & Millet, G.P. (2007). Effects of the playing surface on plantar pressures and potential injuries in tennis. British Journal of Sports Medicine, 41, 733-738.
5. Kerdock, A.E., Biewener, A.A., McMahon, T.A., Weyand, P.G. and Herr, H.M. (2002) Energetics and mechanics of human running on surfaces of different stiffnesses. J.Appl.Physiol. 92, 469-478
6. Meyers, M.M. and Barnhill, B. (2004). Incidence, causes, and severity of high school football injuries on field turf versus natural grass. American Journal of Sports Medicine, 32, 1626-38.
7. McMahon T.A., and Greene, P.R. (1979). The influence of track compliance on running. J.Biomech. 12, 893-904.
8. Mukesh and Mahesh Kumar (2013). "A Comparative Study of Co-Ordinate Abilities of Kabbadi and Kho-Kho Female Players at College Level. International Journal of New Innovations in Enginee ring and Technology" 2(1), 29-32.
9. Bosco, C., Saggini, R. and Viru, A. (1997). The influence of different floor stiffness on mechanical efficiency of leg extensor muscle. Ergonomics 40:670-679.
10. Lejeune, T.M., Willems, M.A. and Heglund, N.C. (1998). Mechanics and energetics of human locomotion on sand. J. Exp. Biol. 201, 2071-2080.
11. Dixon S.J., Collop, A.C. and Batt, M.F. (2000). Surface effects on ground reaction forces and lower extremity kinematics in running. Med. Sci. Sports Exerc. 32, 1919-1926.
12. Lejeune, T.M., Willems, M.A. and Heglund, N.C. (1998). Mechanics and energetics of human locomotion on sand. J. Exp. Biol. 201, 2071-2080.
13. Tillman, M.D., Fiolkowski, P., Bauer, J.A. and Reisinger, K.D. (2002). In-shoe plantar measurements during running on different surfaces: changes in temporal and kinetic parameters. Sports Engin. 5, 121-28
14. Andersson, H., Ekblom, B. and Krustrup, P. (2008). Elite football on artificial turf versus natural grass: movement patterns, technical standards, and player impressions. J Sports Sci., 26, 113-22.
15. Andersson, H., Ekblom, B., & Krustrup, P. (2007). Elite football on artificial turf versus natural grass: Movement patterns, technical standards, and player impressions. Journal of Sports Sciences, 26(2), 113-122.
16. Zanetti, E. (2009). Amateur football game on artificial turf: Players' perceptions. Applied Ergonomics, 40(3), 485-490.
17. Khan, M.H. and Ali, K. (2013). The effects of grass and clay plyometric training on jumping, sprinting and agility in collegiate cricketers. International Journal of Biomedical and Advance Research, 4 (2.), 902-908.

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Physical, Psychological and Physiological Aspect of Yoga in Sports: A Research Review

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Abstract

Yoga can be practiced by men and women of all ages and it can be taken up at any stage of life. It is never too late to begin. Through yoga one can meet the success of life. It is the fact that yoga plays an important role for reducing stress, tension and anxiety of common man as well as of athletes. . Mainly the stress and anxiety play an important role in sports, as these are an part of the "motivation for peak performance" in a sports activity. In recent competitive situation, impose tremendous stress and tensions on sportsman while aiming of winning a medal. The high level of sports anxiety disturbs body awareness and affect physiological functions which resist the smooth movement of muscles, joints etc. Different type of yogic exercises increase the flexibility of back, spine, hip, improve the concentration ability, balancing ability, and the efficiency of liver and digestive system, cure the neurosis and cardiac diseases, remove the blood pressure problems, strengthen the back and shoulder muscles, improve breath and release the mental tension and centering emotions of the sportsmen, which are the main essentials related to the performance of the athletes in different games and sports.

1. Introduction

Today within the era of sufferings all around everybody wants peace of mind. Yoga is our ancient heritage which might balance body, mind and soul and bestow peace. The word 'yogasan derived from the Indo-Aryan word 'Yuj' which suggests to join The unity is explained in non secular terms because the Union of individual consciousness with the universal consciousness,, however on sensible life yoga may be a means that of leveling and harmonizing the body, mind and emotions. This can be done through the apply of position, Pranayam, Mudra, Bandh, Shatkarm (Purification of body) and meditation. The science of yoga begins to work on the outer most side ofpersonality. Once the imbalance is experienced and muscles organs, and nerves no -longer function in harmony , rather they act in opposition one another, then system would possibly become irregular and also the potency of the nervous system decrease to such an extent that a illness can manifest. Yoga by transportation the various body process into excellent coordination build up stamina.

Yoga is associate ancient system of training the body, mind and soul. Its main objective is that the development of the whole individual. Yoga was practiced four thousand years past and "the undeniable fact that these days it enjoys ever increasing quality in even the Western world, indicates its values. Yoga, associate Indian ancient science, claims to modify 'sensory awareness' which can be of huge use in up the sense of aesthetics in sports. However, till-to-date neither any data nor analysis report on yoga in regard to aesthetics in sports is accessible up to now. It was, thus through fascinating to check, if yoga will contribute to reinforce the aesthetic aspects in order that associate athlete improves case in movements and talent for performance. Yoga will be practiced by males and females of all ages and it will be taken up at any stage of life. It's never too late to start

2. Components of Yoga

Maharishi patanjali in 300 B.C. has accepted eight stages or components of Yoga. These have been given the name of Ashtang Yoga of Pitanjali. The eight components of Ashtang Yoga are:

2.1. Yama (Forebearance)
2.2. Niyama (observance)
2.3.. Asana (Posture)

2.4. Pranayama (Regulation of breathing)
2.5. Pratayahara (Abstraction)
2.6. Dhafana (Concentration)
2.7. Dhy-ana (Meditation)
2.8. Samadhi (Trance).

Yoga consists of a number of systems. The following systems are well known: (1) Hatha Yoga deals with physical aspect of an individual. lt includes various postures. The Yoga postures are called 'asana'. (2) Karma Yoga deals with action, preaches that life is service through action.

3. Yoga, Health and Fitness

Yoga for prevention and cure of the sports injuries, promotion of basic fitness, specific sports skills and psychological factors , maintenance of physical fitness during participation and in off season. Physical and physiological capacities are developed through different yogic exercises of the sportspersons and non-sportsperson, which are given below:

3.1. Dhanurasana is beneficial for developing spine and back flexibility.
3.2. Ardha Matsyendrasana makes spine strong and supple. It helps in curing diabetes, constipation and helps in improving efficiency of liver.
3.3. Paschimottanasana refers to an intense stretch of the back. It strengthens and shapes the legs and makes spine flexible.
3.4. Chakrasana is beneficial for developing the spine and shoulders flexibility. It also improves the efficiency of digestive system.
3.5. Ugrasana develops the spine and hip flexibility.
3.6. Ekapada-Kandharasana helps in developing flexibility in hip joint.
3.7. Parivritya Trikonasana is twisted triangle pose. It helps in straightening hunched back and rounded shoulders.
3.8. Varikshasana improves the concentration and balancing ability.
3.9. Shavasana is one of the best asana for recovery after heavy training load. It is also very beneficial for the people suffering from neuroses, high blood pressure and cardiac diseases.
3.10. Anulomv1loma Pranayam very beneficial for improving breathing system. It also helps in releasing mental tension and centering emotions.
3.11. Trataka (Gazing at a candle without blinking) improves concentration ability.

4. Brief Review Related Literature

Several researchers like Swami and Gharote, 1978; Bhole, and Karambelhar, 1971; Datey et.al., 1967; De Vries, 1967; Digjamberji and Gharote, 1978; Ganguly and Gharote, 1974, 1975 & 1979; Gharote, 1973; Karambelkar, et.al., 1978 ; Kuvalayananda, et.al. 1964 & 1969 had conducted studies in 19th century on yoga and physical and physiological health. They indicated that indicate the utility of yogic practices for the development of health and physical fitness.. One of the important factor of physical fitness is known as cardio-vascular endurance is a kind of physiological fitness stated through an adjustment of the lungs and heart to a prolonged physical exertion. Ganguly (1981) Participation in 3 week yogic training practice results in significant gain in cardiovascular endurance.

Herbert A. De Vries (1962) indicated that those player who do not stretch suffer from lack of flexibility and are more injured. The Padahaatasana, Pascimatasana, Ugrasana, Halasana are the best yogic exercises recommended for prevention of injuries and increase flexibility. (M. L. Ghariote, 1974)

The work of H.A. De Vries (1961a), H.A. De Vries (1961b, 1962), Gharote (1974, 1976), Girri, 1966, Moss (1972), Dhanraj, 1974) and Ganguly, 1976 and 1968 have shown the evidence about how yoga could be gainfully employed in the promotion of basic fitness factors. Research review also revealed that Yoga plays an important role for reducing anxiety, stress, tension and of common man (Bhagwat, 1990; Bhole, 1990; Gore, 1987; Rajapurkar, 1990).

A significant reduction in their anxiety level after 15 week yogic practice aws experienced by the university student of Nigeria . The reduction in anxiety level of those who had high level od

anxiety was marked nature . Low level of anxiety , however did not experience a significant reduction in their anxiety(Sohi ,1986), Coleman, 1976), Johnson, 1974)

5. Yoga and Sports

Many books are being written such as "Yoga for the Athlete" (Day, 1974), "Yoga for Tennis," Yoga and Football, which indicate the help of Yoga rendered in the field of sports. Emotional factor is very important for the performance in sports. If it is properly used then, emotions can contribute to the improvement of the performance in sports. Emotions are governed by the working of autonomic nervous system. Control over the autonomic nervous system brings the emotional disturbances down.

Specially, different yogic exercise plays an important role in gymnastics. Hastpadasan is performed on stable and unstable forms as a handstand in the different event of gymnastics by male and female gymnasts during competition. The stable form of this yogic exercise is performed on Parallel Bar, Floor and unstable form on roman rings by male gymnasts. Female gymnasts also performed stable handstand on Balancing beam, Floor and unstable handstand on Unevan Bar during forward and backward giant circle. Male gymnasts also performed unstable handstand on P. Bar, H. Bar and Roman ring during forward and backward giant swing (Bawa,1999).

Different yogic exercise also plays an important role in the ancient game of India i.e. Mallakhamb. The different yogic exercises are performed on fixed and hanging Mallakhamb during competition by male players i.e. Natarajasan, Pachimottanasan, Padashastasan, Dhanurasan, Mayurasan, Naukasan, Koomasan, Shirsasan, Hanumanasan, Veerbhadrasan, Kandapeedasan. Female also performed padamasan, Shavasan, Nidrasan, Dhanurasan, Natarajasan, Shayanasan, akpadashirasan, Pachimottanasan etc on rope Mallakhamb during competition (MFI, Code of Point, 2006 pp. 43-49).

6. Yoga and Psychological Disorders

Stress and anxiety play a significant role in sports as these are an integral part of the "motivation for peak performance" in a sports activity. The term "psyching up" has been used for physical and mental preparation of a game or contest. Too much stress and anxiety tend to interfere with the early stages of the motor learning. The beginner can't perform as well or learn as readily, when the pressures are too great; and the levels of stress and anxiety are too high.

The psychological disorders like mental tension, anxiety, stress, lack of concentration, pressure etc are treated through yogic exercises. Physiological disorders like diabetes, problem of high and low blood pressure, blood circulation in arteries , liver disorder, digestion disorder, knee problem, cardiac diseases, neurosis, breathing problem etc are also be treated through yogic exercises.

The stress and strain: Struggle and Strife, disappointment, irritations, misunderstanding, jealousies, professional rivalries, hatred, egotism, fear and fear of failure, aggressive living, nervousness, loose their temper, worry, indigestion, headache, insomnia, backaches, ticks, hives, stomach upset, tension and other psychological illness causes are mental rather than physical. Yogasan can offer a best solution to these objective problems (Kaul, 1985).

In recent competitive situation, impose tremendous stress and tensions on sportsman while aiming of winning a medal. The high amount of anxiety in sports disturbs body awareness and affect physiological functions which resist the smooth movement of muscles, joints etc.

7. Conclusion

The review report presented above clearly revealed that yoga improve the physical and physiological fitness of a player and control psychological attributes like anxiety, stress, mental tension and exertion etc during competitive situation in sports. Yoga is also a best solution for other psychological disorders.

Bibliography

1. BERA, T.K., Wagh, Choure & Madhuri, T. "Yoga and Aesthetics in Sports :A Research Review". SAI Scientific Journal 22:3 (July.1999) :5-7.

2. Bawa, G. S. .Training Manual Gymnastics. Patiala : Sports Authority of India, Netaji Subash National Institute of Sports, 1999.
3. De Vries H.A. "Prevention of Muscular Distress after Exercise". Research Quarterly 32 (1961 a): 177-185.
4. De Vries H.A. " Electromyographic Observations of the Effects of State Stretching Up to Muscular Distress". Research Quarterly,32 (1961b) : 468-479.
5. De Vries H.A. "Evaluation of Static Procedures for Improvement of Flexibility". Research Quarterly 33 (1962): 222-229.
6. Duffy, Elogabeth (1962) A ctivation and Behaviour. New York: Wiley
7. Gharote, M. L "Physical Fitness in Relation to the Exercises". Ph. D. Thesis, University of Poona , 1974
8. Gharote, M.L. "Yoga For Sports" SNIPES Journal. 4: 4 (Oct., 1981) :58 - 60.
9. Gharote, M.L (1974) Physical fitness in relation to the practice of related yogic exercise, Ph.d Thesis, University of Poona.
10. Gharote, M.L and Ganguly, S.K. (1976) Assessment of Yogic Training to Police , The Indian Police Journal, 23:1 pp. 34-43
11. Gharote, M.L (1976) Effect of yoga exercise on the Kraus-Weber Tests, Percptual and Motor Skills, 43:2, pp. 654.
12. Giri C (1966) Yoga and physical fitness with special reference to athletes IATHPER Quarterly Journal, 2: p. 6
13. Harvey Day (1974) Yoga for Athlete Kaye and Ward publication, London.
14. Moses R. (1972) Effect of Yoga on flexibility and respiratory measures of vital capacity and breat holding time Doctoral of education Thesis, University of Oregon, USA.
15. Dhanaraj V.H. (1974) Effect of Yoga and 5BX fitness plan on selected physiological Parameters, Ph.D Dissertation, University of Alberta, Canada
16. Girt, Rakesh & Prakash, N. Yoga Nindra: An Effective Counter-action for S & A of Sports" NIS Scientific Journal 11:2 (1988) :52.
17. Kraus Hans and Ruth P. Hirschland, "Minimum Muscular Fitness Tests in School Children". Research Quarterly 25 (1954): 178-180
18. Kauul, H. Kumars. "Why Yoga" SNIPES Journal 8 :1 (Jan. 1985) :47-50.b
19. Oxendine, Joseph B. Psychology of Motor Learning. New York: Appleton-Century- Craft., 1960.
20. Saraswati H. S. "Yoga Nidra", Yoga, .12 (December, 1979) : 457.
21. Saraswati S. S. "Meditations from Tantras, Editor. Swami Nischalananda Sarswati, Bihar School of Yoga, Monghyn, India, pp. 150-173.
22. Sohi, A.S. "Effect of Yoga Practice on Anxiety Levels of University Student". SNIPES JOURNAL 9:4 (October, 1986): 53- 57.
23. Swami Kuvalaganarsda , "Asanas" Kaivlyadhama,Lonavala Tiwari, O.P. "Asanas, Why and How", Kaivlyadhama ,Lonavala Worthy, A.M. " Influence of Selected Yogic Exercise on Minimum Muscular Fitness of Elementary School Children". SNIPES JOURNAL 5:3 (1982) :25.
24. Kaul, Kumar H. “Why Yoga” SNIPES Journal, 8:1 (Jan. 1985) : 47-50
25. Sohi, A. S. (1986) Effect of yoga Practice on anxiety levels of university students, 9:4 (Oct. 1986):57
26. Coleman, D. Meditation and Bodily Changes British Medicine Journal, 1 (10) :610 1976.
27. Johnson, S. J. (1974) Effect of yoga therapy on conflict resolution, Self concept and emotional Adjustment Doctoral dissertation abstract, 34, 1974.
28. S. K. Ganguly, Effect of short tern Yogic Training Progarmme on Cardiovascular Endurance, SNIPES Journal, vol. 4, No. 2, April, 1981, P.45-49.
29. Bhole, M.V. and Karambelhar, P.V. “Pressure change in Internal Cavity During Uddiyana and Nauli” Yoga Mimamsa 13:4 (1971) : 19-25.

30. Datey , K. K. et. al. "Savasan: A Yogic Exercise in the Management of Hypertension" Antiology, 20 (June 1967) : 325-335.
31. De Vries, Harbert A. Physiology of Exercise for Physical Education and Athletics, London:Staples Press, 1967, p. 365.
32. Digjamberji, Swami and Gharote, M. L. (ed) Gheranda Samihita, Lonavla; Kaivalyadhams, 1978.
33. Digjamberji, Swami and Gharote, M. L. (ed) Hathapradipika Lonavla; Kaivalyadhams, 1978 pp. 9, 32, 69.
34. Ganguly, S.K. and Gharote, M. L. "Cardiovascular Efficiency Before and After Yogic Training" Yoga Mimamsa 17:1 (April, 1974) : 89-97.
35. Gharote, M. L. " Effect of Yogic Training on Physical Fitness" Yoga Mimamsa 15:4 (3) (Jan., 1973) : 31-35.
36. Ganguly, S.K. and Gharote, M. L "Effect of Nine Week Yogic Training Programme on Some Aspect of Physical Fitness of Physically Conditioned Young Males" Indian Journal of Medicine Sciences, 33 (10) (October, 1979):258-263.
37. Ganguly, S.K. and Gharote, M. L "Survey of minimum Muscular Fitness on School Children" Indian Journal of Medical Research 63 (9) September, 1975, pp. 1242-1250.

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Physical Fitness and Academic Achievement of Male and Female School Children

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Abstract

The purpose of this study was to investigate and compare the physical fitness and academic achievement of male and female children. The present study was based upon the male and female children of 7^{th} and 8^{th} class belong to Krishana Public Schools of Bilaspur district. one hundred (Males=50, Females= 50) subjects were selected. The President's Challenge Physical Fitness test is designed to assess children based on five areas of physical fitness abdominal/core muscle strength and endurance (sit-ups), upper body strength and endurance (pull-ups), flexibility (sit and reach), agility (shuttle run), and cardiopulmonary endurance (mile run). The academic achievement was based upon the current academic year of each student in form of total mark obtain in the five subjects at 7^{th} examinations. The mean age of male and female subjects were 13.40 ± 0.57 and 13.28 ± 0.64 respectively. Results of the study concluded that this study provided varying correlations between physical fitness and academic achievement among male and female children. Academic achievement of male children did not correlated with the five test items of President's Challenge Physical Fitness, but the academic achievement was found correlated with BMI of Male children. Female children were found to have significant relationship between academic achievement- upper body strength and flexibility and other fitness components did not. Male children were found better in their physical fitness than their counter parts. Male and female children were found free from cardiovascular complications.

Introduction

In modern times, every person feels the importance of educational values in their life. During the process of education, many individual follow the concept of education. They think that literacy and theoretical knowledge is the only channel of education, where as, education includes the physical, mental, social, intellectual spiritual, and economical dimensions to the process of learning the education.

Health and educational professionals believe that physically active children perform better in the classroom. A group of researcher found a statistically significant relationship between fitness and academic achievement (Chomitz, McGowan, Mitchell, Slining, Dawson, & Hacker, 2009).

Promoting physical fitness and increasing opportunities for physical activity has implications to support academic achievement. Results from animal studies have shown that physical activity stimulates the development in the brain pertaining to nerve (Studenski, et.al., 2006). Physical fitness can be globally related to academic achievement on the basis of previous research with chldren. Future research is deemed necessary to better determine the role physical fitness has on academic achievement.

Physical fitness is positively correlated with academic achievement (Castelli, et. al., 2007; Martin and Chalmers, 2008; Eveland-Sayers, et. al., 2009; Du Toit, Pienaar & Truter, 2011 and Roberts, 2009). According to Rodenroth (2010), significant relationship was not found between physical fitness scores on the President's Challenge Physical Fitness Test and academic performance for 4^{th} and 5^{th} grade school children.

The advantages of physical fitness are wide acknowledged and extend across several domains of health . The association between fitness and educational achievement, however, remains to be

processed, particularly in young children .Therefore, the purpose of this study was to investigate and compare physical fitness and academic achievement in pre-adolescence male and female children.

Methodology

Selection of Subjects:

One hundred (Males=50, Females= 50) subjects were selected to conduct the President's Challenge Physical Fitness Test and recording of academic achievement. The subjects were divided into four equal groups of twenty-five subjects each. The mean age of male and female subjects were 13.40 ± 0.57 and 13.28 ± 0.64 respectively studying in7th and 8th class. Both grade children attend a physical education class once in a week for a 45 minute session. Physical education classes are held from 9.15 – 10.00 AM or 10.00 – 10.45AM for the 7th and 8th grade children. This schedule remains constant for the entire school year.

Selection of Instrument:

The student's physical fitness was assessed according to the President's Challenge Physical Fitness Test. This instrument was developed in 1953 to help promote a basic level of physical fitness for children. The President's Challenge Physical Fitness Test is a nationally recognized program and is a valid assessment tool that determines physical fitness levels. The academic achievement was based upon the current academic year of each student in form of total mark obtain in the five subjects at 7th examinations. Average scores were calculated from current year achievement of student in English, Hindi, Mathematics, Science, and Social Studies.

Description and Administration of Test's Items:

The President's Challenge Physical Fitness test is designed to assess children based on five areas of physical fitness abdominal/core muscle strength and endurance (sit-ups), upper body strength and endurance (pull-ups), flexibility (sit and reach), agility (shuttle run), and cardiopulmonary endurance (mile run). The reason these fitness tests were used is because these are among the most common physical fitness tests for the identified areas of physical fitness

Results and Discussion

To investigate and establish the relationship of academic achievement with physical fitness components of male and female children, the mean, standard deviation, t-ratio and Pearson's Product Moment Correlation coefficients were computed to reach at the final result of the study. The results were also compared with the adequate significant value at .05 level of confidence. and data pertaining to this have been presented in Table 1 to 5.

TABLE 1

Descriptive Statistics of Various Components of Physical Fitness and Bmi of Male and Female Children

S.N0.	Test variables	Male Children (N=50)		Female Children (N=50)	
		Mean	SD	Mean	SD
1.	Sit-ups	15.02	6.55	15.10	4.61
2.	Pull-ups	02.62	1.21	01.22	0.79
3.	Sit and Reach	25.50	3.57	24.80	03.90
4.	Shuttle run	31.98	5.60	33.00	05.82
5.	1Mile Run	11.47	1.79	13.01	02.29
6.	BMI	18.85	3.81	18.51	3.94

The mean scores of various components of physical fitness of male and female children have been depicted in figures 1 to 6.

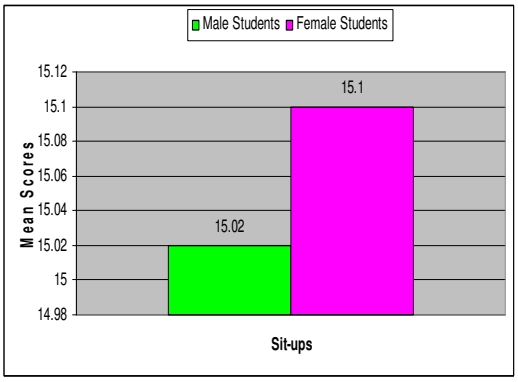

Figure 1: Mean Scores of abdominal Strength of Male and Female Children

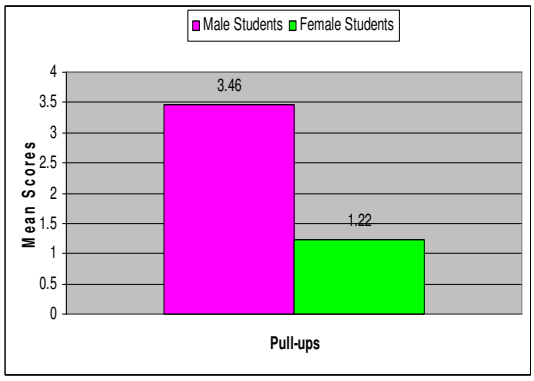

Figure 2: Mean Scores of Shoulder strength of Male and Female Children.

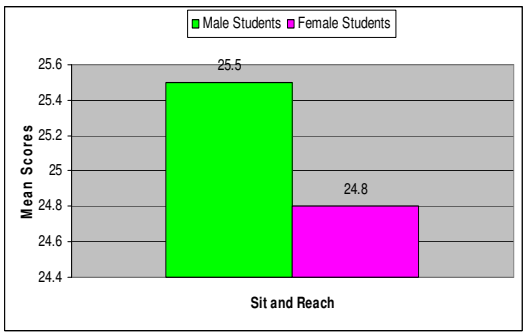

Figure 3: Mean Scores of Flexibility of Male and Female Children.

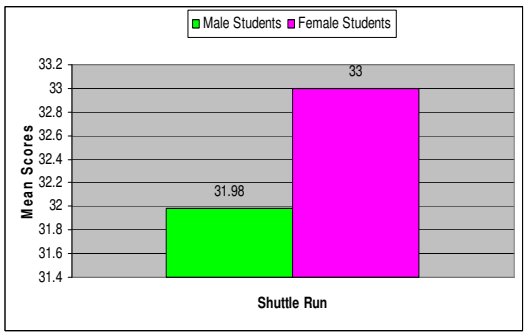

Figure 4: Mean Scores of Shuttle Run of Male and Female Children.

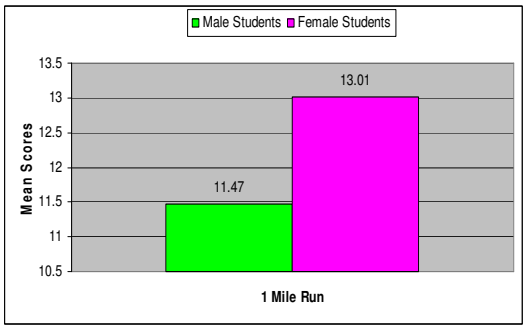

Figure 5: Mean Scores of Endurance of Male and Female Children.

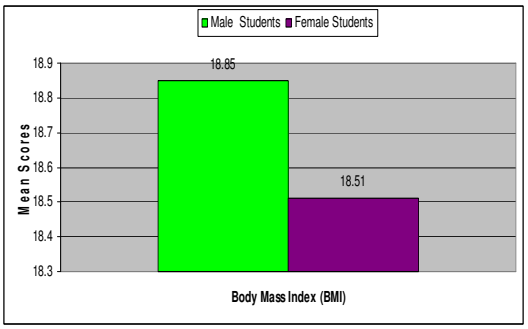

Figure 6: Mean Scores of BMI of Male and Female Children.

TABLE 2

Relationship between Academic Achievement and Physical Fitness Components of Among Male and Female Children

S.No.	Variables Correlated	Male Children	Female Children
1.	Academic Achievement V/S Sit-ups	.086	.054
2.	Academic Achievement V/S Pull-ups	-.090	.367*
3.	Academic Achievement V/S Sit & Reach	-.092	.218*
4.	Academic Achievement V/S Shuttle run	.148	-.020
5.	Academic Achievement V/S 1 Mile run	-.027	-.002

*Significant at .05 level, r.05 (98) = .19

Table 2 shows that positive correlations were found of academic achievement with sit-ups and shuttle run and negative correlation with pull-ups, sit and reach test and 1 mile run components of physical fitness among male children, as the Pearson's Product Moment Correlations ('r') of .086, .148 -.090, -.092, and ..027 respectively were less than the required value to be significant.

In case of female children, significantly positive correlations were found of academic achievement with pull-ups and sit and reach test components of physical fitness among female children, as the obtained Pearson's Product Moment Correlations ('r') of .367 and .218 respectively were higher than the required value to be significant. The insignificant positive correlation was found of academic achievement with sit-ups component of physical fitness, as the obtained Pearson's Product Moment Correlation ('r') of .054 was less than the required value to be significant. But the insignificant negative correlations existed between academic achievement - shuttle run followed by 1 Mile run components of physical fitness among female children, as the obtained Pearson's Product Moment Correlations ('r') of . -.020 and -.002 respectively were lesser than the required value of r.05 (98) = 0.19.

TABLE 3

Relationship between Academic Achievement and Body Mass Index among Male and Female children

Variables Correlated	**Pearson Product Moment Correlation (r)**	
	Male	Female
Academic Achievement V/S Body Mass Index (BMI)	-.311*	-.146

*Significant at .05 level, r.05 (98) = .19

Table 3 shows that the statistically significant negative correlation existed between academic achievement – body mass index (BMI) among male children, as the obtained (r) of -.311 was higher than the required value of r.05 (98) = .19 . Female children were found to have insignificant negative correlation between academic achievement –body mass index (BMI), as the obtained (r) of -.146 was lesser than the required value to be significant.

TABLE 4

Significance of Differences between Mean Scores of Male and Female Children on Academic Acheivement

Variables	**Sex**	**Mean**	**MD**	**σ DM**	**t-ratio**
Academic Achievement	Male	67.64	1.29	2.86	0.43
	Female	68.93			
BMI (Body Mass Index)	Male	18.84	0.33	0.78	0.45
	Female	18.51			

Insignificant at .05 level t.05 (98)= 1. 98

It is evident from table 4, that there was no statistically significant difference between male and female children in their academic achievement and BMI, as the obtained t-values of 0.43 and 0.45 respectively were found lesser than the required t.05 (98)= 1. 98.

TABLE 5
Significance of Differences between Mean Scores of Male and Female Children on Various Components of Physical Fitness

S. No.	Variables	Sex	Mean	MD	σ DM	t-ratio
1.	Sit-ups	Male Female	15.18 15.10	0.08	1.14	0.07
2.	Pull-ups	Male Female	2.62 1.22	1.40	0.20	6.85*
3.	Sit and Reach	Male Female	25.44 24.80	0.64	0.74	0.86
4.	Shuttle run	Male Female	31.94 33.00	1.06	1.14	0.93
5.	1 Mile run	Male Female	11.48 13.01	1.52	0.41	3.70*

Significant at .05 level t.05 (98)= 1. 98

It is evident from table 5 that the statistically significant difference existed between male and female children in their Pull-ups, and 1 Mile run components of physical fitness, as the obtained t-values of 6.85 and 3.70 respectively were found more than the required value to be significant. But significant difference was not found between male and female children in their Sit-ups, Sit and reach and Shuttle run components of physical fitness, as the obtained t-values of 0.07, 0.86 and 0.93 respectively were lesser than the required t.05 (98)= 1. 98.

