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Editorial

It is a delightful news that for the first time in the history of Indian Politics , A sportsman has been given the cabinet Sports Ministry. Mr. Rajyawardhan Singh Rathore silver medalist in olympics will be at the helm of affairs which is a great sign for sports in India and it is a testament of changing dynamics of Sports in India.

Just a Decade Ago, If asked which sport India is known for. The Answer would come in a Flash , Cricket !! . But the last decade has been a revolution for Indian Sports where we are finally giving the due respect to the superstars from other fields. While Saina Mirza started tennis revolution, Saina Nehwal brought the good old days of Badminton back with her stellar performance. P V Sindhu won her Silver Medal, Srikanth Kadambi made it to his 4th super series final, only the 6th man in history to do that. Boxing had Vijender Singh, Wrestling had Sushil Kumar, And just recently Indian Hockey beat Malaysian team and lifted Asia Cup. While we are starting to recognize our super stars from other sports, India also hosted successfully its first Fifa tournament, U-17 Fifa World Cup. India is fast becoming a sporting hub, and the world has noticed the consumption level of Indian audience and the potential of this market. With Sports comes a better lifestyle, passion, leadership, pride and that one thing that binds us all.

On economic front, India are taking big strides by some bold decisions at the top. There is a sincere effort to correct the misdoings of the past and while it has impacted the growth for a short term, There are huge benefits waiting in the future with GST implementation and Taxation reforms happening in the past 3 years.

All this taken into perspective, there is huge scope for Research Scholars to invest its energies in the Growth Story of India. Not just its economic growth, But India as a sporting society is rapidly changing. Its impact on the younger generation, fitness importance, lifestyle are getting affected positively with a large number sporting icons coming into the fray from different sports.

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Effects of Autogenic Training on Psychophysiological Responses in Malaysian Elite Bowlers: An On-Sight Exploratory Study

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Abstract

The main aim of this study was to investigate the effectiveness of standard autogenic training on psychophysiological responses between pre and post intervention in elite bowlers prior to competition.Thisis the real-life setting for the bowlers, it will be more representatives the nature of anxiety prior to competition. Eight Malaysian elite bowlers had international experience in international bowling competitions participated in this study. They were provided written informed consent to undertake this research and were obtained an institutional ethics committee approved the procedures of this study.The standard autogenic training was carried out twice a week, 30 minutes/session after collected the baseline data and all the sessions were assisted by the sport psychologist at the meeting room of training venue 8 weeks prior to official international competition. After completion of 8 weeks intervention program, the players were assessed on the psychophysiological responses one day prior to international competition at the competition venue. All data points for Skin Temperature (TEMP), Skin Conductance (SCL) and Heart Rate (HR)were recorded with Biofeedback 2000 x-pert Schuhfried and aggregated for each minute. A paired-samples t-test indicated that the pre-intervention TEMP was significantly lower (M=29.19, SD=2.90) than the post-intervention (M=32.37, SD=0.96), $t(7)= -4.09$, $p<.05$. The pre-intervention SCL scores revealed significantly higher (M=12.43, SD=4.92) than the post-intervention (M=9.13, SD= 2.83), $t(7)=4.99$, $p<.05$. There were a significant higher of HR during pre-intervention (M=81.16, SD=15.39) than the post-intervention (M=72.50, SD=12.74), $t(7)=2.97$, $p<.05$. In conclusion, Standard Autogenic Training appears to be useful procedure to induce significant changes in all the psychophysiological responses in current study.

Key Words: Psychophysiological Responses, Biofeedback, Standard Autogenic Training

Introduction

Sports and athletics create special opportunities for the study of the feelings of the athletes in various sporting events.[1, 2] Anxiety is a negative emotion that affects perceptions in sport competitions, and this leads to majority of athletes to consider anxiety to be debilitative towards performance, which may result in decreases in performance.[3] Components of anxiety include fear, anger, increased heart and perspiration rate, trembling, and being mentally off balance, which may result in decreases in performance directly involved with the autonomic nervous system creating arousal.[4]