Discussion

Findings of the descriptive data of pre-adolescence male and female student on various physical fitness components indicated that male children were found to have more upper-body strength and endurance, and flexibility than their counter parts. In case of female children, they were found to have more amount of strength and endurance of abdominal muscles, speed and agility, and cardio-pulmonary endurance in comparison of male respondents. The results of the obesity revealed that both sex children were found under normal weight category, it indicates that weight of the male and female children was in the ratio of height.

When the relationship established between five components of physical fitness and academic achievement among pre-adolescence male and female children, significant correlations were found between pull-ups (Upper body strength and endurance) - academic achievement and between flexibility-academic achievement among female respondents. Insignificant correlation was also observed between physical fitness scores of pull-ups as well as sit and reach test and academic achievement among female respondents But the results of this study provided varying correlations between physical fitness and academic achievement among male children, which indicated that the significant correlation was not observed between physical fitness and academic achievement

The results of this study differ from other studies that involved physical fitness and academic achievement, whereas in the numerous studies, the several researchers had discovered significant correlation between physical fitness and academic achievement.

When the relationship established between academic achievement- BMI, statistically significant correlation existed among male children. In case of female respondents, they did not have significant correlations between academic achievement – Body Mass Index (BMI).

When the pre-adolescence male and female children were compared together on academic achievement and Body Mass Index (BMI) , significant difference was not observed between male and female children in the both variables. When the pre-adolescence male and female children were

compared together on physical fitness scores. Significant difference was discovered between male and female children in their strength and endurance of abdominal muscles and cardio-pulmonary endurance. But they did not differ significantly in speed & agility, flexibility and upper body strength and endurance.

Conclusions

1. Male and female children were found free from cardiovascular complications.
2. Male children did not have any significant correlation between academic achievement and all components of Physical fitness.
3. Female children were found to have significant correlation between academic achievement and two components of physical fitness i.e. pull-ups and sit and reach test.
4. Varying correlations were observed between physical fitness and academic achievement among male and children.
5. Significant correlation was observed academic achievement and Body Mass Index among male children. But female children did not have any significant correlation between academic achievement and Body Mass Index.

   6. Male and female children did not differ significantly in academic achievement and BMI. But the significant differences were observed in their muscular strength and endurance and cardio-pulmonary endurance and similarity in their speed & agility, flexibility and upper body strength and endurance components of physical fitness.

Recommendation

The results of present study may be utilized at the time of designing and formulating the secondary school level curriculum. The head of the institution may also interest to improve the physical fitness level and also to provide the related infrastructure, as the base line for academic excellence of other children.

Bibliography

1. Chomitz, V. R., Slining, M. M., McGowan, R. J., Mitchell, S. E., Dawson, G. F., & Hacker, K. A. "Is there a relationship between physical fitness and academic achievement? Positive results from public school children in the northeastern United States". Journal of School Health, 79 :1 (January, 2009): 30-37.
2. Castelli, D. M., Hillman, C. H., Buck, S. M., & Erwin, H. E. "Physical fitness and academic achievement in third and fifth grade children". Journal of Sport Exercise Psychology, 29: 2 (April, 2007): 239-252.
3. Eveland-Sayers, B. M., Farley, R. S., Fuller, D. K., Morgan, D.W., and Caputo, J.L. "Physical Fitness and Academic Achievement in Elementary School Children". Journal of Physical Activity and Health. 6 : 1 (January, 2009) : 99-104.
4. Martin, LeaAnn Tyson and Chalmers, Gordon R. "The Relationship between Academic Achievement and Physical Fitness" Physical Educator, 64 : 4 (2008):214.
5. Roberts, T. L. "Relationships Between Children' Fitness Levels and Academic Achievement". (Master's Thesis, School of Education, Liberty University), August, 2009.
6. Rodenroth, K. Relationships Between Physical Fitness and Academic Achievement. (Doctoral Dissertation School of Education, Liberty University), January 2010.
7. Studenski, S., Carlson, M. C., Fillit, H., Greenough, W. T., Kramer, A., & Rebok, G. W. "From bedside to bench: Does mental and physical activity promote cognitive vitality in late life? Science of Aging Knowledge Environment" 10 (2006) :21.

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Physical Activity for Health Benefit and Life Satisfaction

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Abstract

The importance of a physical activity program is linked to a higher equality of life as well as academic achievement. It is well documented that regular physical activity in childhood and adolescence improves strength and endurance, helps build healthy bones and muscles, helps control weights, reduces anxiety and stress, increases self-esteem and may improve blood pressure and cal activity and who have regular, sequential physical education are stronger students – physically and mentally. Numerous studies (Etnier et al. 1997; Keays & Allisaon, 1995; NASPE/SPEC. 2001: NASPE, 2002: President's Council, 1984; Symons et al., 1997) provide data that adequate physical and physical activity strengths academic achievement. A recent study by the California State Department of Public Instruction provide compelling evidence that the physical well-being of students has direct impact on their ability to achieve academically.

Introduction

People of modern are suffer greatly from disorders of stress (Benson, 1974, and Benson & Klipper 1975; Brown, 1975). In fact they are the major causes of morbidity and mortality all over the world. Even now infective disorders take a great toll of lives in developing countries. But the disorders of stress and injuries are responsible for a large number of human tragedies in developed countries. The excessive stresses and strains affect adversely the quality of life. Further, people undergoing too much of stress and strain are more liable ot be affected by different types of infections than others because of poor immunological responses. The study of the causes and effects of stress is one of the most important subjects of investigation for a modern medical person. But very few scientists and medical men have taken much interest in this subject. (Jacobson, 1938; Levi, 1971; Pelletier, 1971; Udupa & Singe, 1972; Bhushan, 1977; Etnier et al, 1997). About five decades ago Hans Selye reported to the world that stress causes marked changes in the entire body, but not many attempts were made to apply this knowledge in solving the problems of human sufferings. Selye earlier suggested that all the non-specific responses of stress such as hypertrophy of adrenal cortex, lymphopenia and GI ulcerations occurred as a result of excessive secretions of adrenocortical hormones. He further proposed that such a response was mostly due to stimulation of anterior pituitary gland which regulated the adrenal cortex. However this was not fully accepted by the physiologists. Cannon had postulated earlier that adrenal medulla and its hormone adrenaline were responsible for the appearance of various physiological changes in the body after any type of psychosomatic stimulation.

Exercise enhances the mind-body connection, which can improve your mood and physical health – and even lighten various psychological disorders. Improved depression, body image struggles, eating disorders, and even physical problems such as back pain and asthma are some of the health benefits of exercise.

The Health benefits of Exercise

Improved body image

Women who involved in physical activity report more body satisfaction, less self-objectification, and greater satisfaction with physical appearance (compared to women who don't do yoga). Fewer symptoms of eating disorders are also reported by women who involved in physical exercise perhaps because exercise encourages one to listen to the body's feedback and learn to be sensitive to the bodily sensations. This in turn makes o0ne less preoccupied with ones appearance, gives more positive views of the body, and helps incorporate healthy eating habits in ones life. A healthy body image is one of the health benefits of exercise.

Physical activity as a preventive tool

Physical activity is considered as a gift by many due to its immense benefits and ability to provide cure for a wide range of diseases without having to intake medications. But aside from providing cure, physical exercise can also be used as a preventive too. With regular physical activity, it is believed that one can improve health and well being such that body is better able to fight off diseases. The discipline of exercise makes one think differently about ones mind and body by enhancing mind-body bond. People of any age or gender can benefit from the exercise. Its restorative mechanism is what makes exercise unique from other medical approaches or exercise trends that are currently practiced by various individuals. It emphasizes the promotion of a healthy well-being more than it focuses on trying to cure diseases. Indeed, prevention is still several ways better than cure and anyone who has tried can attest to this.

In fact, many who have adapted exercise as part of their regular fitness routine does so since it significantly improves their health maintenance system. One of its practical application involves stress reduction techniques that enable an individual to cope with daily stresses in ife that could have entailing impact on the health. Indeed, stress depletes the immune system's ability to fight off diseases so it is important to eliminate stress in the life. There are several methods involved in physical exercise that will provide with an effective stress management tool, such aerobic exercise, breathing exercises, and stretching exercise. Heart problems and cardiovascular diseases is one of the leading causes of death worldwide. Finding an effective cure against these type of diseases will greatly reduce to mortality rate. But regular exercise offers an even more effective approach to put a stop to the increasing number of people suffering from heart diseases. Hence, expert physical education suggest incorporating Aerobic exercise, calisthenics and resistance exercises into the daily life so that one can embark on an important lifestyle transformation that will improve the heart condition.

When an individual suffers from stress, it constricts breathing passage, creates tension in the heart muscles, and increase heart rate. When this happens, one simply has to start executing aerobic exercises to release pressure exerted on the heart and its surrounding muscles. Performing aerobic exercises and positions are the subject of several health studies over the recent years. And these studies show somewhat similar results that indicate the ability regular exercise to improve the quality of life. This happens mainly due to the improved body composition and better fitness level. Moreover, these effects are equally significant as a complementary therapy for those that are undergoing conventional medical treatments. By regularly executing aerobic exercises, an individual is able to improve their muscular strength, produce a leaner body mass, and improve immune system. It also helps to improve one's level of self-esteem and produce a more positive body image, which greatly impacts their view of the self without suffering from any form of side effects.

It is so believed that exercise improves the health such that it equips oneself with the ability to fight off common diseases and other conditions. Whether it affects the physical health or internal organ system exercise is able to address various health issues, which is the key to improving the quality of life. So, what are these common health problems and how does exercise improve your body's ability to prevent them? All these questions need serious explorations scenically.

Chronic back pain or problem is a common complaint shared by several individuals. But Therapeutic exercise offers a great method to relieve your of any pain sensation or prevent back pain from developing. Back pain, particularly in the lower back area, is often caused by poor posture of remaining at the same position over a long period of time (which is likely with individuals sitting in their office desks for several hours each day) the aim of Therapeutic exercises is to add flexibility, provide proper toning, and increase strength in your muscles. All of these are important qualities that the body needs to eliminate pain in the back or some other parts of the body. And the best part about performing these therapeutic exercises is that they serve both as a way to prevent injuries or speed up the process of healing.

The ability to add strength and flexibility to your muscles and joints are obvious benefits that can be derived from strength and flexibility to your muscles and joints are obvious benefits that can be

derived from stretching exercise people are aware that exercise provides benefit to your internal health system, as well. One of that is your digestive system. When you perform advanced stretches or curling exercises, it also internally massages your organs such that it facilitates for proper functioning of those organs. And when your internal or digestive organs are healthy, so is the rest of your body.

Stress-Related conditions:

Anxiety and stress are normal bodily responses prompted by various external impulses. In fact, stress is considered as healthy as it enables the body to push beyond the limits and act according to what type of physical situation an individual is confronted with. But when present in an overwhelming amount exercise is not good for your health.

There are several ways to equip your body to cope with the effects of stress or better yet manage stress before it begins to create devastating effects on the body. Exercises are very effective in helping you control stress and regulating your breath patterns. The Complete Breath technique is one of the breathing exercises that one needs to learn, especially when "stressed out". Simple concentration and paying close attention to the sound of the breathing and this enables to cam down the nerves and avoid panic attack. Daily or regular exercises and aerobic exercise also known to effectively reduce anxiety or depression caused by stress.

Health Conditions Related to Aging Process

There is also a relatively new category of exercise that caters to the needs or older or aging individuals. This might appear as a bit surprising for many given that most people have this miscomputation that exercise requires a certain level of flexibility or physical skill. However, older individuals can experience several great benefits from therapeutic exercise such as improved dexterity, injury prevention, and reduced amount of pain in their joints, muscles, and ligaments as yoga exercises help to add flexibility into them.

The health benefits of exercise

Regular exercise 45 minutes daily was connected to weight loss in subjects between the ages of 45 and 55, according to a study funded by the National Cancer Institute. Aerobic exercise isn't about burning calories; it's more about becoming more aware of your body and when it's full of food, stress, or conversation. The health benefit of exercise with regard to weight loss is that it's easier to stop eating when your mind-body connection is strong. It's your body awareness that is improving, not necessarily the caloric burn. Regular exercise improves mindfulness and encourages a "gentle strength", which positively affects weight loss and weight management.

The health benefits of exercise improved physical health

Research is proving connections between good physical health and exercise for instance, epileptic stress, back pain and fatigue caused by multiple sclerosis are all health problems that have been proven to be reduced by various types of exercise and that's just barely scratching the surface of all the scientific research about exercise and health.

Exercise seems to possess enormous health potential and serious scientific explorations and its inclusion in the school educational curriculum along with physical education is the need of time to enhance the quality of life of the people in general and nation as a whole.

References

- Benson, H. 1974. Decreased intake of alcohol associated with the practice of Meditation: A retrospective investigation. Annals of New York Acad.Sciences, 223:174
- Bhussan Kumanr 1977. A study of neumorous in arrhythmias following acute MI. MD thesis. BHU
- Center for desease control & prevention. 2003. Physical activity and good nutrition; essential elements to prevent chronic disease and obesity. *At a Glance.*
- Corbin, C. Lindsey, R. & Welk, G. 2000. Concepts of Fitness and Wellness. (3rd Ed.)
- Eliot, R.S. 1974, Stress & Heart. Futura Publishing Co., NY.

- Etnier, J.L., Salazar, W., Landers, D.M., Petruzzello, S.J., Han, M., & Nowell, P. 1997. The influence of physical fitness and exercise upon cognitive functioning; a meta-analysis. *Journal of sports & exercise psychology,* 19(3):249-277.
- Jacobson, E. 1938. Progressive relaxation. Chicago university press, Chicago Kaufman, F.R. 2002. Type two diabetes in children and young adults; a "new epidemic" Clinical Diabetes, 20(4):217-218
- Keays, J., & Allison, R. 1995. The effects of regular moderate to vigorous physical activity on student out comes: a review. *Canadian journal of Public Health* 86:62-66.
- Levi, L. 1971. Society, Stress and disease. Vol. 1. Oxford Univ. Press
- Narayan K. M., et. al. 2003. Life time risks for diabetes mellitus in United States (Abstract No. 967-P). Diabetes 52 (Supp1 I): A225-226
- National Association for sports & physical education (NASPE). 2001 Shape of the Nation Report.
- National Association for sports & physical education (NASPE). 2002. New study supports physical fit kids perform better academically. National Association for sports & physical education / council of physical education for children. 2001. Physical education is a critical to a complete education.
- Nutrition Enviroments. Alexzandra, VA: U.S. Department of agricultur, Food and nutrition service.
- Ogden, C.L., Flegal, K.M., Carroll, M.D., & Johnson, C.L. 2002. Prevelance and trends in overweight among U.S. Children and adolesceants, 1999-2000. JAMA, 288: 1728-1732.
- Pelletier, K.R. 1971. Mind as healer, Mind as a Slayer – A holistic approach to preventing stress disorder. Dill Publisger Co.
- President's Council on physical fitness and sports. 1999. Physical activity promotion and school physical education. Physical education and fitness research Digest.
- Sallis, J.F., McKenzie, T.L., Kolody, B., Lewis, M., marshall, S., & Rosengeard, P. 1999. Effects of health – related physical education on on academic achievement: Project SPARK, Research Quarterly for Exercise and Sport, 70:127-134.
- Shepahard, R. J., Volle, M., Lavalee, M., Labaree, R., Jequier, J.C., & Rajic, M. 1984. Required physical activity and academic grades: a controlled longi- tudinal study. In: Limarnen and valim arki, editors. Children and sport. Berlin: Springer Verlag. 58-63,
- Shepherd, R.J. 1997. Curricular physical activity and academic perofmance. Pediatric Exercise Science, 9: 113-126.
- Shepherd, R.J. 1996. Habitual physical activity and academic performance. Neutrition reviews, 54(4 Supplement): S32- S36.
- Symons, C.W., Cinelli, B., James, T.C., & Groff, P. 1997. Bridging student health risks and academic achievements through comprehansicve school hea;th programs, journal of school health 67(6): 220-227.
- Udupa, K.N. and singh, R.H. 1972. The scientific basis of yoga. J. Am. Med. Ass., 220, 1365.

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Women and Health through Yoga

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Abstract

The woman in today's era is Home-maker, Parent, Multitasking, Successful and Essence of a family. To deserve these tags she has to surpass the odds and she has got along Stress, Frustration and Pressure. And to overcome these Yoga is the answer. This paper aims to list benefits of Yoga related to women health. A woman's golden years of life has it's unique challenges. With age, the practice of complex asanas reduces. Asanas aimed at improving blood circulation and a healthy nervous system will help the body to extend and eventually fully relax. The aim of yoga at this stage, as always, is to maintain both physical and mental health, therefore bringing about balance and harmony. With continuity, the practice of yoga matures and women learn how to accommodate the physical limitations brought about by increasing age. This paper aims to list benefits of Yoga related to women health.

Introduction

A woman of Today's era is much more than her traditional role of a housewife, a mother or a daughter. Her extended roles include equality in the decision making in socio-economic and political life. She is a dynamic, multi-faceted and uniquely influential part of our society and is forever striving for perfection in every aspect of life.

Every woman aspires to be like her mother, grandmother or aunt when it comes to carry-out the family-functions. However, to carry out all her roles with grace, flair and perfection, it is essential that women maintain good health, mental peace and poise in life. And the best way to attain all of these in a single stroke is nothing but "Yoga". Yoga is an essential task as the roles they play have become even more demanding and complex. Moreover, the responsibilities thrust upon them by nature are greater than men. This paper aims to list benefits of Yoga related to women health.

Literature Review:

1. Yoga for Menopause: Alleviate Symptoms with Yoga.
2. Yoga Journal Ayurveda
3. Yoga for Women Art of Living

From fertility to breast cancer to positive body image, yoga benefits women's health.

Benefit of yoga for wearing high heels.

Wearing high heels is fashion. Most women have found themselves hobbling home at the end of an evening thanks to shoes that we just *had* to have. But more than just discomfort, by design high heels throw off the alignment of body, and, over time, can put the spine, hips, knees, ankle and feet at risk.

Yamuna Zake, New York yoga teacher has developed a class that she says can help offset some of the damages of wearing towering shoes. Students bring in their most painful pairs of heels and learn how to redistribute their weight and "re-educate their muscles" through yoga poses and by utilizing small balls, Although the class is designed to help women wear heels more safely, Zake advocates wearing high heels only in moderation..

Zake isn't the only teacher who sees the benefit of yoga for wearing high heels. Another New York yoga teacher Tara Stiles offers a few yoga exercises on Youtube. Students like Mary Beth Harral swear that yoga is the secret to making the shoes bearable. On MindBodyGreen blog Harral wrote"I can run in high heels on concrete,and when people ask me how I can stand it, the answer is simple: yoga!"

Pregnancy and Yoga

The morning sickness, achy lower back, and fatigue of pregnancy have passed. But for new

mamas, a whole other different set of physical conditions often accompanies the bliss of loving your little creation. Luckily, a few simple yoga poses address the most common concerns. "Our bodies are always in transition, so don't think that you have to be exactly the way you were before pregnancy," says Jane Austin, a San Francisco-based pre- and post-natal yoga teacher. "But you can expect to be healthy, vital, and strong again." And moms aren't the only ones who can benefit from yoga; a few basic moves for the wee one can make your infant more comfortable and calm.

All of that pushing during labor understandably makes for a compromised pelvic floor. After birth, it's common to experience lessened sexual sensation or an annoying leakage of urine after a sneeze or a hearty chuckle. But it's no laughing matter: A serious weakness could result in an organ prolapse, an organ that shifts outside of its normal anatomical position.It is called Weakened Pelvic Floor.The solution to this is Kegel Exercises which includes

Picking your position: cross-legged position, Child's Pose, or lying on your back. Then quickly squeeze the muscles that stop the flow of urine. Make the contractions progressively longer: squeeze for five, hold for five, and release for five. Repeat 10 times. These contractions correct incontinence and strengthen the pelvic floor.

Whether you are breastfeeding or bottle-feeding, many new moms experience neck and shoulder aches—the result of many hours spent bending forward to feed the baby. The resulting hunched-over position can lead to the dreaded "forward head" position that may cause other problems such as headaches and back pain.The solution to neckache and Shoulder ache is Gomukhasana (Cow Face Pose) Arms which is as follows.

While feeding, focus on keeping the shoulders away from the ears and the shoulder blades down the back, advises Austin. For a more active approach, try Gomukhasana Arms: Bring the right arm overhead and turn the palm inward. Bring the left arm out to the side and parallel to the floor and turn the palm outward. Bring palms together behind the back, using a strap if they don't touch. Hold for five breaths, release, and repeat to the other side.

After your baby is born, you might notice that running up the stairs isn't as easy as it was a year ago. With your body recovering from labor, fatigue from caring for a newborn, and a change in your exercise routine while pregnant, a shift in endurance level makes sense. This Problem is Loss of Endurance. The solution to this is Virabhadrasana II (Warrior II Pose)

Austin points out that standing poses like Warrior II build stamina and are highly accessible to most women. "New moms like to feel they are building strength, and with standing poses they can feel it in their body," she says. Try Warrior II, named after the fierce warrior Virabhadra: with legs four feet apart, turn the right foot in and the left foot out 90 degrees. Bring your arms out to the sides, parallel to the floor, as you bend the left knee over the left ankle. Reach out with your arms and hold for five breaths. Repeat on the other side.

Weakened Abs:Along with growing and birthing a baby comes weakened and stretched abdomen muscles. Make sure to ask your doctor before starting any ab work: the standard recommendation is to wait four to six weeks after a vaginal birth, and eight weeks after a cesarean birth. Austin also stresses the importance strengthening your pelvic floor before starting abdominal work; otherwise you could create too much pressure in the pelvic floor, which could lead to pain and complications.This can be solved by Pelvic Rocking'

The key to maintaining a healthy abdomen after birth? Starting gently and moving slowly. Austin recommends lying on your back and tucking your belly button in toward your spine; exhale and tilt your pelvis up, inhale and tilt your pelvis back. Continue to rock your pelvis back and forth for gentle strengthening of the abdomen. Repeat 20 times.

Fatigue: Waking up every few hours to tend to the little one doesn't exactly make for a well-rested person. Although you won't cut out all of your sleepless nights, you can deal with fatigue to make your waking hours more manageable. Viparita Karani (Legs-Up-the-Wall Pose) is the solution for Fatigue. When you feel exhausted, your breath becomes more shallow. A restorative pose such as Viparita Karani helps open the chest, encourages you to take deeper breaths, and aids relaxation and rejuvenation. Lay with your right hip against the wall and a pillow under both hips. Then slowly swing your legs up onto the wall, bring your arms out to the sides, and breathe deeply. Hold for two minutes.

Yoga for Menopause

Many women have found that yoga, including restorative and supportive poses, can ameliorate the undesirable side effects of menopause, including hot flashes and more.

Gynecologist suggest that hormone replacement therapy (HRT) prescription drugs used to control menopausal symptoms. The treatment regimen, which artificially elevates a woman's estrogen and progesterone levels, has come under intense scrutiny in recent years. Major studies have linked it to an increased risk of breast cancer, heart disease, strokes, and other life-threatening conditions.

Soon after menstrual cycles became so irregular, Do Iyengar asana. Iyengar asana sequence designed to help women cope with the physical discomforts related to their cycles. Many of the poses were restorative; they included Supta Virasana (Reclining Hero Pose), Supta Baddha Konasana (Reclining Bound Angle Pose), and Janu Sirsasana (Head-to-Knee Pose) with the head supported. Many women have found that yoga can ameliorate the undesirable side effects of menopause.

Yoga for hormonal imbalancer

Though menopause itself is simply the moment that menstruation stops, the transition generally takes several years. This phase is called perimenopause and typically occurs in women between the ages of 45 and 55. During perimenopause, fluctuating estrogen and progesterone levels can trigger a myriad of uncomfortable symptoms. Among the most common are hot flashes, anxiety and irritability, insomnia, fatigue, depression and mood swings, memory lapses, and an erratic menstrual cycle.

Few women experience all of these, but an estimated 55 to 65 percent of them do experience some mild menopause-related problems, says Rowan Chlebowski, M.D., of the Harbor UCLA Research and Education Institute in Torrance, California. About 25 percent report almost no disruption to their daily lives, while approximately 10 to 20 percent suffer severe and often debilitating symptoms.

Hormonal fluctuations generally accompany women's passages into each new biological stage of life; with them often come various discomforts, such as acne and mood swings at puberty, morning sickness during pregnancy, and postpartum depression. "Menopause is no exception," says Nancy Lonsdorf, M.D., author of A Woman's Best Medicine for Menopause.

Typically, a woman experiences the first signs of this hormonal fluctuation about six years before her menstrual periods end. These symptoms generally continue until a year or more after her last period, when the hormone levels gradually stabilize. After menopause, the ovaries produce less of the female hormones. However, the body still needs some estrogen to keep the bones healthy and to prevent conditions like vaginal dryness. The adrenal glands, which are located above the kidneys, play an important role in this by secreting low levels of male hormones that are converted by fat cells into estrogen. Still, the body must adjust to a new, much lower hormone level.

These natural physiological changes and the havoc they can wreak for many women prompted researchers in the late 1960s to seek a solution for common menopausal symptoms. The treatment they ultimately proposed was HRT. Their reasoning was that problems stemming from declining estrogen levels could be eliminated if the missing hormones were simply replaced. Scientists believed that maintaining hormone levels similar to what the body was used to would provide relief.

HRT was a simple solution for managing menopausal symptoms. But since several major studies have shown that HRT exposes women to serious health risks, many women have begun seeking more natural solutions. Those who have turned to yoga for relief have found that while asanas may not directly influence estrogen production, specific postures can help control unpleasant symptoms. Restorative postures in particular can relax the nervous system and may improve the functioning of the endocrine system (especially the hypothalamus, the pituitary gland, the thyroid, and the parathyroid gland), which helps the body adapt to hormonal fluctuations.

A regular yoga practice can make a world of difference in a woman's experience of menopause. And a solid practice before this phase can ease the transition, says Suza Francina, author of Yoga and the Wisdom of Menopause. "If you practice yoga before menopause, then all the poses that are especially useful for coping with uncomfortable symptoms are already familiar, and you can reach for them like an old friend," she says. "If you are familiar with restorative poses, then you have the best menopause medicine at your disposal."

Anxiety, Irritability, and Insomnia

During perimenopause, estrogen spikes (or progesterone plummets), causing anxiety, nervousness, and irritability. Adrenal glands that are exhausted and overtaxed can also produce bouts of anxiety and intense irritability. (Many alternative healers believe that the adrenals can wear themselves out by constantly responding to stress, a poor diet, and lack of sleep.)

When a person is under stress, the sympathetic nervous system responds by accelerating the heart rate, slowing down the muscles of the digestive tract, and increasing blood circulation to the brain to fight the stressor.

Once the stress dissipates, the parasympathetic nervous system responds by doing just the opposite-slowing the heart rate back to normal, stimulating the smooth muscles of the digestive tract, and bringing the body's systems back into balance.

When the body is under continual stress, the sympathetic nervous system and the adrenals-which manufacture stress—fighting hormones along with the male hormones that get converted into estrogen—can get stuck in overdrive.

Walden says forward bends, such as Uttanasana (Standing Forward Bend) and Prasarita Padottanasana (Wide-Legged Standing Forward Bend)—in both cases with the head resting on a bolster or blankets—can help reduce irritability and mental tension, because bending forward and shutting out external distractions and stimuli can soothe the mind and reduce the effects of stress. The nervous system then receives the signal that all is well, and the adrenals and sympathetic nervous system stop working so hard.

If insomnia is a problem, inversions can sometimes help, because they ground the body's energy and burn off excess anxiety. When followed by restorative postures, they encourage a deep state of rest.

Fatigue

Of all the symptoms women complain about during perimenopause, fatigue is second only to hot flashes. Plunging progesterone could be the culprit, especially if the fatigue is coupled with depression and lethargy; if a woman feels inexplicably weary for days or weeks on end, depleted adrenal glands could be part of the problem.

Either way, Walden suggests gentle supported backbends, because they encourage the chest and the heart to open and often bring renewed energy, determination, and joy. One of her favorites for this is Supta Baddha Konasana. A deeply restorative posture, it can instill feelings of safety and nourishment. It also opens the chest, improves respiration and circulation, and helps lift the spirits while completely supporting the body.

Depression and Mood Swings

Menopause signals the end of the childbearing years; for many women, it is a time to mourn the end of their youth. Long periods of fatigue, coupled with a melancholy attitude or a sense that the life they once knew is now over, can trigger bouts of depression. Too much progesterone (or a drastic drop in estrogen) can also contribute to everything from a bad case of the blues to severe clinical depression.

But yoga practitioners have long known that everything you do with your body can affect your thoughts and attitude. Sometimes something as subtle as a shift in posture can lighten a dark mood. If a woman stands tall, with dignity—opening and broadening her chest—and walks with confidence, she announces to the world (and, most important, to herself) that she is grounded, happy, and in tune with her surroundings.

References:

1. Yoga for women Art of living
2. www.yogajournal.com
3. Yoga and women's health.
4. A Woman's Best Medicine for Menopause: Nancy Lonsdorf.
5. Yog Scenario (2015) Dr. Balwant Singh published by Khel Sahitya Kendra, Delhi

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Factor Affecting Goal Setting for Enhancement of Sports Performance

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Abstract

Modern sports' training gives greater emphasis on preparing the athletes psychologically than physiologically though both play significant role. Physical educators & coaches believe that without psychological preparation there is little chance of successes to the higher level of competitions. The primary objective of the paper is to highlight the importance of goal setting in enhancement of the peak performance of the athletes. It is important to set our goal before start our preparation. Sports teams have sought out many ways to improve performance. Goal setting is one way for groups or individuals to attempt to improve their success. Goal setting can be a way of improving motivation and helping athletes to enhance performance. Reaching an appropriately set goal can represent a small victory and show athletes that they are on their way to continued success. The effectiveness of goal setting is evident, Why, then, would a coach or athlete go without their performance enhancing activity? Some coaches and athletes lack knowledge of goal setting, especially of how to set goals systematically. Another barrier to effective goal setting can be the failure to appropriately review progress toward goals and revise goals, if necessary, based upon that progress. Finally it can be concluded that Goal setting is a very psychological element of sport and games. Specially those athletes involved in high level of competition.

Concept of Goal setting

A player is psychologically fit for the game if he possesses the required perceptions, emotional stability, motivation, intelligence & educability to accomplish the task. By creating tension, elevated heart rate blood pressure & anxiety can become barrier to performance. No player is without anxiety but some are better able to adapt to the stress of anxiety in their lives & these players are more psychologically fit for arduous work.

Today sport is considered as the most important factor for around development. Sports are also linked with the image of country and national pride. Everybody accepts the importance of sports as a base for health of body and mind. It is very important to exercise the mind and body together.

Setting goals is a important aspect to your success as athletes in the sport performance. It's well recognized that you stay committed to evaluating and changing your goals when it will be needed. You should create and monitor goals for practice and competitions or games.