Increased recognition of the detrimental effects excessive anxiety can have on athletic performance has prompted the development of a number of anxiety management packages. Autogenic Training is based on passive concentration of bodily perceptions (e.g. heaviness and warmth of arms, legs, and abdomen, rhythm of breath; and heartbeat) and increased

feelings of well-being.[5] The Standard Autogenic Training technique, developed by,[6] consists of six standard exercises. The first exercise aims at muscular relaxation by repetition of a verbal formula, 'my right arm is heavy', emphasizing heaviness. Subsequent passive concentration is focused on feeling warm, initiated by the instruction 'My right arm is warm', followed by cardiac activity using the formula 'My heartbeat is calm and regular'. Then follows passive concentration on the respiratory mechanism with the formula 'It breathes me', then on warmth in the abdominal region with 'My solar plexus is warm' and finally on coolness in the cranial region with 'My forehead is cool'. It usually takes 8 weeks to learn the technique, and home practice of the exercises at least three times daily is encouraged.[7]

Autogenic Training is frequently applied in group settings. Clinical evidence and evidence from many other controlled studies demonstrates that the group setting is as well appropriate.[8]The effectiveness of Autogenic Training on the stress response is two-fold: Autogenic Training produces a switch from sympathetic (fight/flight) dominance to parasympathetic dominance with increased activity of the rest/digest, relaxation/restorative system.[9] Once the excesses of stress are removed, whatever the cause, the individual is better equipped to address other aspects of themselves.

Biochemical stress reactions evolved for short duration survival. These included increased heart rate, blood pressure, ventilation, and fatty acid metabolism, with vasodilation, decreased gastric movement, alteration in body temperature, and increased muscle strength.[10]Biofeedback measures bodily only responses associated with anxiety, and by feeding back the information via computer, help us become aware of how you are responding to stress; learn to create the physiological conditions that support more positive mental states.

Skin temperature (TEMP) is measured by sensors placed on the ring fingers. The temperature modality indicates the contraction of the smooth muscles surrounding the blood vessels, which determines how much blood reaches the fingertips. When these muscles are contracted (tense), the temperature is cooler because less blood reaches the fingers. Skin Conductance (SCL) is a measure of eccrine (sweat) gland activity. Most people are familiar with having cold, clammy hands under stressful circumstances, such as meeting new people or having to perform before an audience. The coldness comes from constriction of the smooth muscles surrounding the blood vessels (measured by hand temperature), while the dampness is caused by eccrine gland activity. The eccrine glands secrete a salty solution in response to emotional and stress stimuli. Heart Rate (HR) is measured in beats per minute. Faster heart rates are often caused by stress; our hearts may race and pound when we are afraid. Other kinds of stress, such as depression, may result in lower heart rates. To measure heart rate, we place a sensor on a finger to detect each beat of the heart.

Unlike other sport sciences, sport psychology can suffer from the lack of objectively measureable parameters. With technologies advances, decreasing costs and equipment size, along with the ease of use of biofeedback devices make the accurate assessment of the effectiveness of special mental skills strategies easier to measure and monitor over time. The physiological response to stress and anxiety, is conceptualized as an individual's psychological and physiological autonomic system activation varying on a continuum from deep sleep to extreme excitement.[11] Anxiety assessment in research and clinical work are predominantly derived from retrospective self-report. Problems with exclusive use of self-report in the measurement of anxiety have led a number of authors to advocate the utility of physiological measures of anxiety.[12, 13] Physiological measures are recommended because they are objective and, with advances in ambulatory techniques, they can be used

continuously in real-world settings.[14]

Most psychophysiological research investigating the link between anxiety and physiology has been conducted in the laboratory where it is easier to monitor and induce anxiety with a minimum of confounding variables. The often-cited concern about this laboratory research is its ecological validity and the generalizability of artificially inducing anxiety in an unnatural environment.[13]When anxiety is measured as it occurs naturally in a real-life setting, it is more representative of that experienced by individuals in their day to day lives,[13]especially during sport competition.

The main aim of this study was to investigate the effectiveness of Standard Autogenic Training on psychophysiological responses between pre and post intervention in elite bowlers prior to competition on the training and competition venues, these are the real-life setting for the bowlers, it will be more representatives the nature of anxiety prior to competition.

Methods

PARTICIPANTS

Eight Malaysian elite bowlers (two females and six males), aged 17-20 years, with a mean age of 18.63 (SD= 0.92) years had international experience in international bowling competitions recruited to participate in this study. All participants were under the training program of National Sport Council of Malaysia. They were provided written informed consent to undertake this research and were obtained an institutional ethics committee approved the procedures of this study.

MEASUREMENT

The Biofeedback 2000 x-pert Schuhfried, multi-module was employed in this study. The Biofeedback 2000 x-pert SchuhfriedGmbh system provides feedback of physiological parameters. Sensors record the signals non-invasively from the skin surface. In the various radio modules these sensor signals are filtered, amplified, digitalized and transmitted via a cordless Bluetooth connection to a computer. The digitalized data was then processes by the Biofeedback 2000 x-pert software and displayed diagrammatically on the screen. It provides immediate feedback from their biodata or biosignature while undergoing training.