To Amateur athletes' goals may simply be to have fun, make friends or learn to run faster. As you get older, your goals can be more specific and more focused on improving your performance.

It's important to remember that goals should not become expectations that weigh you down. In other words, it's one thing to have a goal and work toward it and evaluate it often. In this case, you keep in mind that goals can and should change. It's another thing—and not as healthy—to place high expectations on you, such as "I HAVE to make 10 shots today."

You need to set challenging and appropriate goals, but without the heavy burden of strict expectations. Why are expectations so harmful to goal-setting? First, you set yourself up for a win/lose situation. You either achieve your expectations or you fail to achieve your expectations. Second, if you don't achieve these expectations, it's easy to question your ability.

The coach has a very important role in goal setting, both for teams and individuals. Thus coaches must first educate themselves about goal setting, obtaining the most current information. Coaches will be called on to help athletes set their short- and long-term goals. They need to ensure that all goals are both realistic and relevant to the athlete. Once goals are in place, coaches will need to take time to measure and evaluate progress toward goals, making sure athletes are on track to meet them. If

the goal setting process is to work successfully, coaches must assume an important role in both education and implementation.

Factors Affecting Goal setting

The goals must be more than just a wish or dream ,they must be realistic. Specific factors must be considered in setting goals.

1) Performance: The basic factors used in setting performance goals are the individual's long term goal, the individual's current level, and the number of seasons available to achieve the long term goal. These are used to set a reasonable seasons or short-term goal as the intermediary step to achieving a long term goal.

2) Commitment of the individual: A less obvious but crucial factor in planning goal is the Commitment of the individual. This relates to the amount of time and the degree of effort that the individual is welling to dedicate to achieving his goals.

3) Opportunity. It is also important to consider the effective opportunity that the individual has to achieve his goals. The types of opportunities that should be consider are (a)practice time and facilities available,(b)the limits of coaches,(c)competition available,(d)funds and climatic conditions.

4) Potential: The last factor the individual 'Potential is the most difficult to assess. coaches sometimes think that they know their athletes potential however the certainy of this subjective evaluation is at best suspect. One clue to an athlete's potential may come from a review of the individuals rate of improvement, allowing for opportunity and effort. This necessitates that progress, opportunity, and effort be regularly recorded and evaluated.

If the short term goal appear to be unreasonable when the coach and athlet are planning the season plan, it is important to consider the feasibility of the long term goal.

Problems with Goal-Setting

There are at least three problems that make effective goal-setting difficult for athletes.

1) *Goal-Setting Is Considered Boring.* The best defense against this problem is to emphasize how effective goal-setting is. The vast majority of research done on goal-setting in sport and business settings show that it has a dramatic effect on performance. Research done specifically on goal-setting and athletic performance also shows a significant effect. In fact, I would go as far as to say that creating an effective goal-setting plan may give you the biggest performance bang for your buck of any mental skills technique. In addition, most elite athletes see goal-setting as an important part of their performance-enhancement plan.
2) *Goal-Setting Takes Too Much Time.* Setting goals does take some time, at least in the beginning. Once you've put in the initial investment, however, goal-setting pays off and actually saves you time because it helps you stay focused and motivated. It's often tough to find enough time to train. If you have set effective goals, your time will be spent more efficiently because you will spent your training time involved in the kinds of activities that will be most helpful to you to attain your goals. The time it takes to set effective goals is more than made up for by the efficiency they will bring to your training program.
3) *Athletes Frequently Set the Wrong Kinds of Goals.* One of the most common mistakes in goal-setting is creating too many goals about how you perform compare to others. Attaining goals like winning a competition or beating a rival depend, not only on your performance, but also on the performance of others. Goals that depend on how you compare to others are called *outcome goals*. Outcome goals can be motivating, but relying solely on them can make it difficult for you to get motivated in the short-term, especially if your outcome goal is so far in the future that it doesn't create the sense of urgency that can help you get up early on a cold winter morning to train. Relying solely on outcome goals, (for example, finishing first in an important competition), can also leave you frustrated if another competitor happens to have the competition of their life in the same competition you wanted to win.

Conclusion

Finally it can be concluded that Goal setting is a very psychological element of sport and games. Specially those athletes involved in high level of competition, National, international, Asian Olympic etc .It can be concluded that in sports, as well as in life, it is very important to set goals for yourself. They provide direction so that you can achieve the things that will bring you happiness and success. When setting goals the succession of events goes like this: set a goal, have a detailed plan, commit to that plan, and then take action. Sound easy? It can be if you take goal setting seriously and approach it systematically

References

1. Bergin, D. (1995). Effects of a mastery versus competitive motivation situation on learning. *Journal of Experimental Education*, 63, 4–11.
2. Burton, D., & Naylor, S. (2002). The Jekyll/Hyde nature of goals: Revisiting and updating goal setting. In T. S. Horn (Ed.), *Advances in Sports Psychology* (pp. 459–499). Champaign, IL: Human Kinetics.
3. McCann, E. (2007, July-August). Why goal setting works: Improved performance is one benefit of the daily process. *Soccer Journa*l, 49–50.
4. Robson, R. (n.d.). *Effective goal setting for sports performance*. Retrieved November 12, 2007, from http://www.istadia.com/archive/article/robrobson/6
5. *Articles for Athletes, Sports Psychology, Youth Sports Articles*

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An Overview of Research and Its Types

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Abstract

Research is a scientific investigation and solution of problems. Its nature and ultimate purpose is the discovery the facts from universe or verifying the existing facts.. Research has become of immense value to the development of society. Its importance can be seen in the fact that nearly all current developments depend largely on research. Research may be undertaken for many reasons. It may be carried out with the aim of developing new exciting theories and pushing back the frontiers of knowledge. It has the task of searching for the undiscovered facts and principles about education and of taking existing knowledge and finding ways of applying it to the many problems of life. Researches are carried out in order to improve instruction and education in general. Research is carried out because we want to know something and to devise better conceptual models for describing the inter-relationships among variables or because we want to establish the direction and nature of cause-effect interactions. The research Classified into Three parts such as types such as fundamental research, applied research and Action research. Fundamental research carried out to discover something simply for the sake of knowledge to improve our understanding of the world, and for academic rather than commercial purposes. Applied research carried out for practical applications and problem-solving functions and finally, action Research aimed at helping powerless people in society to solve their problems and be empowered to fight for social justice.

Introduction

The term research has been defined in various ways such as " An attitude of mind, Systematic scholarly application of scientific methods." Systematic solution of problem; " Honest, Intelligence and exhaustive search for facts" and " The quest for the unknown and for more about the known facts to reveal the secrets of the universe." Definitions of research are more than we can imagine.

Best (1993) called research as " The formal, systematic, intensive process of carrying on the scientific method of analysis. " It involves a more systematic structure of investigation, usually resulting in some sort of formal record of procedures and a report of results or conclusions.

According to Moculeyes " Research is simply the process of arriving at dependable soultions to problems through the planned and systematic collection, analysis and interpretation of data."

According the Rusk " Research is a point of view, an attitude of inquiry or a frame of mind."

The Webster New International Dictionary defines research as a " Careful inquiry or examination in seeking facts of principles; a diligent investigation to as certain something."

Tennyson said Cicciarella (1997) comments on this score so wonderfully as given below:

Research in it simplest sense, is a search for truth (scientific truth at least) and the truth can be often unpopular sometimes extremely so. Those who speak the truth or what they honestly believe to be truth sometimes risk verification, ridicule, loss of security, loss of professional reputation, and even serious physical harm, especially when their statements threaten widely or deeply held views or undermine established institutions.

Types of Research

Depending upon its nature and purpose, research is of three types; Fundamental research, Applied research and Action research.

Fundamental or basic or pure research

It is designed to add on organized body of scientific knowledge and does not necessarily produce result of immediate practical value. It is used for advancement of knowledge. The goal of research is the development of theories by the discovery of broad generalization or principle; it is usually carried on in a laboratory situation. Sometimes with animals as subject. This type of research

has been the activity of psychologists rather than education. The prevalent aim of the fundamental research is the discovery of knowledge solely for the sake of knowledge. It has little concern for the application of the findings or social usefulness of the findings. It may result in the discovery of new theory or development of existing theory.

Applied research

It is undertaken to solve an immediate practical problem and the goal of adding to scientific knowledge is secondary, It is a process for studying practical problems and finding a solution to it. The focus is to improve and modify the current practices. It is based on basic research. It is used for the purpose of applying or testing the theory and evaluating, it's usefulness in solving problems. In other words the applied research frequently deals with the second level organization of knowledge, closing the gap between available basic knowledge and specific practical need in application without attempting the secure complete knowledge beyond that practical need. The findings of applied research are evaluated in terms of universal and local applicability such as statistics, Applied physics, Applied Chemistry, Bio-Mechanics and kinesiology.

Action Research

It is focused on immediate and specific application and not on the development of theory or in general application. It's findings have local applicability to particular problem and universal validity. the research specialist, who are subsidized by universities, private or Government agencies and professional association. This type of research is problem specific as well as situation specific and has direct relevance to the setting in which it is undertaken. Being more or less informal in nature, it involves neither any control on variables nor requires any high profile instrumentation, statistical analysis, questionnaires, checklists, schedules etc.The difference in all the three types of research largely lies in the emphasis and on the degree to which each type addresses itself to the understanding of the nature of things and solution of problem of the mankind.

References:

- Borstein,l (1978) secondary analysis : an important research for educational research and evaluation education research 7,9-12.
- Cicciarella, charles f. (1997). Research in physical education, exercise science and sports: an introduction. Scottsdale, arizona' gorsuch scarisbrick.
- Clarke, david h. And clarke, h. Harrision (1970) research process in physical education, recreation and health. Englewood clifts, n.j. Prentice hall.
- Cohen, couis 7 holliday, michal (1979). Statistics for education and physical education. London harper & row.
- Cooley, w. And lohnes, p.r. (1976). Evaluation research in education, health and rereatin. New york; harper & row.
- Erickson, f. (1985). Qualitative methods in research on teaching. In m.c. Wittrock (ed.) Handbook of research on teaching (3rd ed.) New york, macmillan 119-161.
- Fox, david j. (1969) the research in education new york. Holt, rinehart and winston.
- Gephart, william j. And ingle, robert b. (1969). Education research : selected readings ohio; charles e. Merrill.
- Glass, g.v . And hopkins, k.d. (1984), statistical methods in education and psychology (2nd ed.) Englewood cliffs. N j. Prentice-hall.
- Good, carter v. (1963) introduction to educational research. New york; appleton century crofts.
- Gtupta s.p. (1985) statistical methods (21st. Ed.) Statistical methods (21st ed.) S chanssons n. Delhi.
- Good, carter v. (1966) essentials of educational research. Glensiew, lll, scott foresman.
- Hockett, h.c. (1955). The critical method in historical research and writing new york, macmillan.
- Jacob, e, (1987) tradition of qualitative research. Review of educational research, 51, 1-50.

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Hematological Characteristics of Sportsperson in Different Sports Discipline

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Abstract

The primary aim of the study was to assess the hematological profile of sportsperson with respect to Hemoglobin and Red Blood Cells of players to different sports discipline. The Study of hematological characteristics of sports participants is one of the most popular areas in sports related research. The game of volleyball , basketball and Track and Field are more popular sports around the world . The game of volleyball , basketball and Track and Field are frequently play in Maharashtra. Total 40 Volleyball, 40 Basketball and 40 Track and field Players were selected as sample size of the study. The study depends mainly on primary source of data. The data was collected from Volleyball, Basketball and Track &Field players. The data was collected in Agriculture University Parbhani during Ashamedha Tournament from 25 November to 30 November 2013. The findings of the study shows that volleyball more young track and field and basketball respectively. The result of the study illustrates that Track &Field players more time spend in training and more play completion as compare to Volleyball and Basketball players. Further the result of the study shows that insignificant difference were found in hemoglobin and Red Blood Cells among Volleyball basketball and Track and Field Players.

Introduction

The Study of haematological characteristics of sports participants is one of the most popular areas in sports related research. The game of volleyball, basketball and Track and Field are more popular sports around the world. The game of volleyball, basketball and Track and Field are frequently play in Maharashtra . Volleyball and basketball can be played in a small area and practically less equipment is required but track and field require a large area volleyball , basketball and Track and Field games differ from each other in their nature, skill, techniques and strategies etc specially in physiological characteristics. Poor performance of Indian athletes in international competitions is a matter of great concern to the Physical educationist, coaches, sports scientists and planners. Every effort is desperately being made by all those who are connected with sports to find ways and means to improve the performance of athletes in world level sports competitions. Under these circumstances, the role of physical educationist and sport scientists becomes all the more important to provide scientific back up to the athletes and trainers to make them realize the full potential of the sportsmen to achieve their peak performances. This is possible only if appropriate research is carried out on athletes and the findings are used in training the athletes. There is a scarcity of research reports on haematological characteristics of players of different sports disciplines in India and require a very extensive effort. The effort made by the Physical educationist, sports scientists and coaches can prove very useful in this regard.

Methods

The present study was undertaken with a view to "study and compare the body blood pressure , haemoglobin and red blood cells of Volleyball , Basketball and track & field players, Total 40 Volleyball, 40 Basketball and 40 Track and field were selected as sample size of the study. The study depends mainly on primary source of data. The data was collected from players in Agriculture University Parbhani during Ashamedha Tournament from 25 November to 30 November 2013.In collecting the data, the researcher follow to ethical guidelines, principles, and standards for studies conducted with human beings. The participant was agreeing to participate in the study, The participants were not rotating through other health facility at the time of study and finally Participants

free from the smoking, drug abuse and alcohol consumptions during the experimental period. Only two haematological characteristics had been taken RBC and Hb.

Measurement of Haemoglobin and red blood

For measuring haemoglobin and red blood cells the blood sample taken from a vein. This procedure takes only a few minutes. Caregivers put a wide rubber strap around arm and tighten it. Skin was be cleaned with alcohol. A small needle attached to a special test tube was put into a vein in arm or hand. The tube has suction to pull the blood into it. When the tube is full, the rubber strap, needle and tube are removed. The caregiver pressed a piece of cotton where the needle was removed. The subject was asked to hold the cotton on the area for a few minutes to help stop the bleeding. Tape may then be put over the cotton on the arm. The measurement taken from the help of technician

Range of Hemoglobin

Hemoglobin is a protein in the red blood cells that carries oxygen and gives blood its red color. The normal range for hemoglobin may differ between the sexes and is approximately 13 to 18 grams per deciliter for men and 12 to 16 grams per deciliter for women.

Red Blood cells

Red cell count signifies the number of red blood cells in a volume of blood. The normal range in men is approximately 4.7 to 6.1 millioncells/ul (microliter). The normal range in women range from 4.2 to 5.4 million cells/ul, according to NIH (National Institutes of Health.

Data analysis

The data was checked for accuracy and completeness and was coded and putup into the SPSS Descriptive statistics for all studied variables, mean standard Deviation, and F- test were considered statistically technique throughout the study.

Results of study

The present chapter is dedicated to the presentation of results along with the discussion of present study. The results and discussion have been presented in concise and comprehensive manner that is easy to comprehend starting with selected physical parameter.

The primary aim of the study was to statistically compare hemoglobin and red blood cells among Volleyball, Basketball and Track & Field Players with the help of mean standard deviation and F-ratio.

The results concerning this are presented in the form of tables and also illustrated with the help of suitable figure where ever necessary. For the sake of convenience and methodical presentation of the results, following order has been adopted.

TABLE – 1
MEAN SCORES AND STANDARD DEVIATIONS OF SELECTED COMPONENTS VOLLEYBALL, BASKETBALL AND TRACK AND FIELD PLAYERS

Sr.No.	Components	Volleyball		Basketball		Track and Field	
		Mean	SDs	Mean	SDs	Mean	SDs
1)	Age (Year)	21.78	4.53	21.89	4.36	22.22	4.01
2)	Weight (Kg)	67.03	8.23	74.89	8.70	73.80	8.10
3)	Height (Cm)	172.20	15.56	175.39	15.87	173.30	15.01
4)	Training days (Week)	4.54	1.32	4.60	1.38	4.90	1.45
5)	Training duration (Hours)	2.78	.81	2.89	0.98	2.84	0.91
6)	Competition in one year	10.78	2.67	10.89	2.76	12.34	2.80

Table-1 shows that the mean scores and standard deviations of the selected components of Volleyball, Basketball and Track and Field players.

FIGURE-1
MEAN SCORES AND STANDARD DEVIATIONS OF HEMATOLOGICAL CHARACTERISTICS OF SPORTSPERSON FROM DIFFERENT SPORTS DISCIPLINE

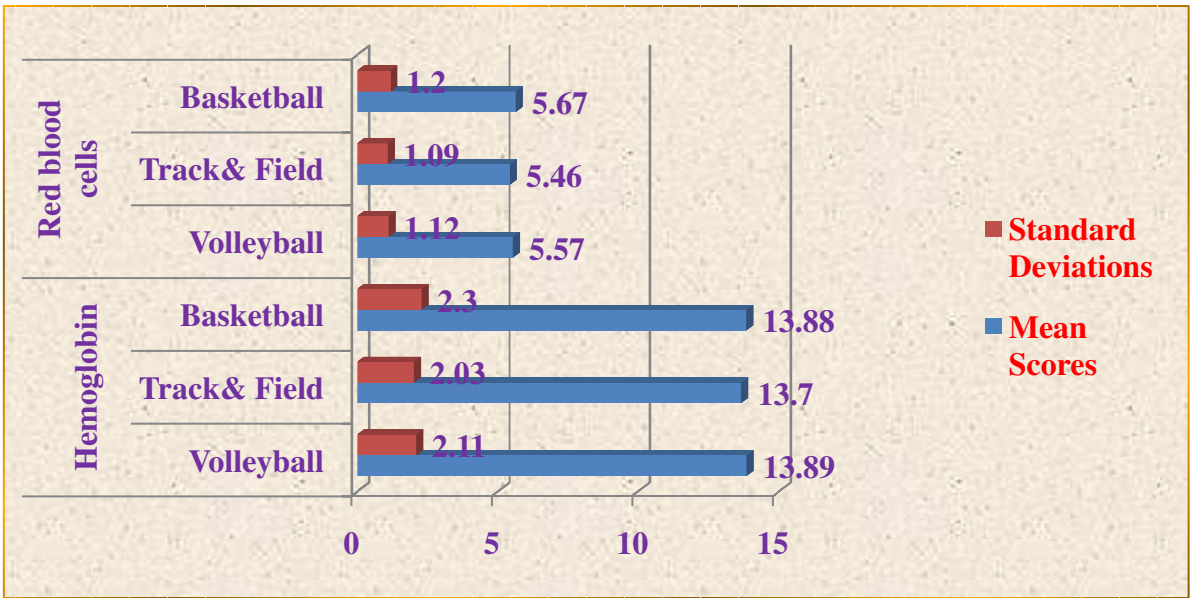

Figure 1 Shows that Mean scores and standard deviation of Hemoglobin and Red Blood Cells among players of different sports discipline. In order to find out the significant difference of Hemoglobin among players of different sports discipline; one way ANOVA was used to compare the Hemoglobin among Basketball, Volleyball and Track & Field players. The results of ANOVA of Hemoglobin among Basketball, Volleyball and Track & Field players formed on the basis of Result is presented in Table 3.

TABLE-3
ONE WAY ANALYSIS OF VARIANCE OF HEMATOLOGICAL CHARACTERISTICS AMONG PLAYERS OF DIFFERENT SPORTS DISCIPLINE

Hematological Profiles	Source of Variance	DF.	SS	MSS	F- ratio
Hemoglobin	Between Groups	3	0.89	0.29	
	Within Groups	117	153.90	1.31	0.22 NS
Red Blood Cells	Between Groups	3	0.71	0.23	
	Within Groups	117	137.30	1.17	0.001NS

NS= Not Significant

Table-3, indicates that insignificant difference of Hemoglobin of among players of different sports discipline as above observed in F-ratio was 0.22. Whereas insignificant difference of Red Blood Cells of among players of different sports discipline as above observed in F-ratio was 0.001.

Discussion

The findings of the study showed that , the mean Score (S.Ds.) age of Volleyball players was 21.78 (4.53) years, mean score (S.Ds.) weight was 67.03 (8.23) Kg., mean score (S.Ds.) height was 172.20 (15.56) cm., their training mean score (S.Ds.) was 4.54 (1.32) days, their training duration mean score (S.Ds.) was 2.78 (.81) hours, and competition mean score (S.Ds.) was 10.78 (2.67) in one year.

Whereas, mean Score (S.Ds.) age of basketball players was 21.89 (4.36) years, mean score

(S.Ds.) weight was 74.89 (8.70) Kg., mean score (S.Ds.) height was 175.39 (15.87) cm. their training mean score (S.Ds.) was 4.560(1.38) days, their training duration mean score (S.Ds.) was 2.89 (.98) hours, and competition mean score (S.Ds.) was 10.89 (2.76) in one year.

In addition , mean Score (S.Ds.) age of Track &Field players was 22.22 (4.01) years, mean score (S.Ds.) weight was 73.80 (8.10) Kg., mean score (S.Ds.) height was 173.30 (15.01) cm., their training mean score (S.Ds.) was 4.90(1.45) days, their training duration mean score (S.Ds.) was 2.84 (.91) hours, and competition mean score (S.Ds.) was 12.34 (2.76) in one year. The finding of the study shows that volleyball more young track and field and basketball respectively. The result of the study illustrates that Track &Field players more time spend in training and more play completion to Volleyball and Basketball players. The mean values of Hemoglobin among Basketball, Volleyball and Track & Field players were 13.89 (2.11), 13.70 (2.03) and 13.88 (2.30) obtained respectively. Whereas, The mean values of Red Blood cells among Basketball, Volleyball and Track & Field players were 5.57 (1.12), 5.46 (1.09) and 5.67 (1.20) obtained respectively. In order to find out the significant difference of Red Blood cells among players of different sports discipline. The results of ANOVA of Hemoglobin and Red Blood cells among Basketball, Volleyball and Track & Field players formed on the basis of Result. Further the result of the study shows that insignificant difference were found hemoglobin and Red Blood cells among Volleyball basketball and Track and Field Players. Sports performance strongly depends on the oxygen transportation capacity to supply exercising muscles. This capacity is associated with the erythrocyte values, which may thus be regularly assessed throughout the sports season (Fallon, 2004.) to allow trainers and medical staff mem- bers to collect useful fitness and health related information on players. In a sportsman practicing an intense long duration activity, water losses are ac- companied by a decrease in iron store. In case this situation persists, it may lead to anaemia, as the sport considered requires important energy expenditure. More than one quarter of the male and the three quarters of the female long distance race specialists would be affected by iron deficiency (Clement & Sawchuck, 1984). The major function of Red Blood cells is to transport haemoglobin, which in turn carries oxygen from the lungs to the tissue, so that the red blood cells are responsible for most of the buffering power of whole blood. Haemoglobin concentration is an important diagnosis indicator for the well-being of sports person. The findings of the study supported that no major differences have been reported between the players of different sports discipline in red blood cells and haemoglobin concentration. (Zapico, et.al.1992). Boyadjiev, & Taralov. (2000), Clement, & Sawchuk, (1984), Douglas, (1989). Ashenden, et.al.(1999). Wilkinson, 2002)

References

1. Ashenden, M. J., Gore, C. J., Martin, D. T., Dobson, G. P., & Hahn, A. G. (1999). Effects of a 12-day “live high, train low” camp on reti- culocyte production and haemoglobin mass in elite female road cy- clists. European Journal of Applied Physiology, 80, 472-478.
2. Ben Rayana, M. C., Kolsteren, P., Lefèvre, P., Gharbi, T., Khosrof-Ben Jaafar, S., & Beghin, I. (2002). Approche causale de l’anémie par carence en fer. CIHEAM. Options Méditerranéennes, 41, 41-49.
3. Biancotti, P. P., Caropreso, A., Di Vincenzo, G. C., Ganzit, G. P., & Gribaudo, C. G. (1992). Hematological status in a group of male ath- letes of different sports. The Journal of Sports Medicine and Physical Fitness, 32, 70-75.
4. Boyadjiev, N., & Taralov, Z. (2000). Red blood cell variables in highly trained pubescent athletes: A comparative analysis. British Journal of Sports Medicine, 34, 200-204
5. Clement, D. B., & Sawchuk, L. L. (1984). Iron status and sports perfor- mance. Sports Medicine, 1, 65-74.
6. Cordova, M. A., & Escanero J. F. (1992). Iron, transferrin, and hapto- globin levels after a single bout of exercise in men. Physiology and Behavior, 51, 719-722

7. Douglas, P. D. (1989). Effect of a season of competition and training on hematological status of women field hockey and soccer players. The Journal of Sports Medicine and Physical Fitness, 29, 179-183.
8. Fallon, K. E. (2004). Utility of hematological and iron-related screening in elite athletes. Clinical Journal of Sport Medicine, 14, 145-152.
9. French Agency for Food Medical Safety (2000). Nutritional intake for athletes. Synthesis of recommendations. Maisons-Alfort (Val-de-Ma- rne). National Center for Studies and Recommendations on Nutrition and Food. National Center for Scientific Research.
10. Portal, S., Epstein, M., & Dubnov, V. (2003). Iron deficiency and ane- mia in female athletes: Causes and riks. Harefuah, 142, 698-703.
11. Santhiago, V., da Silva, A. S., Papoti, M., & Gobatto, C. A. (2009). Responses of hematological parameters and aerobic performance of elite men and women swimmers during a 14-week training program. The Journal of Strength & Conditioning Research, 23, 1097-1105.
12. Schobersberger, W., Tschann, M., Hasibeder, W., Steidl, M., Herold, M., Nachbauer, W., & Koller, A. (1990). Consequences of 6 weeks of strength training on red cell O2 transport and iron status. European Journal of Applied Physiology and Occupational Physiology, 60, 163-168.
13. Schumacher, Y. O., Schmid, A., König, D., & Berg, A. (2002). Effects of exercise on soluble transferrin receptor and other variables of the iron status. British Journal of Sports Medicine, 36, 195-200.
14. Wilkinson, J. G., Martin, D. T., Adams, A. A., & Liebman, M. (2002). Iron status in cyclists during high-intensity interval training and re- covery. International Journal of Sports Medicine, 23, 544-548.
15. Wilmore, J. H., & Costill, D. L. (2006). Sports and exercise physiology: Physiological adaptations to exercise. Brussels: de Boeck.
16. Zapico, A. G., Calderón, F. J., Benito, P. J., González, C. B., Parisi, A., Pigozzi, F., & Di Salvo, V. (2007). Evolution of physiological and haematological parameters with training load in elite male road cy- clists: A longitudinal study. The Journal of Sports Medicine and Physical Fitness, 47, 191-196.

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A Retrospective Study of Injuries Prevalence during Time Period among Football Players

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Abstract

Objectives

The primary objective of this study was to determine the retrospective study of injuries prevalence during time period in football players.

Methods

The research scholar personally contacted the players and the purpose of the study was explained to them. Further instructions were given by the investigator to the players for the completion of questionnaire. A questionnaire prepared by Cromwell & Gromely (2000) for elite Gaelic football players and modified by the investigator was used. The information of injuries were collected from 100 football players . Total 88 injuries out of 100 football players were found out over the one year of the period. . The football players were asked to recall injuries over the proceeding one year period.

Results

Total 88 injuries out of 100 football players were found out over the one year of the period. 19.09%. Football players reported injuries during first halves ,28.79% injuries reported during second halves ,41.12% injuries reported during the training period 06.55% injuries occurred during warm period and injuries reported during warm down period was 02.54%.

Introduction

Football is one of the most popular sports in the world.Australian football association, surveyed injuries between 1992 to 1998. There were 4681 injuries, that satisfied the definition of missing a regular season game, over 97706 players in a weeks. players from team in Northern states were slightly (14%) more likely to be injured then players from teams in victoria (RR 1.14, 95% C1 1.07 – 1.21). There was no significant difference in the risk for any of the categories of upper limb trunk or head and neck injuries. Many of the lower limb injury categories had greater incidence in players from Northern teams, including ankle injuries (RR 1.71, 95% C1 1.36 – 2.58), Calf strain (RR 1.35, 95% C1 1.03 – 1.71).

Football is a high risk sport dominated by overuse injuries while recovery time from injuries is relatively long, but only a few working days are lost by the players to return back to play, thus leading to abuse of the injured sites. In football only a few studies have been made in the literature regarding incidents of injury and pattern, possible risk factors and injury prevention (Wastan. 1993;). In football overuse injuries are the most frequent occurrences of injury

Football is sports that makes heavy demands on the player. The physical work is intermittent involving high intensive activity interspersed with short pauses.

Materials and Methods

The present study was to determine the retrospective study of injuries prevalence in football players aged between 18 to 28 years. The data was collected with the help of questionnaires prepared by Cromwell, F.J. Walsh Gromley for Elite Gaelic footballers (2000) and it was modified by the investigator and utilized the test-retest reliability of the questionnaire was find 0.76. The subjects were required to fill out a questionnaire for each injury for one year. The information of injuries collected from 100 football players . Total 88 injuries out of 100 football players were found out over the one year of the period.

Research Design

The design in a research study refers to "the researcher's overall plan for answering the

researcher's question or testing the research hypotheses. This study involves a comparative survey of three groups of football players and its combine sample in a non-experimental, retrospective study design.

Statistical Technique:

Statistical techniques play very significant role in the interpretation of numerical data obtained from individuals by giving numerical expressions to the relationships and the variations with respect to different aspects. Keeping in view the aim of the study, percentage have used for interpretation of the data The statistical computation of data of the present study is used by using SPSS package in the computer. The result computed also crosschecked by using following statistical variables.

Results and discussion

The results concerning this are presented in the form tables for the sake of convenience and methodical presentation of the results, following order has been adopted.