PROCEDURE

The nature of this study was explained to the participants, and they were asked to sign an informed-consent form. Baseline measures of physiological measures were obtained on-site during training session 8 weeks prior to official international competition.

The intervention used in this study was the Standard Autogenic Training. It usually takes 8 weeks to learn the technique, and home practice of the exercises is encouraged.[7] All the 8 weeks training sessions were carried out at the meeting room of training venue, and it were assisted by the Sport Psychologist from National Sport Institute of Malaysia. The intervention was carried out twice a week, 30 minutes/session for 8 weeks before their sport skill/technical training. After completion of the 8 weeks Standard Autogenic Training, the participants were assessed again on the physiological measures one day prior to competition at the competition venue.

All data points were screened and epochs containing artefacts were excluded. All data points for Skin Temperature (TEMP), Skin Conductance (SCL) and Heart Rate (HR) were aggregated for each minute. Data were inspected for outliers by the SPSS outlier analysis procedure.

Results

Table 1.Comparison between Pre-Post Interventions on Psychophysiological Measures to Standard Autogenic Training

Psychophysiological Measures	Mean Pre Intervention	SD Pre Intervention	Mean Post Intervention	SD Post Intervention	*t*	Sig. (2 tailed)
Skin Temperature (TEMP)	29.19	2.90	32.37	0.96	-4.09	.005
Skin Conductance (SCL)	12.43	4.92	9.13	2.83	4.99	.002
Heart Rate (HR)	81.16	15.39	72.50	12.74	2.97	.021

Discussion

The focus of this study was an investigation of the effects of Standard Autogenic Training on Psychophysiological Measuresbetween baseline and post-intervention prior to competition in Malaysia Elite Bowlers. The findings from the present study indicate that pre-intervention Skin Temperature (TEMP) was significantly lower (M=29.19, SD=2.90) than the post-intervention (M=32.37, SD=0.96), $t(7)= -4.09$, $p<.05$ one day prior to competition at the competition venue.The effectiveness of Standard Autogenic Training intervention was confirmed in this study. Consistent with previous research,[15] the presentstudy also found that Autogenic Training was associated with increased finger temperature during the final session of relaxation. More blood reaches the fingers, the temperature is warmer. It showed that the subjects practiced Standard Autogenic Training was able to increased vasodilation, muscle is more relaxed and it caused more blood reached the fingers associated increased of finger temperature.

The significant differences found for the mean scores of Skin Conductance (SCL) between pre-intervention (M=12.43, SD=4.92) and post-intervention (M=9.13, SD= 2.83) one day prior to competition, $t(7)=4.99$, $p<.05$. Again, in the current study, there were a significant higher of Heart Rate (HR) during pre-intervention (M=81.16, SD=15.39) than the post-intervention (M=72.50, SD=12.74), $t(7)=2.97$, $p<.05$. We observed post-intervention decrement in SCL and HR one day prior to competition at the competition venue. Significant lower of SCL during post-intervention one day prior to competition indicates the subjects were managed to control their stress level, caused reduce of the eccrine gland activity which response to emotional and stress stimuli. The findings of this study confirmed that Standard Autogenic Training is a simple, powerful, and effective method which brings about a profound level of relaxation and relief from negative effects of stress.[5]

The current findings were consistent with a meta-analysis indicated that Autogenic Training has positive effect on clinical outcomes in patients with anxiety disorders, as well as coronary heart disease.[8]Moreover, it highlighted that in addition to the modulations of mood, cognitive processing, and quality of life, autogenic training has significant physiological effects.[8]

Previous studies on elite sportswomen showed lower HR as in another study with men,[16] and higher SCL during and after the task. Elite sportsmen showed lower HR and SCL, which indicates that SCL responses to psychological stressors. SCL has been used as one of the more widely employed indexes in evaluating psychological processes such as emotion, arousal and attention. Hence, elite sportswomen are more reactive to a psychological stressor and present a worse recuperation from stress than physically active subjects. Their results support the idea that SCL could also be used as a good index to discern the responses to laboratory stressors in women who differ in the way in which practice physical activity.