Table – 1

Mean Scores and Standard Deviations of selected components of the Football players

Sr. No.	Components	Means Scores	Standard Deviations
1.	Age (Year)	21.32	8.21
2.	Training (days/week)	04.64	01.71
3.	Training duration (hours)	2.78	0.59
4.	Warm up (minutes)	10.17	3.30
5.	Competition in one year	14.89	2.67

Table-2.1, shows that the mean scores and standard deviations of the selected components of the football players. Mean Score (S.Ds.) age of football players was 21.32 (8.21) years, their training mean score (S.Ds.) was 4.64 (1.71) days, their training duration mean score (S.Ds.) was 2.78 (.59) hours, their warm up mean score (S.Ds.) was 10.17 (3.30) minutes and competition mean score (S.Ds.) was 14.89 (2.67) in one year. Table – 1

Information of injuries during time period among football players dedicated through Table -2

Sr. No.	Time Period	Percentage of injuries (%)
1)	First halves	19.09%
2)	Second halves	28.79%
3)	Training	41.12%
4)	Warm up	06.55%
5)	Warm Down	02.54%

The results obtained from Table:- 1, illustrates the percentage of injuries occurred during the period among football players, 19.09%. Football players reported injuries during first halves ,28.79% injuries reported during second halves ,41.12% injuries reported during the training period 06.55% injuries occurred during warm period and injuries reported during warm down period was 02.54%. According to results and literature reviews of Dvorak and Junge (2000), Morgan and Oberlander (2000), Junge et al (2004), , Junge, Dvorak, Graf-Baumann and Peterson (2004), Chomiak J, Junge A, Peterson L, and Dvorak J (2000) the injury incidence of match exposure compared to training exposure was compiled. The studies of Dvorak and Junge (2000), Junge et al (2004), Boden BP, Kirkendall DT, and Garrett WE, Jr. (1998) ,Junge, Dvorak, Graf-Baumann and Peterson (2004) showed noticeable variations in their results of injury incidence for match exposure. The injury incidence for match exposure ranged from as little as 12 injuries per 1 000 match hours to as much as 144 injuries per 1 000 match hours, which resulted in an average of 72.83 injuries per 1 000 match hours from all the studies, and ranged from 1.2 to 2.7 injuries per match.

References

1. Chomiak J, Junge A, Peterson L, and Dvorak J (2000) Severe injuries in football players. Influencing factors. Am J Sports Med 28: S58-S68
2. Cromwell, F.J. Walsh Gromely "A Pilot Study examining injuries in elite gaelic footballers" British journals of sports medicine 2000, 34: 104-108.
3. Dvorak J and Junge A (2000) Football injuries and physical symptoms. A review of the literature. Am J Sports Med 28: S3-S9
4. Ekstrand J and Gillquist J (1983a) Soccer injuries and their mechanisms: a prospective study. Med Sci Sports Exerc 15: 267-270
5. Hawkins RD and Fuller CW (1999)A prospective epidemiological study of injuries in four English professional football clubs. Br JSports Med 33: 196-203
6. H. Winter Griffith, M.D. (1989), complete guide to sports injuries Motropolitan Book Co. (P).
7. Junge A (2000) The influence of psychological factors on sports injuries. Review of the literature. Am J Sports Med 28: S10-S15
8. Junge A, Dvorak J, and Graf-Baumann T (2004a) Football injuries during the World Cup 2002. Am J Sports Med 32: 23S-27S
9. Junge A, Dvorak J, Graf-Baumann T, and Peterson L (2004b)Football injuries during FIFA tournaments and the Olympic Games, 1998-2001: development and implementation of an injury-reporting system. Am J Sports Med 32: 80S-89S
10. Morgan BE and Oberlander MA (2001) An examination of injuries in major league soccer. The inaugural season. Am J Sports Med 29: 426- 430.
11. Ostenberg A and Roos H (2000) Injury risk factors in female European football. A prospective study of 123 players during one season. Scand J Med Sci Sports 10: 279-285
12. Orchard J, Seward H, McGivern J, and Hood S (2001)Intrinsic and extrinsic risk factors for anterior cruciate ligament injury in Australian footballers. Am J Sports Med 29: 196-200
13. Singh, Sinku Kumar " Comparison of accurrence of injuries to footballers at low and high level of achievement." An unpublished M.Phil thesis, Kurukshetra University, Kurukshetra 2006.
14. Waston A. Incidence and nature of sports injuries in Ireland American journal of sports Medicine 1993; 21: 137-143.

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Suicide of a Student or a Falling Education System?

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Abstract

This paper provides the knowledge concerning the failings of education systems. It limelight the unsafe causes among the students education and the way to cure them. Whether we fail at school or examination, suicide wasn't a solution. Per World Health Organization (WHO) each forty seconds life is lost through suicide. Studies shows that 16,000 students in Asian country committed suicide between 2004 and 2008.South Asian country is taken into account the world's capital, particularly Kerala as a result of such a large amount of suicide cases were seen their from the past decades. Depression among the students and in youth has increased from 2% to 12%. From last 5 years depression is that the no.1 industrial disease of the twenty first century says WHO. Statistics shows that each year 200, 000 teenagers worldwide kill themselves whereas regarding four million adolescents try it. Suicide reasons were to be recognized to many Psychological, biological and surroundings influences. The education system elicited psychological issues like unsafe feelings, concern of exams, concern of failure, educational stress, unsafe mutation, despair, parent lure, sensory activity fatigue, bullying, lack of content, examination phobic neurosis, concern and loss of inspiration.

Introduction

Life conveys completely unusual experiences, lessons and challenges. Generally we discover ourselves at the sting of darkness, unsure and misplaced. At some times, some of the persons take irreversible step falling into darkness. Education in today's world is the most vital side of life. Education makes our lives comfortable and habitable within the society. However generally it becomes a killer for someone's life. Suicides of Youth have been a heavy drawback in several nations over the previous years. Statistics shows that each year 200, 000 teenagers worldwide kill themselves whereas concerning four million adolescents try it.

The adolescent suicide are, just alike the tip of an iceberg, bearing the per found dissatisfaction and despair, a huge part of humanity lives within. Mental growth is much important, vital and relevant that physical or religious growth. Everyone seems to be not a born Einstein or a Newton. Every individual have not the same skills and not the same learning skills. The education system places such a lot pressure on book knowledge that everyone having different skill gets dominated by a individual's capability to learn facts then to breed them within the analysis or examination. What will a student do if he/she fails badly in exam? Is suicide the sole answer to the present problem? What are the failings within the education system?

The illusion of an infinite growth and consumption isn't property during a predetermined world and also the social and economic disasters we have seeing within the past year's measure, doubtless, worrying signs of crumbling views.

Education is that the mainly vital and dominant weapon which May amendment the worlds. It shall help civilization and addressing its difficulties and problems of social life at every stage. There's rather more to life than that. There are a fears, complications and problems. There are a sorrows and sufferings. There's joy and love. There's death. There's loveliness and consciousness. Suicide may be a fulminate interruption of the training method.

Body of the Paper

About 2500 years ago, Socrates said that education is the kindling of a flame, not the filling of a vassal. Suicide is not a solution, if we fail in school, exams or life.

As per World Health Organization (WHO) information each forty seconds a life is lost through suicide. Additional suicide happens between eighteen and forty five. In different words, it's the foremost productive cohort of our society. Each three seconds someone makes an attempt to die. Suicide one among the highest 3 causes of death among the young within the cohort of 15-35 years.

ILO study says that 16000 students in Asian country committed suicide between 2004 and 2008. Depression among the scholars and youth has will increase from 2% to 12% from last 5 years. Depression is that the no.1 disease of the twenty first century says World Health Organization (WHO).

According to the UNESCO, over 50% of the world's children are brought up in the stressful condition. In India 72% students in India are unaware how to deal with stress. In 2006 year 5, 857 students committed suicide due to stress. NIMHANS study says that 27.6% of IT professionals in Asian country addicted to narcotic drugs.

South Asian nation was thought of the world's suicide capital; particularly Kerala, the primary state, has the numeral of suicides committed each day (nearby 32). According to Suen & Yu (2006), Hesketh, dong & Jenkins (2002),Zeng & LE Tendre (1998), reports that in metropolis, China, Japan and different Asian countries associated with the test elicited Psychological issues , dangerous feeling and concern of exams.

Is the examination system is the reason for suicide?

Is the Education System is the reason for the suicide or suicide attempts?

What were the flaws?

These are some questions which were arising.

Suicide Causes square measure to be attributed to many biological, psychological and surroundings factors. A survey worn out United Kingdom (UK), on 6020 schoolchildren (2002) has revealed that 70% of self-hurting youths with suicide feelings have confessed that the reason was their considerations concerning the varsity exams and performance. The pursuit of high take a look at score not solely brings pressure to students, however conjointly to the academics, creating the link between academics and making students worse. Particularly once student perform poorly in exams that leads some students to suicide. Some reports cited that preparation burdens and poor test scores lead them to try and do suicide therefore.

Students stressed to driven at colleges/school, to look for competitive analyses, nobody given the students any recommendation concerning the means of lifetime. Educational performance and pressures are found to be powerfully associated with stripling suicide downside and is one among the most causes resulting in it. Education shall not solely concerning gaining additional information and knowledge, however rather concerning on understanding the higher means of life. Give them the glorious professionals and staff, however additionally students should free from fears and hate, therefore ready to provide and receive love.

Psychiatrists were reported that a large range of scholars were full of traumatic disorders associated with the concern of examination. Lack of guidance among the scholars was the most important reason. Fear issue embodies fear of examination. The parent trap suggests that parents force their kids to get score high that leads them to depression or stress. There have been another reasons like tutorial stress, dangerous mutation, sensory activity fatigue, communicating phobic neurosis, despair, fear, bullying, loss of inspiration, lack of religion, feeling despised and hateful that leads them to loneliness, stress, depression and isolation.

Suggestion for Overcome the Flaws or Future Cures

With the assistance of college counselors, college personnel, psychologists and social employees making an attempt to prevent, discover and secure help for the scholars. Some programmes ought to be conducted worldwide for the purpose of the advancement of the emotional and mental wellbeing additionally on the development of the information on suicide. Providing opportunities to seek knowledge and broader for understanding.

- Instead of one-shot terminals, exams would be staggered over 2 semesters to ease pressure.
- Restricting the amount of Pre- board exams and presumably forbiddance them along.

- Evaluations would be mixture of internal and external. No sprinting through answer papers.
- No a lot of failures within the new grading system being concerned.
- A combination of multiple selection and ancient inquiries to check and understanding the broad skills and not simply memory.
- Focus on talent primarily based education.
- Reward ought to tend to creative thinking, original, thinking, analysis and innovation.
- Implement large technology, infrastructure for education.
- Re-define the aim of the education system.
- Effective de-regulation.
- Take mediocrity out of the system.
- Personalize education- one size doesn't work all.
- Allow delicate capital in education.
- Make reservation inappropriate.

Refrences

- Aggarwal Shobhit(2012, Jun, 21). Education system and student suicide rate; Stop the blame game, retrieved from http://www.youthkiawaaz.com/2012/07/educaion-system-and-student-suicide-rate-stop-the-blame-game.
- Barry, Garfinkel, Art F., and Jane H. (1982) Suicide attempts in children and adolescents. *American Journal of Psychiatry*, Vol. 139, pp.1257–1261.
- Durisch A. B. (2012, Jul, 21). Education and suicide retrieved from http://www.globaleducationmagazine.com/education-suicide/.
- Horowitz M. Lisa et al (2009). Suicide screening in schools, primary care and emergency departments retrieved from http://www.ncbi.n/m.nih.gov./pmc/articles/pm2879582.
- Hagihara Akihito, Tarumik K. and Abe T. (2007, Nov, 11). Media suicide reports, internet use and the occurrence of suicides between 1987 and 2005 in Japan retrieved from http://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-7-321.
- Mann John M. et al (2005, Oct, 20). Suicide prevention strategies. *The journal of the American Medical Association*, Vol. 294, Issue 16.
- Roberts Dexter (2014, May, 15). China exam system drives student suicides retrieved from http://www.bloomberg.com/bw/articles/2014-05-15/china-exam-system-drives-student-suicides.
- World Health Organization (2012). Suicide country reports retrieved from http://www.who.int/mental_health/prevention/suicide/country_rep orts/en/.

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Review of Analogies between Rings of Integers and Polynomial Rings over Finite Fields

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Abstract

The ring of integers Z has many properties in common with A = F[T] , the ring of polynomials over F where F is a finite field. Both rings are principal ideal domain with infinitely many prime elements and finitely many units. There are many other surprising analogies between them.

In this exposition we will try to review as many analogies we can. All rings considered will be commutative rings with identity element. In the sequel F always denote a finite field with characteristic p and with q elements.

Main text

We first note that both Z and A are Euclidean domains. Any non-zero ideal of Z is of the form nZ where n≠ 0 and the number of elements in Z/nZ = $|n|$. As A is Euclidean domain ,it is PID. Every non-zero ideal of A is of the form gA where g≠ 0 . Analogously we define $|g|$ to be the number of elements in the ring A/gA. As we know $\{ r \in A / \deg(r) < \deg(g)\}$ is a

complete set of representatives for A/gA. Hence $|$ A/gA$|$ = $|g|$ = $q^{\deg g}$ where $|F| = q$. From this definition we can see that $|gh| = |g|\,|h|$ where h is some non-zero polynomial in A.

Also If P is an irreducible polynomial A then as the map $\eta : A / P^n A \to P^k A / P^{k+n} A$ given by

$f + P^n A \to P^k f + P^{k+n} A$ is an isomorphism , the number of elements in the ring $P^k A / P^{k+n} A$

is $|P|^n$.

Using Chinese Remainder theorem we can calculate number of units in a proper factor ring of A. This number is denoted as $(A/fA)^*$ where f is a non-zero polynomial in A. If $f = \alpha P_1^{\alpha} P_2^{\alpha_2} \ldots P_t^{\alpha_t}$ is the prime decomposition of f in A where α is unit and P_i's are monic irreducible polynomials in A then $A / fA \cong \left(A / P_1^{\alpha_1} A\right) \times \ldots\ldots \times \left(A / P_t^{\alpha_t} A\right)$ and $(A / fA)^* \cong \left(A / P_1^{\alpha_1} A\right)^* \times \ldots\ldots \times \left(A / P_t^{\alpha_t} A\right)^*$. This resembles the result for $(Z/nZ)^*$ where n is some non-zero, non- unit integer.

We denote Z^+ to be the set of all positive integers. In elementary number theory for any $n \in Z^+$ where $n = p_1^{\alpha} p_2^{\alpha_2} \ldots . p_t^{\alpha_t}$ is its prime decomposition then we define arithmetic functions like ,

$\phi(n)$ = number of integers between 1 and n which are relatively prime to n, d(n) = number of integers between 1 and n which divides n, $\sigma(n)$ = sum of all divisors of n between 1 and n, mobius function $\mu(n)$ is defined as $\mu(1) = 1$; $\mu(n) = (-1)^k$, if n is product of k different primes;

$\mu(n)$=0 , otherwise . Analogues of these arithmetical functions are defined on A. If f is some non-zero polynomial in A then analogously we define $\phi(f)$ = the number of units in A/fA or

Equivalently the number of monic polynomials in A of degree less than the degree of f and are relatively prime to f , d(f) = the number of monic divisors of f , $\sigma(f) = \sum_h |f / h|$ where sum is over all monic divisors of f , $\mu(f)$= 0 if f is not square free and $\mu(f) = (-1)^t$ if f is a constant times a

product of t distinct monic irreducible polynomials. Not only resemblance in these definitions is striking but also resemblance of their formulae is surprising [refer 3]. Three important theorems in number theory are Euler's theorem , Fermat's theorem and Wilson's theorem.**(Euler's Theorem) :** If $(a,m)=1$, then $a^{\varnothing(m)} \equiv 1 \pmod{m}$, **[Fermat's Little Theorem]:** If $(a,p)=1$, p is a prime, then $a^{p-1} \equiv 1 \pmod{p}$,**[Wilson's Theorem]:** The integer p is a prime if and only if $(p-1)! \equiv -1 \pmod{p}$. Analogues of these theorems for A are respectively stated as Suppose $0 \neq f$ and a are polynomials in A with $(a,f)=1$. Then $a^{\varnothing(f)} \equiv 1 \pmod{f}$, Suppose P is an irreducible polynomial in A and $0 \neq a \in$ A is a polynomial not divisible by P, then $a^{|P|-1} \equiv 1 \pmod{P}$ [note here $\varnothing(P) = |P| - 1$]. Let $P \in A$ be an irreducible polynomial of degree d. Suppose X is an indeterminate. Then $X^{|P|-1} - 1 \equiv \prod_{0 \le \deg f < d} (X - f) \pmod{p}$, in this if we will put X = 0 then we will get analog of wilson's theorem for A which is stated as , a nonzero nonconstant polynomial $P \in A$ is irreducible if and only if $\prod_{0 \le \deg f < \deg P} f \equiv -1 \pmod{P}$. Not only statements of these theorems are similar but there is similarity in their proofs also [refer 3].

As d-th power residues modulo n are defined in Z , d-th power residues modulo f are defined in A. These are of importance in the discussion of the law of quadratic reciprocity and more general reciprocity laws for A. d-th residue symbol in A is defined as follows,

[d-th residue symbol]: Let P be an irreducible polynomial in A and $a \in A$. Suppose $d \mid q-1$. If $P \nmid a$, we denote by $\left(\frac{a}{p}\right)_d$ the unique element of $\mathbb{F}^*$ such that $a^{\frac{|P|-1}{d}} \equiv \left(\frac{a}{p}\right)_d \pmod{P}$. If $P \mid a$, we put $a^{\frac{|P|-1}{d}} = 0$. The symbol $\left(\frac{a}{p}\right)_d$ is called d-th residue symbol. The general reciprocity law in A is stated as, Let $a, b \in A$ be relatively prime, non-zero elements. Then $\left(\frac{a}{b}\right)_d \left(\frac{b}{a}\right)_d^{-1} = (-1)^{\frac{(q-1)\deg(a)\deg(b)}{1}} \operatorname{sgn}_d(a)^{\deg(b)} \operatorname{sgn}_d(b)^{-\deg(a)}$ where If $a \in A$, we define $\left(\frac{a}{b}\right)_d = \prod_{j=1}^{s} \left(\frac{a}{Q_j}\right)_d^{f_j}$, $b \in A, b \neq 0$, $b = \beta Q_1^{f_1} Q_2^{f_2} \ldots Q_s^{f_s}$ is the prime decomposition of b and for non-zero polynomial f in A , $\operatorname{sgn}_d(f)$ is defined to be leading coefficient of f raised to $\frac{q-1}{d}$ power. The general reciprocity law for Z [refer 1] is complicated and long. By contrast a very general reciprocity law for A can be formulated without much machinery. Dedekind proved analogue of quadratic reciprocity law for A in the last century. Carlitz has given several different proofs for it.

The Riemann zeta function is an extremely important function of mathematics and physics which arises in definite integration and is intimately related with very deep results surrounding the prime number theorem. Riemann founded the study of this function in the year 1859. It is denoted as $\zeta(s)$ and is defined by , $\varsigma(s) = \sum_{n=1}^{\infty} n^{-s}$ Recall that this function $\varsigma(s)$, defined for $\sigma > 1$, where $\sigma =$ Re [s] is analytic in the half plane $\sigma > 0$, except for a simple pole with residue 1, at the point $s = 1$. [refer 2]. The Zeta function for A is an analogue of the classical zeta function which was first

introduced by L.Euler and its study was immeasurably enriched by the contributions of B.Riemann. The zeta function for *A* is denoted by $\zeta_A(s)$ and is defined by the infinite series $\zeta_A(s) = \sum_{f \in A,\, f\text{monic}} \frac{1}{|f|^s}$, $\forall s \in C$ with real part of $s > 1$.

We know that Hurwitz's formula can be applied to prove Riemann's functional equation for $\zeta(s)$. It was found that functional equation holds in case of A also. Compared to classical zeta function proofs are easy for zeta function for A [refer 3].

If we consider the probability that given positive integer is square free and in case of A if we consider the probability that given monic polynomial of degree n is square free then these two probabilities are surprisingly similar. The probability that positive integer is square free is $\frac{6}{\pi^2} = \frac{1}{\zeta(2)}$. The probability that monic polynomial of degree n in A is square free is $1- q^{-1} = \frac{1}{\zeta_A(2)}$.

Further if we consider the average of divisor function in Z and in A then the results are strikingly similar. Prime number theorem for Z is stated as if $\pi(x)$ denotes the number of primes less than or equal to x then $\pi(x)$ is asymptotic to $\frac{x}{\log x}$. Prime number theorem for A is stated as if n is positive integer and $x = q^n$ then the number of monic irreducible polynomials P in A such that $|P| = x$ is asymptotic to $\frac{x}{\log_q x}$. Again this analogy is surprising. But in case of polynomial rings zeta function is much simpler object and its use rapidly leads us to the prime number theorem for polynomials [refer 3].

Many analogies which could have been included here are left out. For example an important application of analytic functions discovered by Dirichlet[1837] is that there are infinitely many primes in any arithmetic progression b , b + m , b + 2m,……where b , m ∈ Z and $(b, m) = 1$. To do this he introduced L – functions which bear his name [refer 2]. Analogue of this theorem for A was first proved by Kornblum using the theory of Dirichlet series. In case of A , the same result is stated as ' there are infinitely many primes P ∈ A such that $P \equiv a \pmod{m}$ where a , m ∈ A with m non-constant and $(a, m) = 1$.

Clearly number theory in function fields is a vast subject . It is of interest for its own sake and also because it has so often served as a stimulant to research in algebraic number theory and arithmetic geometry.

References:

1. Apostol, T. M., Introduction to Analytic Number Theory, New York: Springer-Verlag, 1976.
2. Ireland, K. and Rosen, M., A classical introduction to modern number the-ory, 2nd edition, GTM 84, Springer-Verlag, Berlin-Heidelberg- New York, 1990.
3. Rosen, M., Number Theory in Function Fields, New York: Springer-Verlag, 2002.
4. Niven, I. and Zuckerman, H.S., An Introduction to the theory of numbers, 3rd ed., New York: John Wiley and sons, Inc, 1972.
5. David S. Dummit and Richard M. Foote, Abstract Algebra , 2nd edition, New York: John Wiley and Sons, Inc.

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Impact of Technology Based Learning Approach on Higher Secondary School Students' Performance in Mathematics

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Abstract

In the fast changing pace of education, the conventional teaching methods are not sufficient to create curiosity amongst the pupils. It is not enough to satisfy the educational, psychological and emotional needs of the pupils of 21st century. As a discipline, mathematics is very much influenced by the rapid changes in every field. From last decades, Mathematics educators have been looking at ways to incorporate technology into the curriculum to make it more approachable. Recent developments in technology have revolutionised the teaching learning process inside the classroom and the world outside. Evidence emanating from research literature suggests that technology has a powerful and significant impact on education both in terms of students' affective and cognitive outcomes in education of their choice of any subject. It has inclined to make learning joyful and lasting in many ways. So the investigator decided to use new trends like technology (Smart class room, E-learning and App based learning) to teach Mathematics to the students of XI and study its effect on them. The study establishes the effectiveness of Technology by comparing the achievement scores of two groups (Experimental and Control group) by teaching the topic 'Probability in Mathematics from their prescribed syllabus.

The result shows that the group of students taught Mathematics using technology method showed a significantly higher score on the Achievement test than the group of students taught through conventional method. The results of this analysis are statistically significant and have useful applications in the educational field. Technology has the unique strength of communicating the difficult concept in easier ways, thus deals numerous advantages to the field of education.

Key words: Impact, Technology based learning, Mathematics, performance

Introduction

As per National Policy of Education Mathematics is a compulsory subject for all students right from pre-primary to secondary school and for higher secondary schools those who aim to go for professional courses in science, technology Engineering and Mathematics. Mathematics is very useful for life and we use it every day in our life one way or other way. The knowledge of mathematics and its application plays an important role in the career development and so the future of every child. But it is very unfortunate that many or majority of people consider mathematics as a villain or a difficult subject to understand .It is very important and necessary to come out of this notion and encourage our children or create an interest amongst the them a love for mathematics so that they can lead our nation to a next level of progression.

The only way to create interest among pupil is to teach mathematics in an interesting way. In the present scenario the students are more inclined to technology, they adapt technology so fast whether it is the use of mobile phones, computer, social media and apps, so the investigator thought of using or integrating these mediums for teaching and learning mathematics and sees their achievements in the subject mathematics.

Review of Literature

Baurer and Kenton (2005), the study reveals that technological integration in schools will equip the teachers to be more innovative and adaptive to the changes happening in the field of education. This will also help the students to overcome obstacles and difficulties which they face while studying. They also suggested that students need to be provided extra time for using computers and teachers needed extra planning to integrate computers within their teaching plan.

Goldberg,et al(2003) ,the study proves that the students who are average in studies ,if they use computers when learning to write will be more motivated and focussed in writing and the quality

will be better. Under teachers supervision they will be able to produce higher quality in their writing.

Harrison et al. (2002) the study shows that the use Information Communication Technology can motivate and inspire students to do better in their respective subjects of leaning.

Valentine et al.(2005) The study found that knowledge regarding information communication technology and belief in technology among students and parents had a significant effect on the students school experience and also enabled them to achieve more, this gives students motivation and confidence. The students who use technology at home had more advantages in terms of good information, excellent presentation, high self-esteem which in turn gave better results.

Zollman et al.(1989) the study reveals that the students who use certain software in computer laboratories twice in a week for a year in the subject mathematics and English showed significant increase in the achievement in reading and mathematics

Limitations of the study

The study conducted has certain limitations within which the findings need to interpreted carefully.

1. As most empirical studies, the research presented is limited by the measures used.

The study may not be completely generalizable because the sample was restricted as follows

1. The investigator selected XI standard attached to Schools
2. The investigator selected only Maharashtra State board of higher secondary
3. The investigator selected area is only Thane city.

Statement of the Problem

Specifically the study sought the answer to the following questions.

1. Why do students in general dislike mathematics?
2. What are the different methods of teaching mathematics?
3. What is the effect of technology in teaching learning mathematics?
4. What is the impact of teaching math using technology on their performance?

Purpose of study

Mathematics plays a vital role in the advancement of our country by increasing the future prospects of students. This inspired the investigator to conduct the present study which helps in promoting technology in teaching learning process of mathematics.

Thus the purpose of the study is to find out the effect of technology based teaching learning on the performance of higher secondary students' mathematics scores.

Research Hypothesis

H0: There is no significant effect of technology based teaching learning on the performance of higher secondary students mathematics scores.

Methodology

This study applied on two groups of students: the control group and the experimental group. The technology based teaching learning is used in experimental group and the control group was taught with the traditional/conventional method. A test was administered to both control group and experimental group comprising of Std XI students of science faculty.

Three higher secondary sections of state government syllabus schools were randomly selected and used for study from Dombivli &Thane of Maharashtra state.

The samples for this study were randomly selected from each school as shown in the table below

Table 1:

School	Total Number	Experimental Group	Control Group
SIA H.S& J.C	76	15	15
DDM H.S & J.C	60	15	15
SES H.S & J.C	80	15	15
Total	216	45	45

A sample of 15 students was randomly selected from each school for both the experimental and the control groups. There are 15 students in each group .Totally there are 90 students as samples

Instrument of the study

The instrument of study was an achievement test which was used to measure mathematics score and retention capacity of the students in calculus from the 11^{th} grade mathematics text book. The researcher prepared the test by herself and it contained 20 multiple choice questions which meant for competitive examinations.

To confirm the validity, the questions of the achievement test were given to different subject experts. The changes were made according to the subject experts' suggestions and opinions. The total mark of the test was 30.

To confirm the test reliability, the investigator has done a pilot study comprising of 20 students excluded the study sample. The reliability of the test was determined using correlation coefficient and it was found (0.84) which is proper for conducting such a study.

Procedure of the study

The investigator followed the steps explained below

1. The investigator selected 45 samples using stratified sampling. First selected three schools at random then selected 15 students from each school again at random. The selected student samples were divided into two groups.one group was control group whom the syllabus decided was taught by traditional method. And the other group which is experimental, whom the syllabus was taught by using technology like smart class room where the content was already readily available, also used online materials which was available related to the chapter. The researcher also used power point presentation to make them understand the concept. The groups were taught by two periods for forty minutes each for two weeks. They were taught for a total number of 16 hours. The test was given for the groups at the end of syllabus completion.
2. The researcher contacted the sample students before the teaching programme and established a relationship with them. They were instructed by the researcher regarding the purpose of the teaching . The instructions regarding the teaching and the test were orally explained in a very clear and specific way to students before starting the teaching programme and achievement test.The topic selected for teaching is informed them .The experimental group has also given instruction regarding the new trends of teaching which excited them and were very curious regarding learning through the new trends. The researcher organised all materials required for the new trends way of teaching. The control group also made familiar with the purpose of teaching separately which help the researcher to carry out the work with cooperation.

The experimental group was taught by using the new trends or the modern technique of teaching (technology) whereas traditional method by using only text book, chalk and duster for teaching. Same topic was taught to both experimental and control group. The teaching programme was given for two weeks

After two weeks from of teaching the achievement test was conducted on both groups

Analysis and Interpretation

The data were collected by using, SPSS statistical program. The following measures are used to analyse the data. Means, standard deviations and z – test .The significance of differences was checked at 0.01 level of significance.

Result

H0: There is no significant effect of technology based teaching learning on the performance of higher secondary students mathematics scores.

Table 2: Summary of analysis of scores for the experimental and control group using z-test

Groups	Mean	SD	N	Df	Std Error	Z test
Experimental	26.51	3.415	45	88	0.777	12.76
Control	16.60	3.934	45			

From Table 2 above, the values of 26.51 and 16.60 are the calculated means for experimental and control groups respectively. Standard deviations of 3.415 and 3.934 were also obtained for the experimental and control groups respectively. The calculated z-value was 12.76 while the critical z-value was 1.64. The calculated z-value, 12.76 was observed to be higher than the critical tvalue1.64, at 88 degree of freedom 0.05 level of significance.

From the results obtained, hypothesis 1 which states that Technology based approach has no significant effect on students performance in mathematics is rejected. Therefore, technology based approach (which has a Z- Test value 12.76 while the critical z-value was 1.64) has significant effect on student's performance in mathematics.

Figure- 1
Overall Achievement in Mathematics score of Control Group and Experimental Group

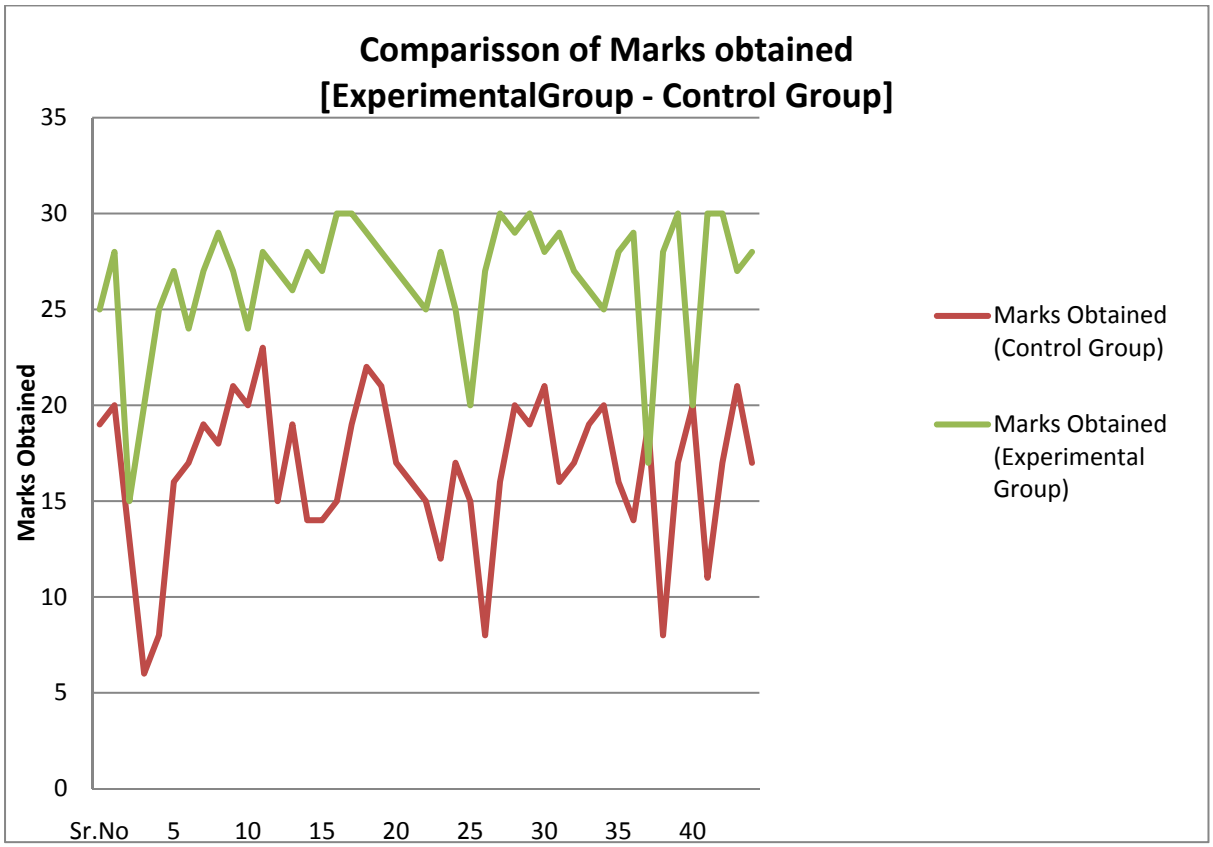

Figure 1 indicates that the students achievement in mathematics subject whose has been taught by traditional method and technology approach .The forty five students who learned probability by traditional method has very low score, which indicates that the students could not understand the concept completely rather the other group of forty five students who learned by using technology has a good score which indicates that the students could understand the topic Probability very clearly. So every student who were in the experimental group score very good marks in the achievement test. The graph clearly shows that the students who adopted technology as teaching learning has showed a greater achievement score than the students adopted traditional approach of teaching learning.

Discussion

There is a significantly positive effect of technology based learning approach on the performance of students used for this study. This is indicated in the higher mean scores of the

experimental group compared to the control group (see table 2). The findings in respect of the performance of students using technology based learning approach ing the experimental group agreed with the findings of Niess (2006), Bell (2002) and Oigara (2010), who in their individual studies discovered that the approach is a valuable strategy for helping students attain high academic standards. The findings also agreed with Carbonara (2005) and Sani (2007) who in their different studies also reported that Technology based learning approach enhances performance and instil cooperative attitudes in students which results in improving learning. Oigara and Keengwe (2011) also reported that the approach

improve students' performance in mathematics learning and a new pedagogy to be employed by all teachers. The one fact that stands out from this technological era is that we cannot afford to ignore technology based learning approach in the teaching of mathematics and other subjects at all levels of our educational system. If this strategy is implemented in the teaching of mathematics, the subject will be better understood and consequently dispel the fear that several students have about mathematics.

In this study, it has been pointed out that teaching mathematics in classrooms that contain huge number of students does not give assurance any meaningful learning of the subject. In order to teach mathematics so that it makes meaning to the learners therefore, mathematics teachers must explore and use the methodologies that would safeguard that the learners contribute actively in the learning process. To this outcome development of learning groups (whatsapp, face book) as technology based approach is essential.

Recommendations

Based on the findings of this study, the following recommendations have been preferred:

i. That training and workshops designed at equipping the teachers with the basic skills of technology based learning approach in lesson delivery should be planned on a regular basis.
ii. That technology based learning approach should be made a essential part of the curriculum for secondary and Junior College of education so as to help in equipping would be teachers effectively for the task of this modern age lesson delivery approach.
iii. Mathematics teachers should be alerted and encouraged to use practical, child-centred, activity based and problem-solving methods of teaching mathematics such as the technology based learning approach.
iv. Mathematics teachers should also keep up-to-date with innovations and new trends in mathematics education through participation in seminars, workshops, short and long term refresher courses.
v. Teachers should help students develop computational and organizational skills, as well as vocabulary ability to relate ideas to problem-solving.

Conclusion

According to the findings from the marks that were scored by both the experimental and control group in achievement test it is proved that technology based approach has a significant impact on mathematics teaching and learning. Usage of technology as a medium for teaching and learning not only creates interest and a liking towards mathematics but also dispels the fear that several students have about mathematics , this consequently leads to a better understanding of the subject.

Teachers need to adapt to the new changes in the field of education i.e. they should make the use of technology as a medium to teach and learn and to create an immersive experience for the students. Teachers can represent complex mathematical equations using diagrams both two dimensional and three dimensional thus creating a shift in the way students learn concepts that are abstract.

A change in teaching methodologies in a manner that adapts technology will not only improve the student's capability to learn and understand but also reduce a teacher's burden in the sense that teachers can efficiently use the limited teaching time to monitor students and help them overcome any difficulties that they may face in solving a particular problem.

References

- Aytac, T. (2013). Interactive whiteboard factor in education: Students' points of view and their problems. *Educational Research and Reviews*, *8*(20), 1907-1915.
- Barton, R(1997).Computer-Aided Graphing:a comparative study. Journal of Information Technology for teacher education,6(1),59 – 72
- Barzel, B.(2007)New Technology ? New ways of teaching – No time left for that. International Journal for Technology in Mathematics Education, 14 (2),77-86
- Bauer, J, &Kenton (2005) Technology integration in the schools: Why isn't happening. Journal of Technology in Mathematics education, 13,519 – 526
- Carter, D.(1994).Effects of computer technology on student outcomes for low performing ninth-grade students.Disertation Abstracts International,55/08-A(Order No. AAD95-01185)
- Cox, M.J (1997) The effects of Information Technology on students motivation. Final report.NCET/King's College London 1997.ISBN 871984-28-9
- Fey JT(1984).Computing and Mathematics: The Impact on Secondary School curricula.Reston : National council of teachers of Mathematics
- Hennessy, S. (2000). Graphing investigations using portable (palmtop) technology. Journal of Computer Assisted Learning, 16, 243-258.
- Kersaint, G. (2007). Toward technology integration in mathematics education: A technology integration course planning assignment. *Contemporary Issues in Technology and Teacher Education*, *7*(4), 256-278.
- Li, Q. (2003). Would we teach without technology? A professor's experience of teaching mathematics education incorporating the internet. *Educational Research*, *45*(1), 61–77.
- McCoy, L., P., (1996). Computer-based mathematics learning. *Journal of Research* on Computing in Education, 28(4), 438-460.
- Rakes, G. C., Flowers, B. F., Casey, H. C., & Santana, R. (2006). Analysis of instructional technology use and constructivist behaviors in K-12 teachers. *International Journal of Educational Technology*, *1*(12).
- Ziegler, J.H., Jr. (1990). The effect of interactive video on learning, perceived effectiveness, and user attitudes in academic library orientation programs. *Dissertation Abstracts International*, 51/09-A (Order No. AAD91-04797.

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Tourism in the Green Economy of Asia

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Abstract
Tourism in Asia is growing at a fast rate and many countries in Asia rate tourism as one of the main contributors to their economy. However, although the concept of sustainability has sparked a paradigm shift of economic development in Asia and many countries have existing policy frameworks for greening the tourism industry, there are not many cases that have been highly evaluated and successful enough to be a model to other countries.

In contrast, the private sector has been active in investing in the greening of the tourism industry. This is notable in the more developed tourism destinations such as Hong Kong, Taiwan, Malaysia, Thailand and Nepal. Promoting the right climate and providing the right incentives for investment is essential for the greening of the tourism industry. Encouraging collaboration and participation among stakeholders may assist in developing and implementing any efforts by reducing potential and actual conflicts of interest and values.
Keywords: Green Economy, Sustainable Tourism

Introduction

Green Economy in Tourism makes an economic case for investing in the greening of tourism and provides guidance on how to mobilize such investments. The objective is to motivate policy makers to support increased investment in greening the sector.

Tourism has significant potential as a driver for growth of the world economy. The sheer size and reach of the sector makes it critically important from a global resource perspective. Even small changes toward greening can have important impacts. Further, the sector's connection to numerous sectors at destination and international levels means that changes in practices can stimulate changes in many different public and private actors beyond the direct and immediate impact of tourism activity.

Tourism in the green economy refers to tourism activities that can be maintained, or sustained, indefinitely in their social, economic, cultural, and environmental contexts: "sustainable tourism". Sustainable tourism is tourism that takes full account of current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities.

Sustainable tourism should

i) make optimal use of environmental resources that constitute a key element in tourism development, maintaining essential ecological processes and helping to conserve natural resources and biodiversity.
ii) respect the socio-cultural authenticity of host communities, conserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance.
iii) ensure viable, long-term economic operations, providing socio-economic benefits to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation.

Objective Of The study

1. To reduce the growth of energy consumption and GHG emmission in travel, transport, accommodation and tourism related activities.
2. To reduce water consumption in tourism
3. To mange waste and improve the water quality
4. To reduce detrimental effect on bio-diversity including coral reefs, rain forests, mountainous area
5. To use effective management to build cultural heritage

Research Methodology

This research is a descriptive economic research in which the data has been studied without making any changes in them.

Analysis of data **:** For Asia and Pacific
Tourist arrivals **:** 203.7 mn (in 2010)

Tourism receipts	**:**	US$ 204.3 bn (in 2009)
Global share of tourists	**:**	22% (in 2010)
Jobs	**:**	Travel and tourism is expected to support directly 63,891,000 jobs in2011
GDP	**:**	The direct contribution of travel and tourism to GDP is expected to be US$ 523.0 bn (2.7% of total GDP) in 2011
Exports	**:**	Travel and tourism visitor exports are expected to generate US$ 288.6 bn (4.3% of total exports) in 2011
Source	**:**	UNWTO (2011b), WTTC (2011).

Investing in the Greening of Tourism

While public sector and NGOs may be proactive in investing for the greening of the tourism industry, the government sector can also play its role by supporting the other stakeholders in creating the necessary climate to induce investment in sustainable tourism.

The economic impacts of sustainable tourism development in Asian countries has proved to be beneficial and encouraging

Bangladesh	Tourism has contributed 0.3% to the GDP. Direct employment is just over 100,000 people and indirect employment could be over 200,000. Tourism diversifies Bangladesh's economy and acts as a poverty alleviation tool.
Cambodia	Tourist spending amounted to approximately US$ 526 million in 2003, which contributed 12% to the GDP and generated employment for 100,000 people. In 2004, the estimated income from tourism was US$ 777 million, which generated mployment for about 180,000 people.
Hong Kong	Tourism is a major economic pillar and source of foreign exchange earnings. Total tourism expenditure by 21.8 million visitors in 2004 amounted to US$ 11.8 billion.
Japan	Tourist consumption contributed 5.6% of total domestic production value added and accounted for 5.7% of GDP in 2003. Tourism accounted for about 4.42 million jobs, about 6.8% of the total employed population.
Nepal	The economic importance of tourism in Nepal has been due to economic linkages, foreign exchange earnings, employment and improved socio-economic conditions in remote rural areas. In 2004, foreign exchange earned from tourism amounts to US$ 180 million, which contributed to 3–4% of GDP.
Singapore	Singapore welcomed 8.3 million international visitors with tourism receipts of about SGD$9.6 billion in 2004. Tourism contributed 3% of the GDP and accounted for 150,000 jobs.
Thailand	Tourism receipts for 2004 amounted to a total of almost US$ 9.8 billion

Case study

Malaysia

1. At the hotels and resorts, a wide range of energy saving practices have been employed and are currently being used to reduce the Group's overall carbon footprint.
2 Electrical appliances (for example lights, air-conditioning) are switched off whenever possible. This is practiced by all staff at all times
3. Water outlets are not left running, leakages are always monitored, and plumbing issues are repaired where needed to reduce wastage. Leakage detectors have been installed to help identify underground water pipe leaks
4. Equipment has been upgraded to reduce carbon emissions. For example, Pangkor Laut Resort upgraded their marine equipment from 2-stroke outboard motors to 4-stroke, which produces less carbon emissions
5. Rainwater harvesting practices are employed at all hotels and resorts
6. All hotels have been retrofitted to improve energy efficiency and sustainability (for example motions sensors have been installed in public spaces so that lights are on only when needed);
7 Bulbs with a lower voltage have replaced previously used ones.

Bhutan

Foreign travellers have only been allowed to enter the country since 1974. The country has carefully strategized their tourism industry through a strict sustainable tourism policy in order to preserve local culture and prevent environmental degradation. Bhutan pursues 'high-value, low-impact tourism' and measures its success in terms of 'gross national happiness' rather than gross domestic product (Ringbeck 2010). More than 72% of the country is still forested where parts of it have been declared as wildlife reserves and many mountains are closed to trekking for fear of littering and pollution.

Suggestion:

1. Promote knowledge and support studies and research in the creation of a good understanding of environmental conservation.
2. Assist owners and operators in the tourism industry to develop environmental quality standards in their work place.
3. Develop standards of environmental practices for tourism and tourism-related business in response to consumer requirements.
4. 'Reuse, reduce, and recycle' policy has also been adopted for all its hotels and resorts. This involves educating all hotel staff on the importance of conservation, using environmentally friendly products, and employing sustainable practices in hotel operations.
5. Plastic bags and laundry bags are re-used where possible, waste material and rubbish is managed properly, and all maintenance and building material is recycled and/or donated for other use (For example, waste wood and building material is not burned but instead reused, donated, or resold where possible to locals or recycling facilities)
6. Guests are given the option to reduce water wastage and detergent release by having their towels and bed linens replaced every other day instead of every day;
7. Shower gels from guest rooms are recycled for staff use at the canteen for washing hands
8. Plastic laundry bags have been replaced with a reusable version at most of our resorts
9. Non-harmful, biodegradable chemicals and detergents from an environmentally-friendly company are used
10. Eco solutions are employed wherever possible (For example, dried coconut husks are used to help prevent hillside soil erosion due to heavy downpour.

Many countries in Asia have developed their own tourism plans at various levels to chart their path in developing the tourism industry.

Conclusions

Tourism has already become one of the major propellers of the economy in Asia and with its rapid growth it will continue to do so in the future. Asia and many of its countries have long developed policy frameworks for greening the tourism industry. Many developed nations in Asia have shown their capacity to shift their conventional economic model to the green model for economic stimulus and sustainability. Asian developing nations use tourism as a tool of development and poverty eradication

with increasing regards to the green and sustainability issues. Some Asian countries have been innovative and at the forefront of the issues in greening their tourism industry with concepts and schemes such as YTL's carbon footprint reduction scheme. With diversity of culture and nature combined with high standards of service found in Asia, this region will continuously attract tourists especially within the Asia region itself and the tourism development ensure further economic development.

References

1. www.business-in-asia.com/industries/tourism_first_qtr09
2. www.tourismasia-india. com
3. www.ukessays.com/essays.com/essays/tourism/'Impacts Of Tourism Industry In Asia Pacific Tourism Essay'

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The Culture of Out Migration among Muslims in Mira-Bhayander Nagarpalika: An Empirical Analysis.

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Abstract:

Globally there were around 232 million international migrants in 2013. Given the magnitude of international migration some scholars have observed the evolution of a 'culture of migration' in certain communities. In such communities out migration is so deeply rooted that the prospect of transnational movement becomes normative, young males are expected to live and work abroad at some point of time in their life. Migration is perceived as a means of socio-economic mobility and the culture of migration assist in sustaining the flow of out migration from one generation to another.

India too classifies as one of the top emigrating countries having 11.4 million Indians abroad in 2010 (World Bank 2011) and If this trend continues it is likely to be one of the largest migrant sending countries by 2050. In this paper I intend to explore the lesser studied aspect of the migration process, the 'culture of migration', using data gathered from field research in Mira-Bhayander Nagarpalika. There is a long tradition among the Muslims in this region to travel, migrate across and around the Persian Gulf for trade and employment. Many families today have branches in several countries, both in the Middle-East, Eastern and South Africa and Europe.

Key Words: Out migration, Culture, Muslims, Mira-Bhyander

Introduction:

Globally there were around 232 million international migrants in 2013. Given the magnitude of international migration some scholars have observed the evolution of a 'culture of migration' in certain communities. In such communities out migration is so deeply rooted that the prospect of transnational movement becomes normative, young males are expected to live and work abroad at some point of time in their life. Migration is perceived as a means of socio-economic mobility and the culture of migration assist in sustaining the flow of out migration from one generation to another.

Objective of the study:

In this paper I intend to explore the lesser studied aspect of the migration process, the 'culture of migration', using data gathered from field research in Mira-Bhayander Nagarpalika.

Literature Review:

In 'The Culture of Mexican Migration: A theoretical and Empirical Analysis', Kandel and Massey (2002) explore the phenomenon of culture of migration in certain Mexican communities. For them internal migration is so deeply rooted in such communities to the extent that the prospect of transnational movement becomes normative. Younger generation is expected to work and live in US at some point of time in their lives. Males of these communities see themselves migrating as normal marker of the transition to manhood in addition to improving their economic status.

Kandel and Massey developed a quantitative model of the development of culture of migration in which they attempted to demonstrate statistically that the more family members an individual has abroad, the likelihood of migration of such individual is becomes much higher. Thus, results in creation of culture of migration. The aspiration to migrate is so strong that it is transmitted across generation and between people through social networks.

Kandel and Massey asserts that the key indication of the development of a culture of migration is that the migrants invest less in their country of origin and more in getting to their destination and making a success of themselves there. They also attempt to draw a relationship between out migration and educational achievement. Their study highlight that there is significant trend of poorer performance in school which is linked to the increased likelihood of out migration to the US. This is

because the aspiring migrants do not see any link between school/education and migration.

Similarly Cohen (2004), in "The Culture of Migration in Southern Mexico", studies Oaxacan migrants to understand culture of migration. For Cohen "Culture of Migration", means that migration is socially accepted and pervasive in the society, both historically and currently and that decision about migration are based in everyday experiences. He further explains the culture of migration model by stating that to call migration in Oxacan 'cultural' is to say that migration is just one response among many to patterns and processes that link households and rural communities to global labour markets, flow of goods and personal demands. He stress on the importance of culturally informed familial and community responsibilities in the decisions to migrate, recruit and return.

Lisa Akesson(2004), in "Making a life: Meanings of Migration in Cape Verde", also uses a culture of migration approach. She emphasizes the significance of history in forming cultures of migration, while exploring the ideas and practices that leads to creation of migration culture in everyday life situation. While investigating the discourse of those living in Cape Verde and the way they visualize migration, Akesson identifies migrants ideology in which mobility is viewed as part of everyday life both as natural and necessary.

Heering et al (2004) study "The Role of Family Networks and Migration Culture in the continuation of Moroccan Emigration: A Gender Perspective", is an attempt to explain the out migration processes from Morroco, particularly to Western Europe from micro perspective. The authors emphasized on the effect of family networks and migration culture on the intention to emigrate of Moroccan men and women without international migration experience. The authors argue that there exist remarkable gender differences in the intention of men and women to migrate. They conclude that for men, emigration intentions are stronger in regions having a migration culture, while the presence of family networks abroad has very less impact of the intention to emigrate. In case of women the existence of a migration culture does not influence their intention to migrate; instead it is highly influenced by presence of family network abroad.

A study "Culture and Migration: African Perspectives", conducted by Hahn and Klute (2007), emphasized on the need to study the society of origin. They argue that though structural models are useful but migration is not just a response to push and pull factors. They assert that migration should be understood as a complex social phenomenon which is structured process and the same time embedded in interpretation and valuations. They describe culture of migration as "a perspective that perceives migration movements as complexes of cultural representations".

In the Indian context I came across three studies focusing on the prevalent of culture of migration. The first one is by Lionel Caplan on the culture of migration among Anglo Indians in Madras, the second by Syed Ali on Muslims in Hyderabad and the third is by Robyn Andrews on Anglo Indian Communities.

Lionel Caplan(1995) in Life is only Abroad, Not Here: The Culture of Emigration among Anglo Indians in Madras, Immigrants and Minorities, argues that the Anglo Indian's persistent drive to leave India is due to having a 'Culture of Emigration' among the community.

Syed Ali (2007) in Go West Young Man's: The Culture of Migration among Muslims in Hyderabad state that most of the studies of migration focus on why and how people migrate and examine economic rationales and the network connections of migrants but there is one more understudied area of the migration process i.e the ' Culture of Migration'. He studied migration among Muslims in Hyderabad from culture of migration perspective. His study highlights that inspite of having opportunities at home, the desire to migrate remains salient. It is due to the culture of migration among Hyderabadi Muslim professionals and labourers promotes migration to the US and Saudi Arabia, even though opportunities at home are greater for some and opportunities abroad are more restricted for others. He further argues that this culture of migration also helps to shape the effects of remittances on status relations and marriage partners among Muslims in Hyderabad, which further promotes migration abroad.

Robyn Andrews (2007), in Quiting India: The Anglo-Indian Culture of Migration, attempts to

explore the nexus between Anglo Indian identity, which they often regard as more western than Indian and their migratory patterns. His study contribute to the 'Culture of Migration' literature by analyzing the presence of culture of migration among the Anglo Indian, an ethnic group in India which exhibits variations on the set of reasonably distinct characteristics associated with groups having a 'culture of migration'. The study concludes that the culture of migration exists among the Anglo Indians is due to strong emphasis on their 'western' identity to the point that they feel cultural orientation to live in more westernized country than India. The desire to leave India becomes even stronger by the success story of other Anglo Indian Migrants.

Maphosa and Morgele (2013), in Changing the Culture of Migration? Attitudes towards Education among former Basotho Labour Migrants to South African Mines, try to develop link between attitude towards education and the culture of migration. They conclude that most of the Basotho Labour migrants have now developed positive attitudes towards education as they perceive it as a more secure and more sustainable means of getting employment and a vehicle of economic and social mobility. They argue that the culture of migration is a phenomenon that develops and changes as people relate to changing realities in their environment. For them a culture of migration develops where the community gains more from migration than from non- migration. So a culture of migration is outweighed by those of culture of non-migration.

Methodology:

The study involves field investigation. The primary data for the study has been collected through survey and questionnaire based interviews. Visits to the field was undertaken on weekends during June-Oct, 2015. During these visits, I personally interviewed and interacted with the member of the community in the field. After a preliminary survey of the field, seventy five households were selected at random for data collection through interview with the help of questionnaire. Interview was conducted in and around the households of the respondents. This enabled to observe closely the living conditions and lifestyle of the respondents.

Theorizing Outmigration:

The concept of international out migration can be defined as a type of spatial mobility of people, the essence of which lies in the movement of people across state borders with the aim of spending certain period of time in the destination country.

The causes for out migration are varied; as a result some theoretical model may be more useful than other for explaining patterns and trends of migration in a particular situation for a particular community. The migration theoretical models may be classified in to micro, macro and meso in nature. Macro model theories focus on aggregate migration trends and explain the migration patterns, while micro model theories stress on individual migration decisions. The Meso model of migration theories is a mix of both. Its emphasis is on social networks and can explain causes and perpetuation of migration.

Table 1 here

Theory of Cumulative causation:

Number of research in the field of migration has pointed that social networks trigger a process of cumulative causation which implies that once a migration flow is in motion it continues to grow as migrant social capital accumulates abroad. The present study applies this strand to understand the out migration from the study area.

The theory of cumulative causation first originated in the work of Swedish economist Gunnar Myrdal in 1957 and later elaborated by Douglas Massey and associates. Massey and associates used the theory of cumulative causation to describe the continuous rise in the magnitude of Mexican immigration to US. Massey argues in Worlds in Motion, "causation is cumulative in the sense that each act of migration alters the social context within which subsequent migration decisions are made typically in ways that make additional movement more likely" (Massey, D S 1998:45-46).

The cumulative causation theory differs from other theories in two ways. Firstly its focus is not on micro or macro level variables as other theories do. It is integral than other theories as it

includes both economic variables and the socio-cultural context in which migration decision is made. The theory consider, the actor to be rational being who takes his or her decisions in the context of a specific environment and has to cope with different socio-economic and cultural determinants.

The theory of cumulative causation explains not only the migration decision of the migrants but also the perpetuation of international migration by investigating how the migration of individuals changes the values, norms and expectations of the sending countries.

Massey and associates identifies some variables that influence the migration decisions:

1. Enlargement of networks: Once migration network is established, it tends to perpetuate the migration flow because it lowers the risk as well as the expected cost of migration for future migrants. Since the first migrants provide information, support of job and house searching, as well as potential social integration in the destination country.
2. Distribution of household income: Once the migrant household improves their income, it act as a motivation for non-migrant household to aspire for migration. Soon they also use this strategy to improve their social and economic status.
3. Distribution of land and organization of farm production: The migrant start acquiring land in their country of origin as security measures for old age and not for farming until they return. And even if they farm when they return, it is more likely that they would use modern machinery. This reduces the demand for farm laborers. This not only increases the pressure on the local population to look for opportunities elsewhere but also increases the market price of the land.
4. Culture of migration: The essence of the theory of cumulative causation is the influence of culture on migration and vice-versa. After coming in contact with different society that has highly diversified labour market leads to repeated migration so as to maintain the level of prosperity they have achieved. This also motivates the non-migrant to migrate. Thus in the long run this changes the attitudes of the individuals and influences the community values and expectations. Finally creates a culture of migration within the community.
5. Distribution of human capital: This is an important factor in initiation and perpetuation of the migration process. The one who migrants are mostly the skilled, educated and motivated lot. This leads to brain drain as the less educated and skilled stay behind.
6. Finally, there is emerging structural demand for migrant labour in the receiving economies because jobs are than branded as immigrant's jobs that local workers are not interested in taking up.

The Study Area:

Mira –Bhayander is in the district of Thane admeasuring 79.40sq.km, in the state of Maharashtra, located around 20km to the north of Mumbai on the Mumbai-Ahmedabad highway. Due to its proximity to Mumbai this city is witnessing rapid growth. Earlier the region was administered by the Gram Panchayat, but later because of recommendation of MMRDA, Mira-Bhayander Municipal Corporation was constituted on 12th June 1985, Nine Grampanchayats namely Bhayandar, Mahajan, Ghoddeo, Pen Pada, Kashi, Mira, Navghar, Wadi and Ghodbunder were integrated to form Mira Bhayander Municipal Council. Later in the year 1990 the Council was extended by including following more villages Chena, Varsova, Rai – Murdhe, Murdha, Morva, Tarodi Pali Chowk, Dongri – Uttan. The population consists of a varied mix of cultures and religions typical of a burgeoning suburb.

Table 2: here

Results and Discussion:

For the study any adult member of the migrant household who is either the primary receiver of remittance, or the head of the household or migrant who have generally come for annual visit to be with the family are the respondents. Table 3 show the sect denomination of the sample household. Majority (70.6%) belong to Sunni Muslims from Ratnagiri, Sholapur, Raigad district of Maharashtra and from Karnataka and Uttar Pradesh while rest 29.4 percentage are Shia Muslims from Gujarat, UP and Bihar. The total figures for marital status of the respondents show that 82.6 of them are married

and 17.4 percentages are unmarried. It is observed that majority of the sample household have total number of family member between 5-7.

Table 6 indicates the age distribution of the respondents. Maximum (30.6%) belonged to the age group of 31-40 followed by 21-30 (29.4%), 41-50 (24%) and 51-60 (16%). Regarding education of the respondents, table 7 indicates that 5.4 % of them have primary education, 10.6% secondary, 33.3% higher secondary, 29.3% graduate, 12% post graduate and 9.4% having technical education. The study shows that around 32% of the sample household has at least one person who has out migrated for job opportunities oversea. While 68% are non-migrant household. However 37.3% of the non-migrants aspire to go abroad for employment. It is also observed that quite a large number of families have relatives spread in various countries of the world. A special mention of Mr. Mohd. Jafari who is 48 years of age, a doctor, who migrated from Bihar have relatives who have migrated with or without family to countries like Pakistan, Iran, UAE, Singapore, Saudi Arabia, USA and Tanzania. He also aspires to go to Iran with the help of one of his relatives who is employed in Iran because he believes that will improve his socio-economic status. However he plans to go alone leaving his family here in Mira Road.

Table 11 show the age of migrants, 37.5% belonged to the age group of 21-30, 29.2% in the age group of 31-40, 25% in the age group of 41-50 and 8.3% were in the group of 51-60. Majority of them (41.7%) sighted better opportunities abroad as the important factor for their migration while 20.8% said better standard of living while 20.8 % said unemployment to be the reason for out-migration. Thus the study highlight that pull factor works as the cause for migration from the study area.

Occupational status of migrants as indicated in table 10 suggests that 66.7% of migrants are into service sector, 20.8 into business and 12.5% as others.

Table 17 shows destination of migration. Majority of the migrants from the study area are employed in Saudi Arabia followed by USA (25%), UK (4%) , Dubai (16.7) and Qatar (12.5). It is also observed that a strong social network exist in the region as majority of the migrant migrated with the help of relatives (54.2%) and friends (16.7), 8.3 % applied for jobs directly without any assistance and other 20.8% took the assistance of agents. Majority of the migrant and their family members are satisfied with the decision of the migrant to migrate as they feel that their socio-economic status has improved after migration (Table 15 & 16)

Conclusion:

The study portrays from a meso perspective the ongoing process of migration from Mira-Bhayander Nagarpallika. The research reveals that the idea of cumulative causation of migration is useful in explaining the patterns of migration from the region. Various aspects of cumulative causation are relevant in understanding the case of out migration from the region. Firstly the findings of the study draw attention to the presence of social networks in the exploitation of the job opportunities overseas. The finding reflects that, despite having access to other source of information on job opportunities such as news- papers and other channels, still social networks is considered to be the most trusted way of seeking employment. This network generally consists of kin and ethnic friends. The role of these networks is also considered important in the immediate post migration period, because as new comers in the host society, the migrant lacks locally acquired social and human capital. Thus the study points that for the majority of the migrants the process of dissemination of employment related information occurs through their personal contacts.

Another aspect of cumulative causation that is closely associated with the study area is the implication of migration on the migrant sending communities and the culture of migration. Results indicate that there is a long tradition among the Muslims from the study area to migrate. Most of them have migrated from different parts of Maharashtra, Gujarat, UP, Bihar, and Karnataka to the study area Mira-Bhayander Nagarpallika. From here they have further migrated to countries like UK, USA, Saudi Arabia and Qatar for trade and employment. The males from the area are more sensitive to the existence of a culture of migration in the region and consider migration as the easiest way to improve

their social and economic status within their community. It is also observed that the presence of relative abroad stimulates the men from the region to dream of overseas employment.