Current findings similar to previous findings that speech-related increases in SCL were predictive of speech anxiety is consistent with other findings,[17 18] and with the view that SCL is an index of autonomic arousal.[19, 20, 21, 22] As arousal is thought to differentially engage emotional over problem-focused processes, this is consistent with research demonstrating that high speech-anxious individuals tend to engage in emotion-focused rather than problem focused information processing.[23, 24]

In fact, it seems that all psychophysiological measures in this study were significant difference between pre-intervention and post-intervention one day prior to competition was likely to be due to the athletes' expertise. Theoretically, the stress level of the athletes should be higher during this time with lower temperature, higher skin conductance and higher heart rate, but the results revealed the opposite. One possible explanation is the elite athletes may employed other psychological techniques such as a combination of cognitive confidence management strategies,[25, 26]including mental rehearsal, thought stopping, and positive self-talk, and arousal-based strategies (e.g., to enhance or diminish arousal intensity), to protect against the potential debilitating effects of stressful situations such as competition. Moreover, these positive subjective interpretations are also possibly due to their experience of sport competition at this level, which is associated with the familiarity/unfamiliarity of the situation to the individual.[27, 28]

From the findings of this study, psychophysiological measures have the potential to supplement and eventually replace subjective measures in determining stress and anxiety level of elite athletes. With the advances in equipment over the last decade, the use of various psychophysiological methods, particularly Biofeedbackhas become more feasible in operational settings. Advances in technology have rapidly moved the use of psychophysiological measurement equipment from the controlled laboratory environment to the chaoticrealm of operational reality. Psychophysiological assessment methods can be used to quantify anxiety symptoms in the initial assessment of the problem and to monitor treatment success in terms of the reversal of psychophysiological symptoms,[13]

Furthermore, the study of anxiety levels during training periods would be very interesting. Training periods may be extremely stressful for coaches as well as athletes, since coaches experience daily concerns regarding the load and intensity of the training program, the adaptations of the athlete and a number of peripheral issues that affect the athlete's training and subsequent performance, such as stress and anxiety during training and competition. The contributions of studies such as this are to provide a broader measurement approach in the study of competitive stress. Adopting psychophysiological approaches which are minimally invasive to the sportsperson will ensure that stress responses can be measured more frequently and therefore in close proximity to performance.

Although the present study provides some evidence for psychophysiological measures in the pre-competition period, there are some limitations that need to be addressed. First, this

study concerned elite bowlers only and so further studies need to be conducted on different competitors and events. For example, this could include the experience level of the elite athlete, influences how individuals interpret competitive emotions.[28]

In conclusion, from the results of this study, we revealed that Standard Autogenic Training appears to be a useful procedure to induce significant physiological changes in elite bowlers prior to competition.

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Examining Cultural, Educational Barriers and Supervising of Public Sport in Sahand Industrial University

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Abstract

Identifying and perception of the present situation in public sport and the issues hindering its development will help the authorities by applying proper policies to eliminate those barriers. The aim of the present study is to examine cultural and educational barriers and supervising the public sport in Sahand University. This is a kind of analytical-experimental research in which the required data for the study gathered using field research method. The statistical population of the research consisted of all the students, faculty members and the staff of the respected university. It consisted of 480 individuals (110 faculty members, 125 staffs and 245 students) which selected using stratified sampling method. Research made questioners with the validity of 98 (a=%89) used as the data collecting tool and content validity used for validating the questionnaire. According to the outcome the study, the most salient items in software dimension were the barriers and impediments in research-educational sector which acquired the highest average among other factors, and other barriers namely planning impediments in financial and cultural and social sector, in supervising section, evaluation and control of the barriers and impediments in human resource section took the later rankings. In hardware dimension, few hours of extracurricular programs in sport facilities of the university was among the important barriers in public sport. Other factors such as lack of supervising in designing the facilities, low quality of the equipment and lack of exclusive facilities, over sighting the needs of users, lateral factors and standards and improper behavior of the authorities took the next places**.**

Keywords: public sport, educational, cultural, Supervision

Introduction

Today, the decrease of individual's activity as a result of technological advances and mechanization of human life demonstrates the need for planning in order to meet the required physical movement and generalization of regular physical activities among the people (1). Public sport is an effective plan with low price and suitable applicability which can have an important role in daily life, physical health promotion, mental and social health. So, the sport officials have examining the ways which can increase the number of participants in public athlete (2). Islamic Republic of Iran has emphasized on public sport and set it in the first development plan of economic and sociocultural. Public sport in this development plan is really reiterative point for body nature and soul. So, emphasized on identified necessity, assessment importance, problem analysis, inaudibility with goals such as protection against injuries and possible threats will be main aim in development plan (3).