Many families from the region also have branches in several countries such as Iran, USA, UK, UAE, Saudi Arabia, Oman, South Africa, and Kuwait. Though there is trend of Muslim male outmigration from the area but few cases of Muslim female migration was also noticed for employment to countries such as USA and UAE. Majority of the migrants are satisfied with the way their life has shaped post migration and also wish their children, particularly son to explore opportunities abroad. In their opinion out migration is one of the best mean to alleviate their socio-economic standing in the society.

The study indicates that there is strong pull factor that propel migration from the region and there is empirical evidence that suggest that there is positive effect of community level social capital that stimulates further migration from the region. The culture to migrate is so strong that there are incidences of illegal migration also, particularly to countries like USA and UK, the males from the region go on student visas or tourist visas and try to find foothold in the place of migration.

References:

1. Abella Manola, I.1995.Asian Migrant and Contract Workers in the Middle East. in Cohen Robin (ed.) The Cambridge Survey of World Migration. Cambridge University Press.
2. Addleton, Jonathan S.1992. Undermining the Centre: The Gulf Migration and Pakistan. Oxford: Oxford University Press.
3. Andrew, R. 2207. Quitting India: The Anglo Indian Culture of Migration. SITES: New series. Vol 4. No.2.pp 32-56.
4. Bretell, C. 2003. Anthropology and Migration. Essays on Transnationalism, Ethnicity, and Identity. Rowman and Littlefield Publishers: Alta Mira Press.
5. Brink, J.H.1991. The Effect of Emigration of Husbands on the Status of Their Wives: An Egyptian Case. International Journal of Middle East Studies, Vol.23(2). Pp201-211.
6. Caplan,L. 2001. Children of Colonialism: Anglo Indians in a Post-Colonial World. Oxford:Berg.
7. Cohen, J. 2004. The Culture of Migration in Southern Mexico. Austin: University of Texas Press.
8. de Hass, Hein. 2008. Migration and Development: A Theoretical Perspective. International Migration Institute. Working Paper No.9. University of Oxford.
9. Deshingkar P and Shaheen A. 2009. Migration and Human Development in India, Human Development Report Research Paper Series, Vol.13. No.2009.
10. Elizabeth, F and Douglass S. Massey. The Limits to Cumulative Causation: Inte rnational Migration from Mexican Urban Areas. Demography. Vol 41 No. 1, Feb, 2004, pp 151-171.
11. F, Maphosa and R N, Morojele. Changing the culture of migration? Attitudes towards Education among former Basotho Labour Migrants to South African Mines. Africa Development. Vol.XXXVIII. Nos. 1 and 2, 2013. Pp 151-171.
12. Favell, A. 2008. Rebooting Migration Theory: Interdisciplinarity, Globality and Post disciplinarity in Migration Studies. In CB Brettell and JF Hollifield (eds) Migration Theory. Talking Across Disciplines. Second Edition Routledge. Chp 9. Pp 259-278.
13. Hahn, Hans Peter and George Klute. Culture of Migration African Perspectives. Vol. 32. LIT Verlay Munster. 2007. Pp 9-25.
14. Hansen, T.B. 2001. Bridging the Gulf: Global horizons, Mobility and Local Identity among Muslims in Mumbai. in C. Bates (ed.) Community, Empire and Migration: South Asians in Diaspora, Basingstoke Balgrave.
15. Heering,A, van der Erf, R. and van Wissen, L. 2004. The Role of family networks and Migration Culture in the continuation of Morrocan emigration: A gender perspective. Journal of Ethnic and Migration Studies. 30(2):323-27
16. Kandel and Massey. 2002. The Culture of Mexican Migration: A Theoretical and Empirical Analysis. Social Forces. 80(3).pp 981-1004.

17. Lisa, A. 2004. Making a Life: Meanings of Migration in Cape Verde. Ph.D thesis. Gothen burg: Department of Social Anthropology: Goteburg University.
18. Massey, D., Arango., Hugo, G., Kouaouci, R., Pellegrino, A. and Taylor, J.E. 1998. Worlds in Motion: International Migration at the End of the Millenium. Oxford: Oxford University Press.
19. Nangia Praveen and Uma Saha. 2001. Profiles of Emigrants from India: A Comparative study of Kerala and Punjab. www.iussp.org.
20. N.P Singh, R P Singh, Ranjit Kumar, R N Padaria, Alka Singh, Nisha Varghese. 2011. Labour Migration in Indo- Gangetic Plains: Determinants and Impacts on Socio-economic Welfare. Agricultural Economics Research Review Vol. 24, Pp 449-458.
21. Prakash, B.A (ed.).1998.Indian Migration to the Middle East, Trends, Patterns and Socio-Economic Impacts. Rohtak: Spellbound Publications.
22. Premi, M.K and M.D, Mathur. 1995. Emigration Dynamics: The Indian Context International Migration. Vol. 33 (1). Pp627-663.
23. Rajan, S. I. 2003. Dynamic of International migration from India: Its Economic and Social Implications. Paper presented at Ad Hoc Expert Group Meeting on Migration and Development. UN Economic and Social Commission for Asia and Pacific. 27-29 August 2003. Bangkok.
24. Rowena, Robinson. 2007. Indian Muslims: The Varied Dimensions of Marginality. Vol. XLII No(10).March 10, EPW.

Table 1: Types of Migration Models:

Macro Model:	Micro Model:	Meso Model:
Reason for Migration: Income and employment opportunity Macro theories: • Neoclassical Macro theory • Migration as a system • World system theory • Dual labour market theory • Mobility transition	Reason for migration: Individual desire Micro theories: • Pull and Push factor • Neoclassical micro theory • Behavioural Model • Theory of social system	Reason for migration: Social Networks • Social capital theory • Institutional theory • Network theory • Cumulative causation • New Economics of Labour Migration

Table 2: Demographic Profile of Mira Bhayander City

Population	**In Percentage**	**Literacy**	**In Percentage**	**Religious groups**	**In percentage**
Male Population	55	Average rate of literacy	93.67	Hindus	53
Female Population	45	Male Literacy	96.41	Muslims	30
		Female literacy	90.53	Buddhists	8.6
				Christians	3.4
				Jains	4.7

Source: Census 2011

Table 3: Distribution of respondents according to their sect denomination:

Sect Denomination	**Frequency**	**Percentage**
Sunni Muslims	**53**	**70.6**
Shia Muslims	**22**	**29.4**
Total	**75**	**100**

Table 4: Distribution of respondents according to Marital Status:

Marital Status	Frequency	Percentage
Married	**62**	**82.6**
Unmarried	**14**	**17.4**
Total	**75**	**100**

Table 5: Distribution of respondent according to size of the household:

No. of family members	Frequency	Percentage
2-4	**28**	**37.3**
5-7	**36**	**48**
8 and above	**11**	**14.7**
Total	**75**	**100**

Table 6: Distribution of respondents according to age:

Age	Frequency	Percentage
21-30	**22**	**29.4**
31-40	**23**	**30.6**
41-50	**18**	**24**
51 -60	**12**	**16**
Total	**75**	**100**

Table 7: Distribution of respondents according to their education:

Education	Frequency	Percentage
Primary	**4**	**5.4**
Secondary	**8**	**10.6**
Higher Secondary	**25**	**33.3**
Graduate	**22**	**29.3**
Post graduate	**9**	**12**
Technical	**7**	**9.4**
Total	**75**	**100**

Table 8: Distribution of household according to migration history:

Occupation	Frequency	Percentage
Migrant	**24**	**32**
Non-migrant	**51**	**68**
Total	**75**	**100**

Table 9: Distribution of non-migrant household according their occupation:

Occupation	Frequency	Percentage
Service	**12**	**23.5**
Self employed	**26**	**50.9**
Unemployed	**10**	**19.7**
Government job	**3**	**5.9**
Total	**51**	**100**

Table 10: Distribution of migrants according to their occupation:

Occupation	Frequency	Percentage
Service	**16**	**66.7**
Business	**5**	**20.8**
Others	**3**	**12.5**
Total	**24**	**100**

Table 11: Distribution of migrants on the basis on age:

Age	Frequency	Percentage
21-30	**9**	**37.5**
31-40	**7**	**29.2**
41-50	**6**	**25**
51 -60	**2**	**8.3**
Total	**24**	**100**

Table 12: Distribution of respondent according to factors for migration:

Occupation	Frequency	Percentage
Unemployment	**5**	**20.8**
Better opportunities abroad	**10**	**41.7**
Better Standard of living	**5**	**20.8**
Other	**4**	**16.7**
Total	**24**	**100**

Table 13: Distribution of respondent according to aspiration for migration:

Occupation	Frequency	Percentage
Not interested in migration	**32**	**62.7**
Aspiration to migrate	**19**	**37.3**
Total	**51**	**100**

Table 14: Distribution of respondent according to source/network for migration:

Source/Networks	Frequency	Percentage
Relatives	**13**	**54.2**
Friends	**4**	**16.7**
Agents	**5**	**20.8**
Direct	**2**	**8.3**
Total	**24**	**100**

Table 15: Distribution of respondent according to level of satisfaction with migration:

Improved status	Frequency	Percentage
Strongly agree	**7**	**30.7**
Agree	**15**	**61.3**
Disagree	**1**	**4**
Strongly disagree	**1**	**4**
Total	**24**	**100**

Table 16: Distribution of respondent according to satisfaction with Migrants decisions to migrate:

Satisfied with the decision	Frequency	Percentage
Strongly agree	**6**	**30.7**
Agree	**15**	**61.3**
Disagree	**2**	**4**
Strongly disagree	**1**	**4**
Total	**24**	**100**

Table 17: Distribution of migrant according to destination of migration:

Place	Frequency	Percentage
USA	**6**	**25**
UK	**4**	**16.7**
Saudi Arabia	**7**	**29.1**
Dubai	**4**	**16.7**
Qatar	**3**	**12.5**
Total	**24**	**100**

* * *

A Study on Celebrity Endorsement in Sports Management

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Abstract

Celebrity branding or celebrity endorsement is a form of advertising compaign or marketing strategy used by brands, companies, or a non-profit organization which involves or a well known person using their social status or their fame to help promote a product, service or even raise awareness on environmental or social matters.

Keywords: Endorsement, Non-profit organizations, Promotions.

Introduction

Marketers use celebrity endorsers in hopes that the positive images of the celebrity endorser of the brand will also be passed on to the products or the brand image associated with the celebrities. Celebrity endorsement is usually commonly used by fashion or beauty brands, but a non-profit organization relies on celebrities as well, as celebrities have mass communication skills which can attract people's attention and is helpful in reaching a wider audience to raise their awareness towards a certain organization or an issue. Thus, making celebrities, effective fundraisers Celebrity branding is also known as celebrity endorsement, and is a form of publication by portraying a well recognized sports or entertainment celebrity to be a brand ambassador for a company or firm, and by using their social status to promote a service or product. The **celebrity endorsement** we have with Chris Evans for our new line of men's athletic underwear is by far the best decision the company has made all year. You should try to get a **celebrity endorsement** that may get your product marketed to many new people over time. It was important for the new Prada shoes to receive the **celebrity endorsement** of Kim Kardashian before going on sale in the store.

Through the 1760s, royal endorsements were used as a type of celebrity branding to promote products. The first product that used celebrity endorsements was in 1760's, where a company called "Wedgwood" who produced pottery and chinaware, used royal endorsements as a marketing devise to show value in the company and promote others their product ("Celebrity Endorsement – Throughout the Ages,"2004). In 1875-1900's trade cards were introduced, this is where there would be a picture of a celebrity with a photo of the product. Typically, these trade cards would be given to consumers with the product or would be inserted on the packaging of the product itself, which would feature celebrities such as actors or sport stars.

Cigarette brands became hugely involved in celebrity branding, 'Kodas' cigarettes introduced baseball player cards into the packets of cigarettes as part of a customer loyalty scheme. This created a demand for consumers to buy more cigarettes so they could gain all the cards of all baseball players due to celebrity endorsement of the cards.

In the early 1930s the major trending celebrity endorsers were athletes, then by 1945 the trend changed and movie stars were the next big celebrity endorsers. In 1965, colour television was introduced to the marketing and there was a popular rising demand which was occurring, this in when television personalities and entertainers became a celebrity endorsement for communicating services and products.

Companies and firms in 1980's then decided to start making products around celebrities ("Celebrity Endorsement – Throughout the Ages,"2004). An example of this is in 1984 when the company 'Nike' noticed a talented and young basketball player called Michael Jordan. Michael Jordan, then became 'Nike's' celebrity brand ambassador for their sports industry. Nike extremely relied on Michael Jordan's social status to make the brand internationally well known.

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The modern world of marketing communication has become colorful and flooded with advertisements, and it is hard to get noticed. It is an uphill task for the designer of an advertising campaign to differentiate itself from others and attract viewers' attention. In this jet age, people tend to ignore all commercials and advertisements while flipping the magazines and newspapers or viewing TV. But even then, the glamour of celebrity goes unnoticed. Thus, celebrity endorsement in advertisement and its impact on the overall brand is of great significance. This Paper gives an insight of the effect of celebrity endorsement on the buying behavior of the consumers.

Friedman and Friedman (1979) stated that, in the promotion of prod- ucts high in psychological and/or social risk, use of celebrity endorser would lead to greater believability, a more favourable evaluation of the product and advertisement, and a significantly more positive purchase intension.

Mc Craken's (1989) defined celebrity endorsement as – "any individual who enjoys public recognition and who uses this recognition on behalf of a consumer good by appearing with it in an advertisement.

Objectives:

The purpose of this study was to analyze the customer's perception regarding celebrity endorsement. The paper focuses on under mentioned points:

- To analyse whether gender of the celebrity endorsing a product affects the consumer buying behaviour.
- To identify how is celebrity endorsed advertisement perceived.
- To compare the effectiveness of bollywood stars and cricket stars.

Findings:

- One very interesting finding extracted is that the male endorsers are more popular and effective than their female counterparts
- The results that the celebrity endorsement is an effective tool to affect positively the consumer's decision towards a product.
- Bollywood stars are still the rulers of the advertisement domain in India.

Many businesses believe that an advertisement delivered by a celebrity provides a higher degree of appeal, attention, recall and possibly purchase compared to those without celebrities. Celebrity endorsement decisively gives more visibility to the product endorsed. What-so ever the Ground realities may be, but the masses still try to imbibe a style imitating the celebrities. The Brands, taking into consideration all the related factors, can make best use of either the 'Bollywood stars' or 'Sports star' to endorse their product. Yet not many studies are conducted to test if the celebrity advertisement appeal carries on towards both male and female, or only towards a particular gender. Companies must understand that the fees for celebrity talent can be substantial, cost of national advertising, especially on television, is extremely high, and the type of spokesperson affects the levels of awareness and recall Studies with regards to celebrity endorsers, researchers have included the issue of demographics. Nevertheless, many of these studies on celebrity endorser have looked at the issue of gender, but from the perspective of the celebrity themselves and not of the respondents gender specifically. The increase of celebrity endorser based advertising over the recent years begs the question as to the impact on the different respondent gender towards the use of celebrity endorsers. All the related factors have to be taken care of; otherwise the celebrity endorsement may prove to be a landmine having a devastating impact on the profitability, product's future prospects and brand image.

References:

- Pradeep Agrawal Research Scholar, Faculty of Management Studies, Banaras Hindu University, Varanasi. 221005
  Dr. S. K. Dubey Associate Professor, Faculty of Management Studies, Banaras Hindu University, Varanasi. 221005
- Friedman and Friedman (1979)
- Mc Craken's (1989)

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Necessity of (SWOT) Analysis Technic in Modern Library Management

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Introduction:

While doing management of modern libraries, first thing we have to take into consideration is that, we must know all technics of management. There are number of library management technics but out of them SWOT is one of them. SWOT concept is emerged from management science. Firstly, It is Coined by Albert Hwmphrey in 1960.

Library is social and charitable institute. Thats why management of libraries must be done by keeping social objectives befor eyes. When there is change in objectives at that time it also changes every conspect of library management . To handle library science and informatin science in proper manner it requires scientific managerial base. for daily work in library there is need of management and in different times at different level it also requires decision power better management. With this to handle various works in library in good manner planning of management is also important one. SWOT is the most important technic of management in planning.

Library management:

In acncient peroid scupltures. bricks of clay, bhujpatre, Tamrapaat etc. were used in propogation of knowledge. After invention of printing art it increased number of books in lakhs. Nowdays, apart from books, magazines, films, cassettes, or computer discs are includes in library which helps in increasement of knowledge collection. To work at library level means by studying books to provide library services to readers at same level objectives should be set as, to aware readers, to provide such literature which will entertain them, to take decision means which and upto what extent services should be provided to them, How many servants should be appointed etc. and actual action means to buy books, to render their prices and appoint servants by confering works on them all such process known as library management.

Entire / Whole quality management in library:

TQM concept is know as entire quality management or perfect quality management. This cancept first time was coined by W. Edwards deming. He as management expert and advisor express his views and his stand about quality. According to this concept it is better quantity should follow to quality rather than any part of quantity. But, every one should be aware about providing good services to consumers. It consists cleanness from floor or clean uniforms of worker to the books which reaches in hands will be of good standard such caution is required their.

A) Nature of SWOT Technic:

For success of streategic planning there are various technics are evolved by confining various things their types and importance they will be utilised by mathematical methods. Such tachnics are developed. SWOT is the one of them analytical method.

B) SWOT analetical Concept:

While arranging strategies internal and external stregnths a weakenesses in contempary bussiness should be studied with taking into cmsideration opportunities and treates which may arise in future. It requires analysis. Which known as SWOT analysis.

Necessity of Swot Analysis in modern library:

To discharge various works in library some technics must be used there. while using any technic discipline is most important. with this at the time of actual work use of presence of mind is the skill of manager.

A) Internal Stregnths of library may be helpful to the manger as follow:

No any library is prefect in case of literature , it means there is no possiblity of availing all the facilities in library. But, there are certain libraries are exception for upto date services. For ex. readers in colleges and universities are researchers, writers, students. In research work of such readers what ever important material they want is provided by copies. Duplication services by become internal stregnth of present library.

B) By taking into account internal Lawnas / weaknesses / deficiencies in the library manager may held further remedlis / solutions:

Library manager means librarian must know and study lawancas and weaknesses of the library. By knowing such deficiencies he/she must in continous attempt to overcome it by providing proper solutions. Suppose, Continous closeness of library is internal wekness of library. To aviod this problem he must be attentive for Ex. public reading service is from 10 A.M. to 06 P.M. But readers visiting to library are students, writers and reasearchers. So to open the library 2 hours earlier in the morning and close it at 10 p.m. at night than regular time such remedy may be provided by librartion to overcome the lawnace.

C) Library development opportunities may be helpful to librarian in following manner:

For the growth of library what are progressive opportunities must be seek by librarian and while providing services to the readers he must study the beneficial factors also, for development of those factors there further opportunities. Well equippe building of libraray, upto dafe instuments i.e. computer service, separate reading hall etc. increase in number of readers as literate people this is also opportunity in development of library.

D) Possible threates lobstacles in library:

Two lakh readers and one thousand furniture is the wealth or libray. To preserve and develop it is the first task of librarian as manager. The furniture and reading material has threates from various things. To study possible threates and prevent them by taking precations is the responsibility of librarian.

Conclusion :

In case of libraries SWOT analytical technic is limited one. Library is social and chariltable institution. Hence, the analysis techinc of SWOT is strictly not applicable in library institutions. In library management there are interanal lawnas / weaknesses and possible treates which are very well known to the library manager. But to overcome this problem there may be some obstancles and limitations also. Although, SWOT technic is usefull in library management for pre plannings.

References:

- www.SWOT analysis.in
- Khot Namita & Jadhav S.S. (2010), Dyangangortri, Nasik
- Mishra V.N & Kulkarni J.N. (2013), Library mangement Aruna publication, Latur.

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Effect of Concurrent Training on Back Walkover Skill Performance of Female Gymnasts

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Abstract:

The study was conducted in order to find out the effect of concurrent training on back walkover skill of female gymnasts. 20 beginner gymnasts were randomly selected for the study. In place of their regular training pattern the gymnasts were asked to replace it with concurrent training schedule prepared by the researcher for the period of 12 weeks, 3daysin a week, during the evening sessions. A pre-test and a post-test were conducted using the standard evaluation prescribed by the federation international gymnastics (only execution deductions). The data of the pre and post-test were statistically analysed using 't' test and the study showed a significant difference at a level of 0.05.It can thus be concluded that concurrent training improves the back walkover skill performance of gymnasts. It can also be applied for improving other gymnastics skills and can have an extended application to training sportsmen for other sports and games as well.

Introduction:

It is generally observed that while training gymnasts coaches face certain problems with regards to the development of various abilities within one single training session or program for example while providing a gymnasts with strength training the flexibility of the gymnasts goes unattended, and thus the gymnasts end up having enough strength but lack flexibility. A similar problem is faced while training gymnasts for walkover skills both forward and backward while emphasizing on the strength of the body to travel from one position to another while maintaining the entire body weight on the upper limbs an individual tends to forget about the flexibility aspect involved in the skill which also plays a major role in the skill performance. In this study the researcher induces concurrent training method in which multiple abilities can be trained within the same training session or program. The study was conducted to find the effect of concurrent training on back walkover skill performance of female gymnasts.

Objectives of the study:

To study the effect of concurrent training on back walkover skill performance of female gymnasts

To prepare concurrent training module for improving the back walkover skill performance of the gymnasts

To determine the effect of concurrent training on the strength and flexibility of gymnasts

To suggest remedial measures to improve the performance of back walkover skill of female gymnasts

Hypothesis:

H_1: There will be a significant improvement with regards to back walkover skill performance due to concurrent training in female gymnasts.

Method:

Single group experimental design was designed for this study. Twenty female gymnasts were randomly selected as subjects from 75 gymnasts from the age group 6 -12 years, from various clubs from south Mumbai city. The selected twenty subjects form a single experimentalgroup. A pre and post test on back walkover skill performance was conductedusing the standardized scoring used by the federationinternational gymnastics (FIG)on the subjects mentioned in the code of points. Only the

execution deductions were applied to the back walkover skill performance and the pre-test data was collected. After the score were obtained the concurrent training was designed and applied to the training schedule of the subjects. The training was given 3 days a week in the evening training session for a period of 12 weeks. The duration of the training was for 60 minutes (1 hour). The session involved warm up followed by concurrent training program and stretching and concluded by back walkover skill practice. The variables that were trained during this session were strength of back, arms and legs and flexibility of back and lower limbs.

Statistical analysis and Findings:

The data obtained during the pre and post- test was then analysed by using statistical procedure of 't' test for further understanding and interpretation of the scores obtained.

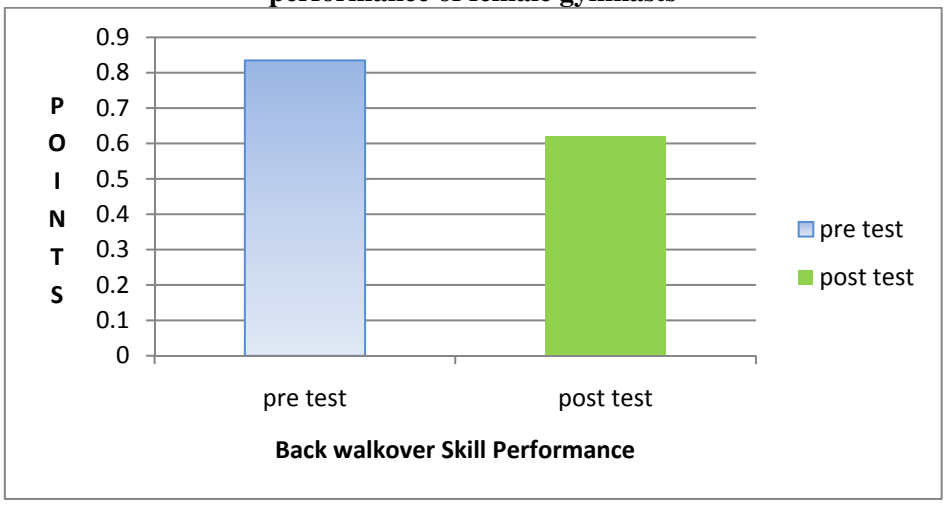
Table

Result of walkover skill performance of female gymnasts

Variable	Pre Test		Post Test		MD	SD	SEM Diff	't'	Df	Sig.(2 tailed)
Back walkover skill Performance	Mean	SD	Mean	SD	.215	.108	.024	8.826	19	0.00
	.835	.187	.620	.196						

It is seen from table that the back walkover skill performance as measured by the evaluation of the skill of mean score of pre and post-test of the selected subjects are 0.8350 (SD 0.18715) and 0.6200 (SD 0.19628) respectively, whereas the mean difference is 0.21500 and 't' value is 8.826, which is significant at 0.05 level. Since calculated 't' = 8.826 is greater than tab t .05. = 2.09, at .05 level of significance.

The graphical presentation of the result of concurrent training programe on back walkover skill performance of female gymnasts



From the above graphical representation it is seen that the gymnasts have shown significant reduction in the execution scores and thus have improved the skill performance. Hence the H_1 – There will be a significant improvement with regards to back walkover skill performance due to concurrent training in female gymnasts is accepted. It indicates that the selected subjects have benefited from the concurrent training programme.

Findings and Discussion:

From the above analysis and interpretation of the data, the following finding may be drawn- Concurrent training programme contributes significantly towards back walkover skill performance. As seen in the pre-test the scores obtained by the application of deductions, the score is higher whereas

the scores obtained in the post test after the application of concurrent training is lower. Thus showing significant improvement in the performance of the back walkover skill by reducing the deductions.

Conclusion:

From the statistical analysis it has been concluded that there has been a significant improvement in the back walkover skill performance due to concurrent training of female gymnasts.

References:

1. Baudry L[1], Leroy D, Thouvarecq R, Choller D. "Auditory concurrent feedback benefits on the circle performed in gymnastics." J Sports Sci. 2006 Feb;24(2):149-5
2. Cantrell GS, Schilling BK, Paquette MR, MurlasitsZ.Eur J Appl Physiol. "Maximal strength, power, and aerobic endurance adaptations to concurrentstrength and sprint interval training." 2014 Apr;114(4):763-71. doi: 10.1007/s00421-013-2811-8. Epub 2014 Jan 5.
3. Dallas g.,1 p. Kirialanis,2 and v. Mellos3 " the acute effect of whole body vibration training on flexibility and explosive strength of young gymnasts" biol sport. 2014 aug; 31(3): 233–237. Published online 2014 jul 15. Doi: 10.5604/20831862.1111852pmcid: pmc4135069
4. Dallas G[1], Smirniotou A, Tsiganos G, Tsopani D, Di Cagno A, Tsolakis Ch. "Acute effect of different stretching methods on flexibility and jumping performance in competitive artistic gymnasts."J Sports Med Phys Fitness. 2014 Dec;54(6):683-90.
5. Davis WJ[1], Wood DT, Andrews RG, Elkind LM, Davis WB. J Strength Cond Res. "Concurrenttraining enhances athletes' strength, muscle endurance, and other measures"2008 Sep;22(5):1487-502. doi: 10.1519/JSC.0b013e3181739f08.
6. Despina T[1], George D[2], George T[1], Sotiris P[3], Alessandra DC[4], George K[5], Maria R[6], Stavros K "Short-term effect of whole-body vibration training on balance, flexibility and lower limb explosive strength in elite rhythmic gymnasts".HumMov Sci. 2014 Feb;33:149-58. doi: 10.1016/j.humov.2013.07.023. Epub 2013 Sep 20
7. DimitarObreshkov and TeodoraSimeonova, (2012) "The Effect Of Six-Month Training In Gymnastics On The Flexibility, Speed And The Ability To Jump Among 10-Year-Old Girls", Preliminary communication, UDC: 796.41.015-057.874
8. Enright, Kevin *enrighk@hope.ac.uk*, Morton, James[1], Iga, John, Drust, Barry[1],European Journal of Applied Physiology. Nov 2015, "The effect of **concurrenttraining**organisation in youth elite soccer players." Vol. 115 Issue 11, p2367-2381. 15p. 2 Diagrams, 4 Charts, 1 Graph.journal article
9. Gruodyte-Raciene R[1], Erlandson MC, Jackowski SA, Baxter-Jones AD.J Bone Miner Res."Structural strength development at the proximal femur in 4- to 10-year-old precompetitive gymnasts: a 4-year longitudinal hip structural analysis study". 2013 Dec;28(12):2592-600. doi: 10.1002/jbmr.1986
10. Helen T. Douda Institution Democritus University of Thrace, Savvas P. Tokmakidis Institution Democritus University of Thrace, NikolaosTsigilis Institution Aristotle University of Nikolaos Thessaloniki, Greece. **Article** · January 2002 "Effects of specific training on muscle strength and flexibility of rhythmic sports and artistic female gymnasts"
11. Kinser AM[1], Ramsey MW, O'Bryant HS, Ayres CA, Sands WA, Stone MH. "Vibration and stretching effects on flexibility and explosive strength in young gymnasts."MedSci Sports Exerc. 2008 Jan;40(1):133-40.
12. Harringe M. L. , Nordgren J. S. , Arvidsson I. , Werner S. **. "**Low back pain in young female gymnasts and the effect of specific segmental muscle control exercises of the lumbar spine: a prospective controlled intervention study"**SportsMedicine**Knee Surgery, Sports Traumatology, ArthroscopyOctober 2007, Volume 15, Issue 10,pp 1264-1271 First online: 27 June 2007

13. OlyviaDonti,*CharilaosTsolakis,* and Gregory C. Bogdanis "Effects of Baseline Levels of Flexibility and Vertical Jump Ability on Performance Following Different Volumes of Static Stretching and Potentiating Exercises in Elite Gymnasts" J Sports Sci Med. 2014 Jan; 13(1): 105–113.Published online 2014 Jan 20. PMCID: PMC3918545
14. William A. Sands, Jeni R. McNeal, Gabriella Penitente, Steven Ross Murray, Lawrence Nassar, M onèm Jemni, Satoshi Mizuguchi, Michael H. Stone "Stretching the Spines of Gymnasts: A Review"First online: 18 November 2015 DOI: 10.1007/s40279-015-0424-6Sports Medicine March 2016, Volume 46, Issue 3, pp 315-32

Websites:

- www.google.com
- www.pubmed.com
- www.springer.com
- www.ebsco.com
- www.study.com
- www.researchgate.net
- Wiley online library

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Internal Audit and Vigilance in PSU Banks

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Abstract

The banking industry in India is going through major challenge of growing Non Performing Assets since the global financial crisis of the year 2008. The impact of NPAs is more on the Public Sector Banks than on private or foreign banks. PSU banks are more focussed today on Internal Audit and Vigilance to identify potential NPAs and controlling their level in order to protect themselves from further capital erosion.

These banks have implemented enormous measures for internal controls and vigilance.

This paper attempts to familiarise the readers PSU banks standard internal control mechanism that includes internal audit and vigilance.

This article is a small initiative to familiarise scholars and researchers with existing internal audit and vigilance systems in PSU banks.

Key words: Internal Audit, Vigilance, Risk Management, Audit Committee, Non- Performing Assets

Introduction:

Banking Sector is going through a severe problem of growing Non Performing Assets (NPA). PSU Banks are owned by the government and any capital erosion is a loss to public wealth. Recent Reserve Bank of India survey has estimated Rs. 4,50,000 crore NPAs across all PSU Banks.

This means, there will be a capital erosion of this amount if not recovered immediately. There do not seem to be immediate chances of recovery. Which means these banks will have to infuse fresh capital to retain the capital level prior to erosion. The most likely way of doing this, is dilution of government share in these banks and that too not for expanding the capital base but only to retain the pre-erosion capital level.

With this backdrop, it will be interesting to see the role played by vigilance and audit function in PSU banks as they are considered to be eyes and ears of any organization. They also set early warning alarms through their periodic reports. Their continuous feedback helps the bank in monitoring borrowers account. Management can take preventive and corrective actions based on the information generated by audit department.

Objective

This article seeks to enumerate major aspects of the audit and vigilance department and various standard practices at PSU Banks. They all have implemented more or less similar audit and vigilance systems. Similarly these banks have standardized disclosures in their annual report as per BASEL II implementation program, which include information about audit function.

3. Audit function and structure

Banks have well-resourced Internal Audit Department, which conducts regular audit of various activities undertaken by different business / support verticals, branches and subsidiaries. Audits are carried out under the guidance and supervision of the Audit Committee of the Board.

The audit function is independent and maintains objectivity while carrying out the assignments. Banks have implemented risk-based internal audit as its strategy and as per the RBI guidelines and recent guidelines issued by the Government of India on Internal and Concurrent Audits.

The Internal Audit function has become more effective after Implementation of a web-based Audit Management System, Off-site Alerts Management System, and setting up of Audit Hubs at important centres.

Banks have deployed an experienced in-house Information System Audit (IS Audit) team, to address technology and IT-related security issues commensurate with the nature and complexities of its operations.

As required by the regulatory authorities banks have implemented a comprehensive concurrent audit system to supplement its internal audit function. Credit Audit System has been put in place to achieve constant improvement in the quality of its credit portfolio. The system comprehensively covers compliance with Bank's policies in the area of credit appraisal, sanction of loans and credit administration.

Bank management regularly reviews and evaluates the adequacy and effectiveness of internal control mechanism, adherence to policies and procedures, and suggests measures to strengthen and streamline control for addressing various risks.

As routine practice, Banks annually review the Risk Based Internal Audit Policy, Concurrent Audit Policy, Information Security Audit Policy and Fraud Risk Management Policy.

3.1 Audit Committee of the Board:

As per corporate governance requirement Audit Committee of the Board (ACB) is a must for banks.

The role and powers of ACB are in accordance with the provisions of the Companies Act, relevant RBI guidelines and revised Clause 49 of the Listing Agreement and are enumerated hereunder:

Powers

- The Committee can investigate any activity within its terms of reference;
- Seek information from any employee;
- Obtain outside legal or other professional advice, wherever required;
- Secure attendance of outsiders with relevant expertise, if it considers necessary.

Role

- The Committee supervises the Bank's financial reporting process and the disclosure of its financial information, to ensure that the financial statement is correct, sufficient and credible.
- The committee also recommends to the Board, the appointment, reappointment of auditors and fixation of audit fees, subject to the approval of the RBI and shareholders.
- The committee recommends the payment to statutory auditors for other services, if any, rendered by them.
- It also reviews the annual financial statements with the management and then submits to the Board for approval, with specific reference to:

a. Matters required to be included in the Directors' Responsibility Statement, which are a part of the Board's report complying the relevant provisions of the Companies Act;
b. Changes in accounting policies and practices and reasons thereof;
c. Major accounting entries that are estimated debits/credits based on judgment by the management;
d. Significant adjustment entries passed based on audit findings;
e. Compliance related to listing agreement and other legal requirements relating to financial statements;
f. Related party transactions disclosure;
g. Qualifications in the draft audit report;
h. Review of the quarterly financial statements with the management and then submitted to the Board for approval;
i. Review of performance of statutory and internal auditors and adequacy of the internal control systems with the management;

- The committee reviews the adequacy of internal audit function, if any, including the structure of the internal audit department, staffing and seniority of the official heading the department, reporting structure coverage and frequency of internal audit;
- Discussing with internal auditors, any significant findings and follow-ups thereafter;
- Discussing with statutory auditors about the nature and scope of audit as well as post-audit discussion to ascertain any area of concern;

- The committee carries out any other function, as is mentioned in the terms of reference of the Audit Committee.

3.2 Review of information by Audit Committee

The committee meets every two months and reviews the following:

- Management Discussion and Analysis of the financial condition and results of operations.
- Statement of significant related party transactions (as defined by the Audit Committee) submitted by the Management.
- Management letters / letters of internal control weaknesses issued by the statutory auditors.
- Internal audit reports relating to internal control weaknesses.

4. Internal Controls

The inspection system performs vital and critical role in identification, control and management of risks through the internal audit function, which is considered as one of the most important components of Corporate Governance.

The Banks conduct mainly two types of audits – Risk Focused Internal Audit (RFIA) and Management Audit, covering different angles of Internal Audit requirement. The Bank's Management Audit covers administrative offices and scrutinises policies and procedures, besides quality of execution.

Moreover, the department undertakes Credit Audit, Information Systems Audit (Centralised IT establishments & Branches), Home office Audit (audit of foreign offices) and Expenditure Audit (at administrative offices) and oversee policy and implementation of Concurrent Audit (domestic and foreign offices) and Circle Audit.

To validate the level of rectification of irregularities by branches, further audit of compliance at select branches is also done.

4.1 Fraud Management System:

Banks have implemented a fraud monitoring mechanism through the Fraud Monitoring Group (FMG) which reports to the Internal Audit Department. Fraud Review Councils (FRC) have been established to monitor and review all frauds to identify systemic gaps, if any, take corrective measures and monitor progress of investigations and recovery position.

The FMG also reviews effectiveness of the remedial action taken to prevent frauds from taking place again. Actions taken include strengthening of internal controls and taking need-based remedial measures.

Well defined Fraud Risk Management Policy is in operation to provide a system to effectively manage and control potential fraud zones. The policy also includes a framework for early detection, prevention, reporting, monitoring and follow-up of frauds.

The Audit Committee of the Board and Audit Committee of Executives reviews the performance regularly, guides internal audit officials and reviews the effectiveness of internal control systems and compliance with regulatory guidelines.

4.2 Vigilance Mechanism:

A full-fledged Vigilance Department, functions as a source for providing inputs to the Top Management by investigating vigilance-related complaints, and suggest corrective measures for reducing deficiencies, in the control systems and procedures. It also recommends the quantum and type of penalties in regard to vigilance related disciplinary action cases.

Banks have implemented the prescription issued by the Central Vigilance Commission (CVC) for improving Vigilance Administration, and has implemented a system through which complaints received from the public or any other sources are immediately attended. Important guidelines on this critical aspect are communicated to employees for information and compliance.

Surprise vigilance visits are conducted to various branches to find out if there are any malpractices and non-adherence of prescribed systems and procedures. Appropriate corrective measures are suggested, wherever necessary.

Banks' always endeavour to spread vigilance awareness among the employees and therefore organise numerous interactive workshops and talks / presentations with a focus on preventive and participative vigilance. Banks sensitise employees about the evils of corruption through Vigilance awareness week.

4.3 Regulatory Compliance:

Banks take appropriate steps to ensure compliance with various statutory and regulatory stipulations and guidelines. A dedicated Compliance Department, steered by the Chief Compliance Officer, oversees compliance-related activities like:

a) Statutory provisions (Banking Regulation Act, RBI Act, FEMA, Prevention of Money Laundering Act, and so on)
b) Regulatory guidelines (RBI, IRDA, SEBI, and so on)
c) Standards and Practices prescribed by industry associations /self-regulatory bodies (BCSBI, IBA, FEDAI, FIMMDA, among others)
d) Bank's internal policies: The Department also communicates statutory and regulatory requirements across the organisation. Moreover, in close co-ordination with Internal Audit Department, it monitors adherence to regulations by the business and other verticals. It also ensures that proper checks are implemented, if the gaps are noticed.

4.4 Recovery Review Committee:

Subsequent to Government directives the Boards have formed a Recovery Review Committee (RRC) for reviewing NPAs, stressed accounts, written-off cases, Overdue Loan cases, Debt Recovery Tribunal (DRT) cases. Such committees meet at least once in a quarter to take stock of the performance.

4.5 Risk Focused Internal Audit

Internal &Management Audit Department conduct a critical review of the entire operations of audited units through RFIA which plays supporting role to Risk Based Supervision as per RBI directives. The domestic branches are broadly separated in three groups (Group I, II & III) based on business profile and risk exposures.

The audit of Group I branches is administrated by the Central Audit Unit (CAU), audit of branches in Group II and III category and Business Process Re-engineering (BPR) entities are conducted by Zonal Inspection Offices, headed by a General Manager.

4.6 Management Audit

On introducing RFIA, Management Audit has realigned the focus on the effectiveness of risk management in the processes and the procedures followed in the Banks. Management Audit covers Corporate Centre establishments / Circle Local Head Offices / Apex Training Institutions, Associate Banks and Regional Rural Banks (RRB).

To augment the effectiveness of Management Audit, frequency has been reduced from the existing once in three years to two years.

4.7 Credit Audit

Credit Audit focusses at achieving improvement in an on-going way in the quality of Commercial Credit portfolio of the Bank through critically examining individual large commercial loans with exposures of Rs. 10 crores and above annually.

The Credit Audit System also imparts feedback to the business unit by giving warning signals about the quality of advance portfolio in the unit and suggests corrective measures.

Credit Audit also reviews (Loan Review Mechanism) of all the pre-sanction and sanction process of all individual advances above Rs.5 crores within 6 months of sanction / enhancement / renewal.

4.8 Information System Audit

Information System (IS) Audit is undertaken at all branches to assess the IT related risks as part of RFIA of the branch. IS Audit of centralised IT establishments is conducted by a team of qualified personnel.

4.9 Concurrent Audit System

Concurrent Audit System is primarily a control process, essentially for establishing sound internal accounting functions, effective controls and overseeing of operations on a continuous basis.

Concurrent Audit System is reviewed continuously as per RBI directives, in order to cover the Banks' Advances and other risk exposures as prescribed by the regulatory authority.

I&MA department stipulate the processes, guidelines and formats for the conduct of concurrent audit at branches and BPR entities. During the year FY 2013-14, banks revamped their Concurrent Audit System with the introduction of a web-based solution.

Conclusion:

Thus it could be observed that banks have a robust internal audit and vigilance systems. This obviously has acted as very fine filters that trap variations from the prescribed systems and norms. Being vigilant always helps in reducing the incidences that could lead to bigger frauds and eventual losses. It also acts a deterrent for potential frauds. However, as long as there is banking business, it will continue to attract persons those who think they can try to exploit weak and vulnerable spots in banking system and make quick fortune. Hence banks will have to be always alert through their audit and vigilance department.

References

1. State Bank of India, Annual Report – FY 2013-14
2. Bank of India, Annual Report – FY 2013-14
3. IDBI Bank of India, Annual Report – FY 2013-14
4. Bank of Baroda, Annual Report – FY 2013-14
5. www.bseindia.co.in
6. www.rbi.org
7. www.sbi.co.in
8. www.bankofindia.co.in
9. www.idbi.com
10. www.bankofbaroda.co.in

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The Formation of the Palestine Liberation Organisation and its Resistance Movement

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Abstract

Palestinian was dispersed in several Arab countries, as was a powerful state it was neither possible, nor wise to fight straight hence Palestine chose the way of proxy war against the Israel, in these circumstances which gave birth to PLO. Israel over indulged in Jerusalem after the defeat of Arabs; hereby Israel orientation was to develop Jerusalem as their capital and such act was the break of UNO'S decision.

Throughout the twentieth century history of Palestine, none of the numerous proposals for "partition" of the Palestine have ever been accepted by any significant group of Palestinian Arabs in spite of the many proposals to that end prior to and following the forced dismemberment of the country in 1948. Palestinian and Arab resistance on this point has been unequivocal and effective -- at least until recently.

The Palestine Liberation Organization (PLO)

The Palestine Liberation Organization (PLO) is an organization founded in 1964 with the purpose of the "liberation of Palestine" through armed struggle, with much of its violence aimed at Israeli civilians. It is recognized as the "sole legitimate representative of the Palestinian people" by over 100 states with which it holds diplomatic relations, and has enjoyed observer status at the United Nations since 1974. The PLO was considered by the United States and Israel to be a terrorist organization until the Madrid Conference in 1991. In 1993, the PLO recognized Israel's right to exist in peace, accepted UN Security Council resolutions 242 and 338, and rejected "violence and terrorism"; in response, Israel officially recognized the PLO as the representative of the Palestinian people.

The First Palestine Arab National Congress was held in Jerusalem on 28 May 1964 nearly sixteen years to the month after the State of Israel was declared. Its first chairman, a Haifa-born, Cambridge–educated lawyer, Ahmad Al–Shukeiry, was a fiery Pan–Arabist: 'Arab nationalism', he had said in 1948, 'will not give up a span a territory of the other Fatherland from the Atlantic to the Arabian Gulf.....'

But the PLO was by no means the first Palestine body to be organised after 1948. As early as 1955, the Jerusalem–born Yasir Arafat founded the Palestine Liberation Movement (*Harakat al–tahrir al Falishtine*) or, as it is more popularly known, al–Fatah, and its military arm, El Asifa.

Accordingly, the Palestinian National Congress met in Jerusalem on 28 May, 1964, and the Palestine Liberation Organisation (PLO) was officially created.

The Palestine National Charter

The two drafts which Shukeiry had submitted on the question of the creation of the Palestinian entity. One was "the Palestine National Charter" which laid down the national rights and obligations of the Palestinians and the other one was the proposed constitution for the creation of the Palestine Liberation Organisation.

The Palestine national Charter expressed the hopes and aspirations of the Palestinian people for a homeland. Its limits were the "boundaries existing under the British Mandate" (Article2). The Charter also said: "The Arab Palestinian People, the rightful owners of its homeland, is an indivisible part of the Arab nation" (Ariticle3). The Jewish citizens from Palestine descent were regarded as Palestinians if they wanted to live loyally and peacefully in Palestine (Article 7).

The Charter gave three slogans: National Unity, National Mobilisation and Liberation. It was up to the Palestinians to decide about their political, economic and social systems after liberation (Article 10). It also declared that the fate of the Arab nation, if not the fate of Arab existence, was dependent on the fate of Palestine (Article 13). The partition of Palestine and the creation of Israel was null and void since it contradicted the right of self-determination under the U.N. Charter. Zionism was called an imperialist, racial and fascist movement (Article 17 and 19). It further said that the PLO did not practice any regional sovereignty on the West Bank and the Gaza Strip and confined its activities to national popular level in the fields of liberation, orgainsation, policy and finance (Article 24). The PLO would not interfere in the internal affairs of any of the Arab regimes (Article 26). Article 24 was inserted to please King Hussein and President Nasser who were administering those areas which originally belonged to Palestine.

The Constitution for the Projected "Palestine Liberation Organisation" says that all the Palestinians are natural members of the PLO, who exercise their duty in the liberation of their homeland (Article 2). It provides for the "National Assembly of the Palestine Liberation Organisation" which would represent all the Palestinians irrespective of their ideological affiliations (Article5). The National Assembly would elect an "Executive Committee of the Liberation Organisation" with 15 members who, in their turn, would elect a president, two vice-presidents and a secretary-general. The president of this committee would represent the Palestinians at the Arab League (Articles 11,12 and 14). It also suggests that the Arab States should give opportunities to the Palestinians to join the Arab armies (Article18). It further provides for private Palestinian contingents to be formed in accordance with military needs and plans decided by the Unified Arab Military Command in agreement with the concerned Arab States (Artcle19). These two draft submitted by Ahmed Shukairy were accepted by the Palestine National Congress with minor amendments made by the sub-committees.

The Palestinian National Covenant

The PLO had held its congresses in Jerusalem in 1964; Cairo in 1965 and Gaza in 1966. Ahmed Shukariy had already lost his leadership. Yahya Hamouda was then the leader of the PLO. That Congress was also attended by *Al–Fatah* and *Al–Saiqa*. On 1 Februrary, 1969, the Palestinian National Council met in Cairo. It elected its new Executive Committee for the Palestine Liberation Organisation and the committee, in turn, elected a new Chairman; Yasser (Abou Ammar) Arafat who was also leader of the *Al-Fatah*. The National Council was inaugurated by President Nasser who pledged full support to the Palestinian movement.

Al–Fatah leadership took over the PLO on the condition that the Palestinian National Charter of 1968 would be upheld in its revised form and *Al–Fatah* would be allowed to maintain its identity. *Al–Fatah* had 33 representatives in the 105-member Palestine National Council.

Ideological Commitments of the Palestine Liberation Organisation

The Palestine Liberation Movement is basically a national liberation movement which may be followed by a social revolution after the goal is achieved. Its primary task is to recover the lost land and to ensure the return of the displaced and disintegrated Palestinian community. *Al–Fatah* has proclaimed that the liberation movement wants "to create the new Palestine of tomorrow, a

progressive, democratic and non-sectarian Palestine in which Christians, Moslems and Jews will worship, work, live peacefully and enjoy equal rights...Our Palestinian revolution still stretches its welcoming hand to all human beings who want to fight for, and live in a democratic, tolerant Palestine, irrespective of race, colour or religion.

The PLO is the political co–ordinating body of the *Fedayeen* organisations. For co-ordination in the military field, the Palestinian Armed Struggle Command (PASC) was formed in March 1969. In the beginging *Al–Fatah*, Al-Saiqa, the Arab Liberation Front (ALF), the PDF, the Popular Liberation Forces (PLF), the General command of the Popular Front section A, the Popular Struggle Front (PSF) and a small group known as "The Arab Palestine Organisation" joined this co–ordinating body. In 1970, the PFLP also became a member of the PLO.

Attitude View of the *Fedayeen*

The *Fedayeen* believe that the peaceful settlement would result in the subservience of the Palestinians in the State of Israel. The revised Palestinian Charter of March, 1969, says that the liberation of Palestine is a defensive act form international point of view (Article 18). It declares the partition of Palestine in 1947 and the Balfour Declaration of 1917 as null and void (Article 19 and 20). It also says :

The Arab Palestinian people, who express themselves by the armed Palestinian revolution, reject all solutions that may stand as alternatives to the full liberation of Palestine; they also reject all proposals that seek to liquidate the Palestinian cause (Article 21).

The *Fedayeen* claim that their resistance movement is similar to the resistance movements conducted in several European countries during the Second World War against the German occupation, namely, the resistance movements in France, Italy, Poland, Czechoslovakia, the Soviet Union, Yugoslavia, Romania and other countries. The resistance movement to the Zionist occupation, therefore, is just and lawful. The repatriation of Palestinians to their homeland is legitimate.

The *Fedayeen* believe that the Security Council resolution of 22 November, 1967, entails the greatest harm and damage to the right of the Palestinian Arabs and violates the United Nations Charter and the Universal Declaration of Human Right. All the *Fedayeen* organisations condemned the Security Council Resolution (No. 242) of 22 November, 1967, the mission of Dr. Gunnar Jarring, the U.N. peace envoy, and also the Soviet plan for the implementation of the resolution in phases.

The Jarring Mission

Under Security Council resolution 242 (1967), the Secretary-General appointed Ambassador Gunnar Jarring of Sweden as Special Representative in another United Nations effort to try and negotiate a Middle East settlement. Ambassador Jarring's attempts from 1967 to 1970 A D. to promote agreements on the basis of resolution 242 (1967) did not succeed. In 1971, in identical aide-mémoire to Egypt and Israel, he proposed that they give simultaneous and reciprocal commitments subject to the eventual satisfactory determination of all other aspects of a peace settlement. Israel would give a commitment to withdraw its forces from occupied Egyptian territory to the former border between Egypt and mandated Palestine, and Egypt would give a commitment to enter into a peace treaty with Israel on certain explicit understandings in relation to resolution 242 (1967). Egypt agreed to give the commitment required if Israel would likewise give the commitments covering its own obligations.

The Israeli response, without specific reference to the commitment requested from it, stated that it viewed favourably Egypt's expression of readiness to enter into a peace agreement with Israel, and reiterated that it was prepared for meaningful negotiations on all subjects relevant to a peace

agreement between the two countries. Israel stated it would give an undertaking to withdraw its forces to secure recognized and agreed boundaries to be established in the peace agreement; Israel would not withdraw to the pre-5 June 1967 lines. The Jarring mission did not produce an agreed basis for discussions, and was suspended in 1972.

Pro Palestinian Fedayeen and Jordan

After the occupation of the whole of Palestine in the June war, Jordan became the base for the Palestinian resistance movement; its political and military leadership operated from Palestinian refugee camps. It was here that they trained most of their resistance fighters, organized their militias and built up their own social and political institutions. The resistance movement was responsible for administering and organizing life in the refugee campus.

People felt that Jordan should prepare for war against Israel. King Hussein was under pressure to mobilise for war. But Hussein could foresee the outcome of this leap in the dark, if it had to be taken at all. Israel would certainly adopt a more aggressive policy. An Israeli aircraft had already dropped some leaflets over Amman making the point clear that Israel would increase the scale of her artillery and aerial attacks. It also threatened to occupy more Jordanian territory.

King Hussein was in a dilemma. He never wanted a war against Israel but peace was also impossible due to the presence of the *Fedayeen* who carried on operations from the Jordanian territory. He therefore, decided to contain the *Fedayeen*. In October 1968, the *Fedayeen* organisations were warned that they would be subject to stricter Government control.

On 2 November, 1968, a loose organisation, called *Kataeb al–Nasr* (Victory Contingents) led by Taher Dablan created troubles. Taher Dablan was arrested. On 4 November, other members of Naser's organisation ambushed a police car containing four Bedouin policemen and held them as hostages. The security forces entered the large refugee camps of Djebel Ashraifyeh and Djebel Hussein in Amman, where they killed 28 people. The massacre was prompted by an a*l–Fatah* radio broadcast urging them to act on the kings words, 'we are all *Fedayeen* now, and go over to the *fedayeen* side.

The majority of Palestinians under Yasser Arafat and *Al–Fatah* were anxious to avoid open conflict with the military superior Jordanian forces. A Palestinian defeat in such a conflict might imply a pretext for Israel to expel Palestinians to Jordan. Jordan was not and would not be the home of the Palestinian. Their goal lay on the other side of the Jordan.

But all efforts to observe cease-fire agreement and achieve a political solution of the conflict were doomed to failure. By the early summer of 1970, Civil war looked inevitable. King Hussein, certain of military support from the USA, determined to settle the conflict by military force.

In August 1970, King Hussein announced on Jordanian television that he would give his backing to the 'peace plan' of American Secretary of State Rogers. This announcement was virtually a declaration of war on the Palestinians. That same night, Jordanian army units moved into new positions.

On the morning of 17 September the Jordanian army began its attack on Amman and the Palestinian refugee camps. Fighting between the *fedayeen* and the Jordanian Army continued for nine days. It is said that about 3,500 persons were killed and more than 10,000 wounded.

On 27 September, at Nasser's insistence, a ceasefire agreement was reached between Arafat and Hussein. This was followed on 15 October by a formal agreement between the PLO and Jordan. This 14-point agreement gave the PLO complete freedom of movement in Jordan, although the

Fedayeen were barred from appearing openly in the towns. King Hussein officially committed himself to 'unreserved support for the Palestinian revolution.

From November, 1970, to July, 1971, there were several confrontations between the *Fedayeen* and the Jordanian Army resulting in heavy casualties. On 13 July, the Jordanian army began its final offensive against PLO units. Completely cut off, the *Fedayeen* at Jerash and Ajlun fought a desperate rearguard action. The heroic stand of Commander Abu Ali Iayyad, a member of the *Al–Fatah* central committee, at Tell Al-Akra, has became legendary. Guerrillas led by Abu Ali Iayyad defended their positions in the hills to the West of Jerash to the last bullet, till they were massacred by the Jordanian army. On 19 July, the Jordanian Prime Minister Hasfi Tll announced that there no longer any guerrilla bases in Jordan. The PLO was defeat its political and military presence in Jordan was destroyed. Thirty thousand Palestinian were killed in this bloody civil war.

Reports of the fighting in September 1970 and in July 1971 are unanimous in their condemnation of the cruelty and brutality of the Jordanina army. Civilians in the Jordanian army, Civilians in the refugee camps were cold-bloodedly murdered of crashed by Jordanian tanks. Thousands of wounded died on the streets because the Jordanian army would not allow any medical aid, stopping even the International Red Cross from giving help, prisoners were appallingly mistreated, trowel and killed.

Many *Fedayeen* obviously preferred to flee to Israel rather than fall into the hands of Hussein's troops. This was a truly tragic end to a sorrowful chapter in modern history.

Fedayeen and Other Arab States

An important consideration in the growing involvement in the Palestine questions on the part of Saudi Arabia and the Gulf States, was the nature of the Palestinian presence in these countries and Israel's reaction to that presence.

With the exception of Egypt, the rest of the Arab countries around Israel had a sizeable Palestinian population. In Lebanon and Syria, though a minority, the Palestinians had considerable political influence. On many occasions the Palestinians acted as a destabilising force in these countries. The political and social dissatisfaction of the majority of Palestinians, who lived in refugee camps in the Arab countries around Israel, very often added to the instability of these regimes. Until 1967, the Arab governments were able to contain the political influence of the Palestinians, however, after that; the newly emerging militant groups acquired some measure of autonomy, especially in Jordan and Lebanon. The difficulties of the Arab regimes were further exacerbated by Israel's policy of massive reprisals against the territory of host Arab country whenever the Palestinian commander attacked Israeli targets.

The Arab regimes faced the dilemma of either tolerating the Israeli reprisals or suppressing the Palestinian. In the final analysis, the Jordanian monarch and the Lebanese government chase the latter option. In Jordan, king Hussein succeeded, but in Lebanon, a civil war ensued and engulfed the whole country. Consequently, the authority of the central government rapidly disintegrated. Syria, however, did not face such a dilemma. The successive regime in Damascus kept tight control over the activities of the Palestinian. At the same time, the resistance movement refrained from using Syrian territory to launch its attacks against Israel. The *Fedayeen* appeared to be 'conscious of the vital need to maintain good relations with at last one of the countries on Israel's eastern periphery.'

The Palestine Resistance is faced with an historical dilemma which is to a great extent beyond its control. There is an alternative to the present predicament, but that alternative exists only in theory and not yet in reality. That is why the “pragmatic” faction of the Palestinian leadership has turned a

deaf ear to the "rejectionists" and other leftists in the movement who claim that the Arab masses will rise to foil any plots against the movement. That which exists in theory cannot resolve the dilemma the PLO encounters in reality. The fact is that the Palestine Resistance and Arab progressive and national democratic forces are at a point of historical disconjuncture.

Reference & Notes

1. Pamela Ferguson, *The Palestine Problem* (London: Mortin Brian So keefe, 1973.).
2. *The Palestine National Character 1964,* Mehmood Hussain, The P.L.O: A Study in Ideology Strategy and Tactics (Delhi: Delhi University Publisher India, 1975).
3. *Proposed Constitution for the Projected "Palestine Liberation Organisation" 1964.*
4. Jillian Becker, *The PLO Rise and fall of Palestine Liberation* Organization, (Weidenfeld and Nicolson, 1984).
5. Abduallah Frangi, The PLO and Palestine,Translatrd, Paul Knight(London:Zed Books Ltd.,1983).
6. Giocomo Luciani, *The Arab State,* (London: Routledge, 1990).
7. Bharat Bhushan Gupta, *Arab-Israeli Relations* (New Delhi: Ashisha Publishing House, 1978).

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Effect of Mental Relaxation Training on Selected Physiological Variables on Certain Situations of Male Boxers

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Abstract

The study was conducted to find out the effect of mental relaxation training on selected physiological variables on certain situations of boxers. For this study 40 male boxers aged 16 to 20 years were selected randomly as subjects from KD's Boxing Academy of Mumbai. The selected forty boxers were divided into two equal groups viz: experimental group and control group consists of twenty subjects on each group. The experimental group was given mental relaxation training for ten weeks, three days in a week with the duration of one hour in the evening. The control group was treated as sedentary. The data were collected by conducting the pre and post tests of both the groups on the selected physiological variables i.e. Blood pressure (systolic and diastolic) and Pulse rate of the boxers. The collected data were analysed by using the 't' test. While concluding, it may be stated that, within the limits of the present study, selected mental relaxation training exercises could regulate the selected physiological variables of Blood pressure (systolic and diastolic) and Pulse rate of the boxers.

Introductions

Sports have always play a very important role in our lives. Boxing is considered to be a game that combines both physical and mental assets. In recent years, it has won great recognition all over the world. We now have started to realise that both physical training as well as mental training of players are essential to develop their competencies. Every sports person possesses untapped physical and mental strength. Performance of the sportsperson depends not only on his physical strength and stamina but also on the mental strength. Let us take an example of a boxer. A boxer in his regular training concentrates more of his physical abilities. However, his mental abilities are given less importance. Generally it is observed that Boxers possess good physical strength, but they are also expected to have good mental strength. Various relaxation techniques may improve the mental strength of the Boxers and ultimately their performance.

Hypotheses

- Mental relaxation training may help to maintain normal Blood pressure (Diastolic and Systolic) in certain situation of boxers.
- Mental relaxation training may help to maintain normal Pulse rate in certain situation of boxers.

Methodology

The subjects for this study were forty male boxers age 16 to 20 years had been selected randomly as subjects from KD's Boxing Academy of Mumbai with to find out the effect of mental relaxation training on selected physiological variables on limited situation of boxers. The selected forty boxers were divided into two equal groups viz: experimental group and control group consists of twenty subjects on each group. The experimental group was given mental relaxation training for ten weeks, three days in a week with the duration of one hour in the evening. The control group was treated as sedentary. The data were collected administering the pre and post tests of both the groups on the selected physiological variables i.e. Blood pressure (systolic and diastolic) and Pulse rate of the boxers.

The study conducted in 3 phases

- Phase I - Pre test
- Phase II - Training stimulus
- Phase III - Post test

Dependent Variables

1) Pulse rate
2) Blood pressure
    a) Systolic
    b) Diastolic

Independent Variables

1. Meditation
2. Pranayama
3. Motivational video
4. Visualisation
5. Music

Statistical analysis:

The collected data were analysed by using the 't' test to find out the effect of mental relaxation training on selected physiological variables.

Findings and discussions:

Table 1 Results of the mean differences on selected physiological variables of mental relaxation training of experimental group

Variables	Experimental Group Before training				Experimental Group After training			
	Pre mean	Post mean	MD	't'	Pre mean	Post mean	MD	't'
Pulse rate	74.45	70.35	5.9	15.98	70.5	70.65	0.15	1.83
B.P. Systolic	118.45	122.55	4.1	10.90	116.65	120.75	0.1	1.45
B.P. Diastolic	77.15	79.95	2.8	11.85	75.8	75.85	0.05	1

Table 2 Results of the mean differences on selected physiological variables of mental relaxation training of control group

Variables	Control group before training				Control group after training			
	Pre mean	Post mean	MD	't'	Pre mean	Post mean	MD	't'
Pulse rate	71.3	75.95	4.65	9.23	70.5	76.35	5.85	14.66
B.P. Systolic	116.7	120.7	4	11.76	117.2	124.05	6.85	14.52
B.P. Diastolic	6.25	79.9	3.65	10.43	76.7	81.2	4.5	9.75

Fig.1. Performance of pulse rate before mental relaxation training

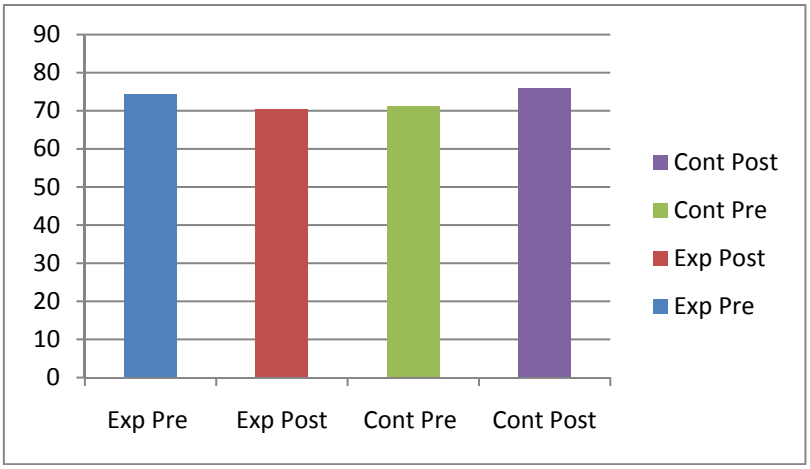


Fig.2. Performance of pulse rate after mental relaxation training

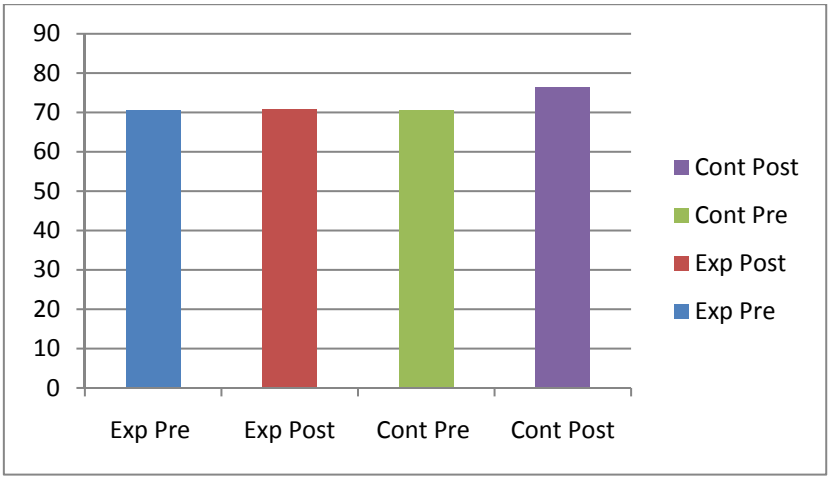


Fig.3. Performance of Blood pressure (**Systolic**) before mental relaxation training

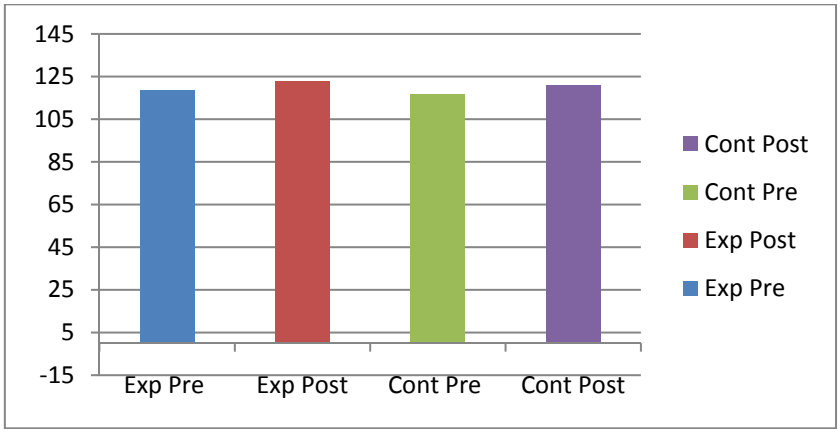


Fig.4. Performance of Blood pressure (**Systolic**) after mental relaxation training

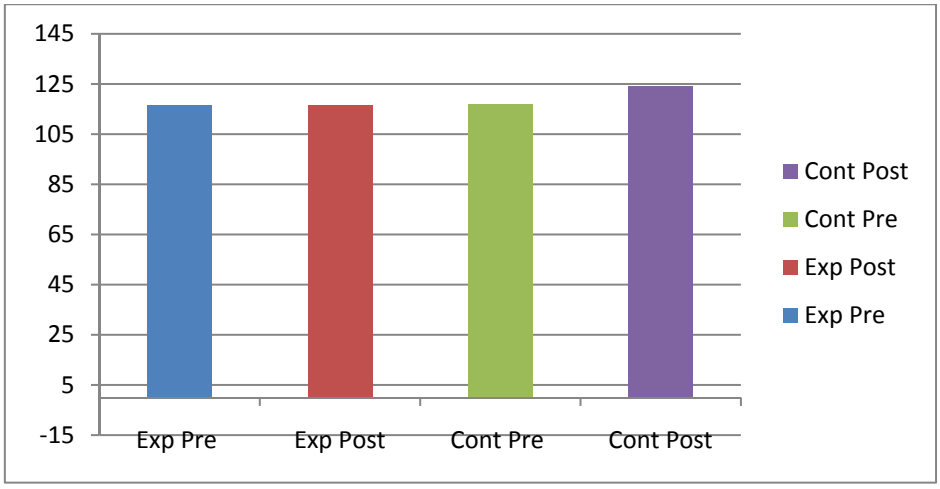


Fig.5. Performance of Blood pressure (**Diastolic**) before mental relaxation training

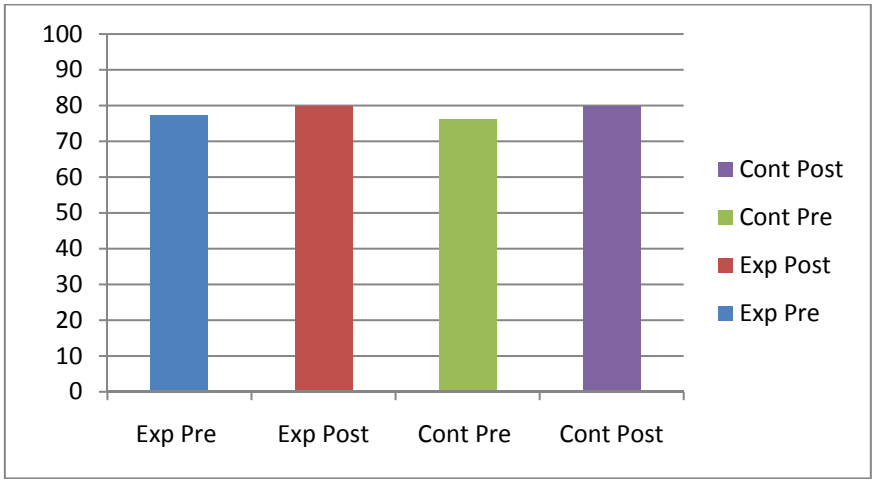
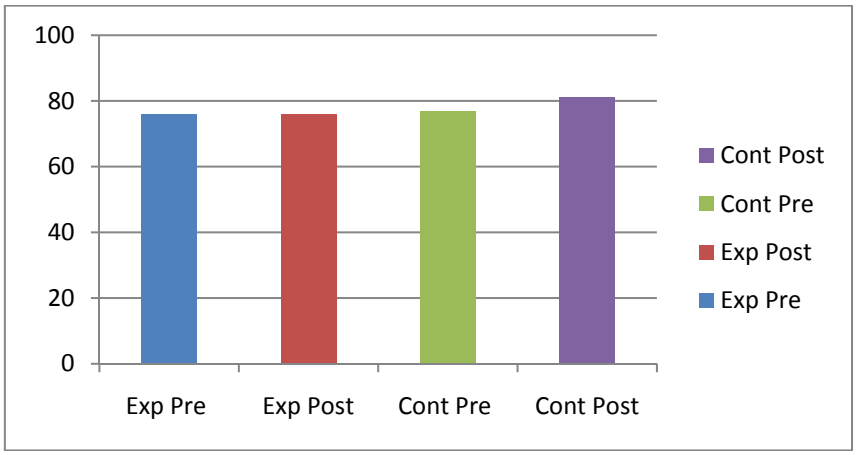


Fig.6. Performance of Blood pressure (**Diastolic**) after mental relaxation training



It is very clearly seen from the above tabulations and the graphical representations that the mental relaxation training showed improvement in maintaining the pulse rate and blood pressure (systolic) & (dyostolic) during certain situations.

Conclusion

While concluding, it may be stated that, within the limits of the present study, selected mental relaxation training exercises could regulate the selected physiological variables of Blood pressure (Diastolic and Systolic) and pulse rate of the boxers on certain situations.

Reference

- Ruikshank JK, Higgens CS, Gray JR. Two cases of acute intracranial haemorrhage in young amateur boxers. Lancet. 1980 Mar 22;1(8169):626–627.
- Jordan BD. Neurologic aspects of boxing. Arch Neurol. 1987 Apr;44(4):453–459.
- CRITCHLEY M. Medical aspects of boxing, particularly from a neurological standpoint. Br Med J. 1957 Feb 16;1(5015):357–362.
- Harvey PK, Davis JN. Traumatic encephalopathy in a young boxer. Lancet. 1974 Oct 19;2(7886):928–929.
- Guterman A, Smith RW. Neurological sequelae of boxing. Sports Med. 1987 May-Jun;4(3):194–210.
- Corsellis JA, Bruton CJ, Freeman-Browne D. The aftermath of boxing. Psychol Med. 1973 Aug;3(3):270–303.
- Lampert PW, Hardman JM. Morphological changes in brains of boxers. JAMA. 1984 May 25;251(20):2676–2679.
- STRICH SJ. Diffuse degeneration of the cerebral white matter in severe dementia following head injury. J Neurol Neurosurg Psychiatry. 1956 Aug;19(3):163–185.
- Levin HS, Lippold SC, Goldman A, Handel S, High WM, Jr, Eisenberg HM, Zelitt D. Neurobehavioral functioning and magnetic resonance imaging findings in young boxers. J Neurosurg. 1987 Nov;67(5):657–667.
- Whiteson AL. Injuries in professional boxing. Their treatment and prevention. Practitioner. 1981 Jul;225(1357):1053–1057.
- Atha J, Yeadon MR, Sandover J, Parsons KC. The damaging punch. Br Med J (Clin Res Ed) 1985 Dec 21;291(6511):1756–1757.

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A Study of Frustration of Rural and Urban Inter School Foot Ball Players

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Introduction:

Many players experience frustration during a match. They may be make the wrong decision on a shot, make an error or lose a game when they've had the lead. These can all be sources of frustration for tennis players. Many players experience frustration because they are not playing their best tennis

The key is to know what causes you to become frustration upset about your performance. Many athletes are frustrated because they are not performing up to their expectations. Expectations are not helpful to your performance. Expectation can cause athletes to judge their performance and can lead to added pressure.

The key is to let go of your expectations. Because your expectations have developed over years of play, it may be difficult to let go of your expectations. Try setting process goals to replace your expectation. Use process goals to guide and track you performance. Avoid trying to judge your performance based on your process goals.

Another cause of frustrations is dwelling on mistakes. When players dwell on mistakes they may have over analyze or think too much about the mistake. Tennis players who dwell on mistake are stuck in the past, which doesn't help them play in the present moment. Dwelling on past mistakes can affect your performance on the next points and can cause more mistakes.

The key is to play one point at a time. Think of each point as the start of the match. Some players may be annoyed or frustrated at their opponent. Players may become angry at their opponent's strategy, their line calls or personality. The key is to play the ball, not your opponent. When you focus too much on your opponent, you become distracted at the task at hand. You aren't able to focus on execution.

Try to focus on what's important to perform successfully. Composure is an important mental skill for athletes to learn. To stay composed during matches, be aware of when you lose composure and what causes your frustration.

Use process goals instead of expectations play each point as a new point and focus on what's important. Frustration is an emotional response to circumstances where on is obstructed from arriving at a personal goal. The more important of the goal, the grater the frustration. It is related to anger and disappointment. Sources of frustration may be internal or external. Internal sources of frustration involve personal deficiencies such as a lack of confidence or fear osf social situations that prevent one from reaching a goal. Conflict can also be internal sources of frustration when one has competing goals that interfere with one another. External causes of frustration involve conditions outside the person such as a blocked road; or conditions linked to the person's action but not directly such as lack of money, or lack of sexual activity. In psychology, passive-aggressive behavior is a method of dealing with frustration. According to N.E.Miller "Frustration produces instigation to a number of different types of response, one of which is instigation to some from to aggression"

Claudio Robazza and Laura Bortoli (2005):

Perceived impact of anger and anxiety on sporting performance in rugby players.

Objective

The main purpose of the study was to extend the notion of the directional perceptions beyond anxiety to anger in order to assess rugby players perception of the facilitative effects of trait symptoms.

Design

A cross-sectional study design was employed using measures of anger and anxiety.

Method

The frequency and direction of symptoms of competitive trait anger were assessed in 197 Italian rugby players together with the intensity and direction of multidimensional trait anxiety.

Results

Finding revealed a general tendency of rugby players to experience a moderate frequency of anger symptoms and to interpret their symptoms as facilitated rather than debilitative. Regarding the direction of symptoms, cognitive anxiety was a significant predictor of anger, while self-confidence was a significant predictor of control of anger.

Chang Yun Dvijesh Shashtri Ioannis Pavlid is Zhigang Deng

Once of the major challenges of video game design is to have appropriate difficulty levels for users in order to maximize the entertainment value of the game. Game players may lose interests if a game is either too easy or too difficult. This paper presents a novel methodology to improve user's experience in computer games by automatically adjusting the level of the game Difficulty. The difficulty level is computed from measurements of the facial physiology of the players at a distance. The measurements are based on the assumption that the players at a distance. The measurements are based on the assumption that the players' performance during the game-playing session alters blood flow in the supraorbital region, which is an indirect measurement of increased mental activities. This alters heat dissipation, which can be monitored in a contact-free manner through a thermal imaging-based stress monitoring and analysis system, known as Stress am. In this work, we investigated on two primary objectives (1) the feasibly of utilizing the facial physiology in automatically adjusting the difficulty level of the game and (2) the capability of the automatic difficulty level adjustment in improving game player's experience. We employed and extended a XNA video game for this study, and performed an in-depth, comparative usability evaluation on it.

Methodology

Aim and Objectives of the study:

- To Examine of Frustration and Performance of Urban and Rural Interschool Football Players.

Hypothesis:

- Rural Interschool Football Players have significantly high Frustration and Low Performance than Urban Interschool Football Players.
- Female Interschool Football Players have significantly high Frustration and Low Performance than Male Interschool Football Players.

Sample:

For the present study 100 players were selected from various School of Pusad, Dist Yawatmal. The effective sample consisted of 100 subjects, out of whom 50 subjects were Urban and 50 subjects were Rural. The age range of subjects where 15 to 17 years.

Tools:

- Dr. N.S. Chauhan and Dr. G.P.Tiwari Nairasha Mapan Test were used for measuring Frustration. All the 40 item has five answer (multiple Choice) graded on 5 point scale on the positive dimension and a zero point on the Negative dimension. This is well known test having high reliability and validity coefficients.

Procedures of data collection:

Each of the three instruments could be administered individuals as well as a small group. While collecting the data for the study the later approaches was adopted. The subjects were called in a small group of 16 to 20 subjects and there scatting arrangements was made in a classroom. Prior to administration of test or scale, through informal talk appropriate rapport form and following the instructions and procedure suggested by the author of the scale and tests. The tests were administered and field copies of each test were collected. Following the same procedure, the whole data were collected.

Variables of study:

1) Residence a) Urban b) Rural

2) Gender a) Male b) Female

Statistical treatment of data:

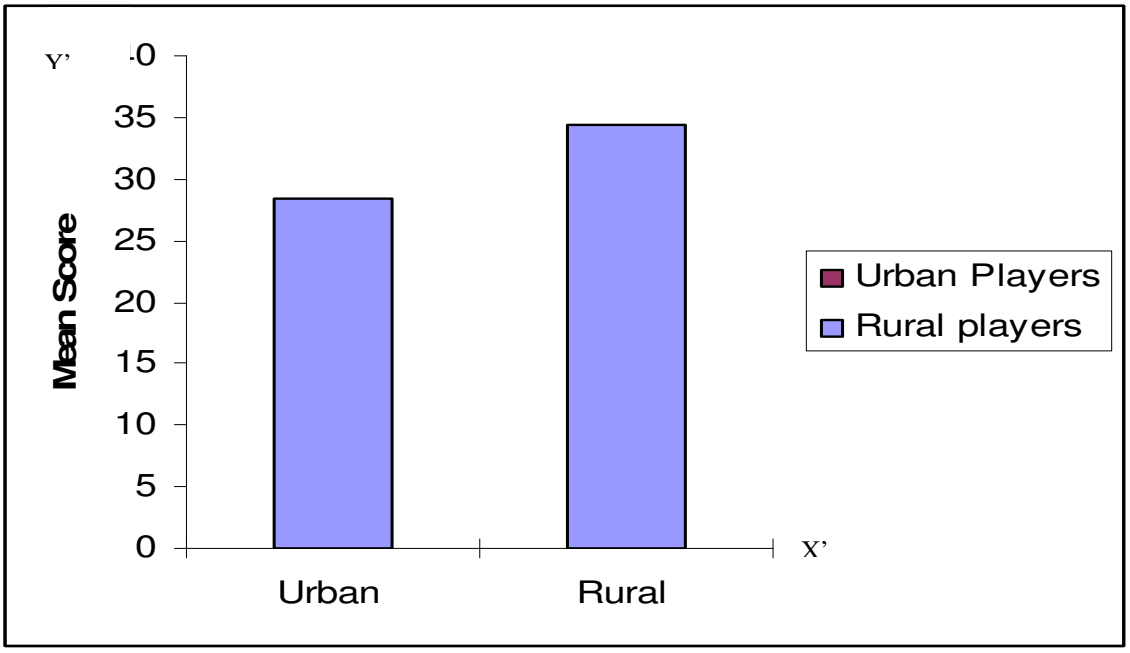
First data were subjects to descriptive statistics i.e. mean and standard deviation.

And "t" Test has been used.

Urban and Rural Interschool Football Players Shows the mean S.D, and t value of actors 'Frustration'

PLAYERS	MEAN	SD	N	DF	t
Urban Interschool Players	28.43	3.78	50		
Rural Interschool Players	34.31	4.59	50	98	7**

Significant at 0.01 levels**



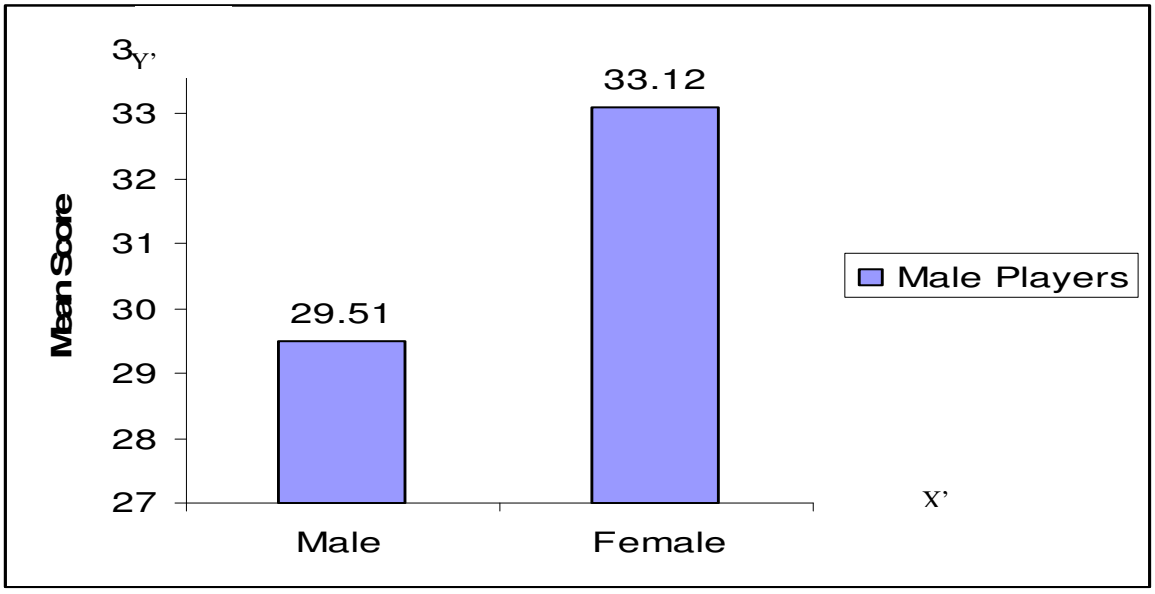
The results related to the hypothesis have been recorded. Mean of Frustration score of the Rural Interschool Football Players is 34.31 and that of the Urban Interschool Football Players 34.31. The difference between the two mean is highly significant' = 7, df = 98.

Thus the hypothesis is confirmed Rural Interschool Football Players have significantly high Frustration and Low Performance than Urban Interschool Football Players.

Urban and Rural Interschool Football Players Shows the mean S.D, and t value of factors 'Frustration'

PLAYERS	MEAN	SD	N	DF	t
Male Interschool Players	29.51	2.96	50		
Female Interschool Players	33.12	3.10	50	98	5.73**

Significant at 0.01 levels**



The results related to the hypothesis have been recorded. Mean of Frustration score of the Male Interschool Football Players is 29.51 and that of the Female Interschool Football Players 33.12. The difference between the two mean is highly significant' = 5.73, df = 98.

Thus the hypothesis is confirmed Female Interschool Football Players have significantly high Frustration and Low Performance than Male Interschool Football Players.

Results:

- Rural Interschool Football Players have significantly high Frustration and Low Performance than Urban Interschool Football Players.
- Female Interschool Football Players have significantly high Frustration and Low Performance than Male Interschool Football Players.

Reference:

- A Bridge to Simplicity Through Diagrams by Thomas Fargnolil. Page 60
- The frustration-aggression hypothesis. Miller, N.E. Psychological Review. Vol 48(4), Jul 1941,337-342.
- J.A.C Brown, The Social Psychology of Industry (Baltimore, Md.:Penguin, 1954),pp. 253-54.
- Dollard, Miller et al.(1939). Frustration and aggression, Yale University Press, New Haven,
- Miller, Barker et al.(1941). Symposium on the Frustration-Aggression Hypothesis, Psychological Review, No. 48, pp. 337-366
- Berkowitz, Leonard (1969). The frustration-aggression hypothesis revisited, in: Berokowitz (ed.), Roots of aggression, Atherton Press, New York
- Anmderson, C.A. and Dill, K.E. Video games and aggressive thoughts, feelings, and behavior in the laboratory and in life. Journal of Personality and Social Psychology, 78,(2000),772—790.

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Influence of Physical Education Teacher's Academic Qualification on Student's Attitude towards Physical Education

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Abstract

Objective

The purpose of this study was to measure influence of physical education teacher's academic qualification on the student's attitude towards physical education.

Design and Method

Total 10 schools from Nagpur city were selected for the study, out of which 5 schools had post graduate physical education teachers (PGPET) and 5 schools had under graduate physical education teachers (UGPET) were selected purposely. Total 200 students from respected school were selected randomly as sample from this study. "Silverman and Subramanian attitude scale" was administered to measure the attitude of the student toward physical education. The collected data was statically analyzed by using independent sample t- test.

Results

The mean score of students of UGPET and students of PGPET were 61.6300 and 63.6700 respectively. Result showed that the student studying in the school were post graduate physical education teachers are employed had better attitude toward physical education than the students who were studding in the school were under graduate physical education teachers are employed.

Conclusion

On the basis of the result obtained in this study the investigator concludes the scores of attitude of post graduate physical education teacher's students are more positive towards physical education as compared to under graduate physical education teacher's students. Thus it shows the teacher's higher qualification plays a vital role in molding the attitude of students.

Key words

Physical Education Teachers, Academic Qualification, Student's Attitude

Introduction

The purpose of this study was to measure influence of physical education teacher's academic qualification on the student's attitude towards physical education. The effective attitudes and actions employed by teachers ultimately can make a positive difference on the lives of their students, and this belief will serve as the central focus of this studies. By examining past educational experiences, preservice teachers can discuss what they should or should not do with a class of students. Stein hardt (1992) states a better understanding of student's attitude and beliefs about PE can greatly influence teacher effectiveness & the design of progress to address the need of children. Positive attitude towards PE because of their desire to be successful or to spend their time width out pressure of

academic success in PE lesions. Despite the apparent commonality in the roles of actors and lecturers, there have been limited and intermittent discussions over several decades associated with the relationship between a teacher's use of performance techniques and students' learning gains. Teachers, who illustrate enthusiasm towards their subject, and towards improving engagement and learning, are usually and intentionally implementing performance techniques such as facial expression and gestures (Tauber & Mester, 2007; Murphy & Walls, 1994). Additionally, students are generally remotivated by teachers who use performance based teaching practices than those who do not (Bolton, 1979; Charles, 1979; Felman, 2001; O'Toole & Lepp, 2000; Tauber & Mester, 2007; Whatman, 2000). Carlson 1994) found student attitudes toward PE were influenced by culture, society and school teacher behavior (Tulsidas). The purpose of this research is to present a summary of the research conducted upon Comparison of teacher's qualification and its influence on student's attitude towards physical education. As we know from the above researches that the teachers qualification, motivation, and behavior may be an effective factor in the attitude of students towards physical education. On the basis of this we are going to check the attitude of students of secondary schools of Nagpur city towards physical education on the basis of teacher's qualification.

Materials and Methods

Total 10 schools from Nagpur city were selected for the study, out of which 5 schools had post graduate physical education teachers (PGPET) and 5 schools had under graduate physical education teachers (UGPET) were selected purposely. Total 200 students from respected school were selected randomly as sample from this study. "Silverman and Subramanian attitude scale" was administered to measure the attitude of the student toward physical education. The collected data was statically analyzed by using independent sample t- test. The level of significance was kept at 0.05 to test the hypothesis

Results

Table No.1.1

Descriptive Statistics of Bachelor degree teacher's students and Master Degree teacher's Students on Attitude score.

Variables	N	Mean	Standard Deviation	St. Error Mean
Bachelor degree teacher's Students	100	61.63	5.89753	0.58975
Master Degree teacher's Students	100	63.67	4.53506	0.45351

In the above table no 1.1, there were 100 Bachelor degree students having mean of 61.63 with standard deviation of 5.89753 and standard error of mean 0.58975. Similarly there were 100 Master Degree Students having mean of 63.67 with standard deviation of 4.53506 and standard error of mean 0.45351 respectively. (In the table N means number of students).

Table no 1.2

Independent sample't' test of Attitude between Bachelor degree teacher's students and Master Degree teacher's Students

t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
2.742	198	0.007	2.04	0.74396

In the table no 1.2, mean differences for the Attitude of Bachelor degree teacher's students and Master Degree teacher's Students was 2.04. This deference when tested by Independent't' test,'t' value was found 2.742 which was statistically significant at 0.05 (p=0.05) significance level for 198 degree of freedom. Therefore the hypothesis H_1, there is significant difference in student's attitude towards physical education is accepted.

Summary and conclusion

It was observed from the finding that the attitude of B.p ed and M.p ed students from table 1.2, that there were significant differences between the attitude of B.p ed and M.p ed students. The hypothesis H_1 was accepted. In the mean scores attitude of B.p ed and M.p ed students; it shows that M.p ed students have high degree of attitude towards physical activity than B.p ed students. On the basis of the result obtained in this study the investigator concludes the scores of attitude of M.P Ed students are more positive towards physical education as compared to B.P Ed students. Thus it shows the teacher's high qualification plays a vital role in molding the attitude of students. This finding is supported by Polk, B.(2009) who studied the influence of the teachers training and teacher attitude on the academic achievement of African American and Hispanic students in mathematics. Based on the findings derived from the results of this empirical study the following conclusions were reached. in general ,it appeared that African American middle school students whose teachers had 6 to 15 years of training are the ones more likely to perform better on the mathematics section of the TAKS test than their counterparts whose teachers had 5 years or less training of 16 years or more of training. It appeared that Hispanic middle school students whose teachers had 6 to 10 years of training are the ones more likely to score better on the mathematics section of the TAKS test than those Hispanic students whose teachers had 5 years or less of training or 16 years or more of training. Finally, On the basis of the result obtained in this study the investigator concludes the scores of attitude of Master Degree teacher's students are more positive towards physical education as compared to Bachelor Degree teacher's students. Thus it shows the teacher's higher qualification plays a vital role in molding the attitude of students.

References

- Alden, M. A. (1932). The factors in physical education programs that are least attractive to the college girl. Research Quarterly, 3, 97-107. http://findarticles.com/p / articles / mi_m0FCR / is_2_38/ai_n6124562/pg_4/
- Gourneau, B. (2005). Five Attitudes of Effective Teachers: Implications for Teacher Training.Essays in Education, vol.13, p. 1-8.http://www. usca. edu/ essays/ vol132005 / gourneau.pdf
- Bernstein, V., Phillips, S., & Silverman, s. (2011). Attitude and perception of middle school students toward competitive activities in physical education. Journal of teaching in physical education, vol-30. Pp.68-83. http:// researchcommons. waikato. ac.nz/ bit stream/handle/ 10289/5208/ Phillips% 20 Attitudes. pdf? sequence=1
- Silverman, S. & Subramanian, P. (1999). Student attitude toward physical education and physical activity: A review of measurement issues and outcomes. Journal of teaching in physical education, vol.-19, Pp- 97-125.

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