If academicians do not increase their physical activity, maybe this neglect diminished quality and quantity of their career or even physical and psychological problems occur for

them (4). Physical activity and participating in public sport in university can have a significant role in promotion of physical, mental and social health of academic life (5).

Based on available evidence, in spite of increasing public awareness about complications and consequences of inertia, only a small percent of countries publication is welcomed by the sports plans in universities and it can say students are most important part of this community. In other words, attention to students' exercise can have positive and effective outcomes (6). Employees are also an integral part of the academic community. As in all works, job environment in university has pressure and uniformity. Members of scientific boards and staffs in order to cope with job problems, physical and mental fatigue must maintain their spiritual and physical well-being (7). If practice and physical exercise is a process that is effective in cultural immunity of a society like university; So the group of identification and training of human creativities and practice innovations for growth and balance in physical exercise must be reached (8).

The barriers in sport section of university can be considered as one of the biggest barriers in the university. So, barriers should be identified and eliminated to achieve educational goals. Therefore, in this paper the researcher seeks out examination of educational, cultural and supervising barriers in public sport of Sahand Industrial University, upon recognizing some of educational problems of this university and eliminating them, more academics can be seen in the sport facilities and educational system developed more than before.

The result of other researches revealed that the lack of sport facilities and comfort and pleasure, lack of motivation and lack of enough skill and expertise in any sports are most important reasons for lack of exercise in life of students and stuff and faculty members in Sahand Industrial University. The truth is that the need to identify and rank the problems and propose solutions in terms of the sport development felt more than ever and the reasons are low academic community participation in sport and also the problems that make this issue more critical.

Active participation in sport for all universities plan can play a significant role in promoting social and academic community have physical and mental health; therefore, the nature and structure of sport in universities and identify problems that prevent peoples' participation in, can provide useful information can be so helpful for sports' officials in universities to developing better sport plan and even removing barriers.

Masmanidis, Tsigilis and Kasta, (2015) studied the causes of low rate of Greek Universities students in sport. They argue that different factors such as individual limits, structural limits and lack of enough times are barriers for students' participation in public and recreational sport. Also the main reasons are high prices of facilities sport and students low financial power (9). Frenkl, Attilla and Arcangelo, (1996) studied the sport status and barriers in universities and concluded that increase of students in developing countries, advanced sport equipment, quantities and qualities development in plans implementation are reasons for sport plans promotions for all students classification (10).

Jack Openacker and Filipboen (2007) studied increase sports participation. The result of this research indicate that increase public sport in society develop by researcher, politician and experts participant (11).

Maghsoodi imen and Hadavi, (2013) comparative studied nowadays Iran's Universities status in sport extracurricular plan nowadays with ten years ago. The result of this research indicate that the number of nowadays sport extracurricular plan is different with

ten years ago in different aspects such as; number of participant in plans and number of active filed in extracurricular plan of Universities (12). GHafoori and Partners, (2007) studied barriers in public sport. They concluded that the most important barriers are lack of time, lack of facilities and equipment, lack of motivation and high price of sport (13).

Azizi and Partners (2011) studied barriers in public sport. They argue that lack of facilities, busy life and faintness are the most important barriers for public sport participation (14).

1. Research Methodology

The data required for this research has been collected from faculty members, staffs and students of Sahand Industrial University in JIROFT city; Iran using filed research method. For this purpose, 110 members of faculty members, 125 members of staffs and 245 members of students who are in the university (totally 450 member) examining barriers of cultural, educational and supervising of public sport Sahand Industrial University in JIROFT city ; Iran. Research made questioners with the validity of 98 (a=%89) used as the data collecting tool and content validity used for validating the questionnaire. This process is defined by professors in sport planning and management field. The questionnaire consisted of two parts. The first part includes demographic characteristics of participants and second part includes issues of pathology of sport structure in Sahand Industrial University in different and various aspects; such as cultural, educational and supervising. Answers of second parts questions placed on spectrum 5 in Likert Scale questionnaire (very high: -5, high: -4, average: -3, low: -2 and very low: -1). Researcher has used frequency table, frequency percentage, average and standard deviation for descriptive analysis and also has used Cronbach's Alpha, the Nominal test and Friedman test for Inferential Statistics and SPSS 22 Software.

2. Result

Table 1 shows the demographic characteristics of sample members.

Table 1. Demographic characteristics of participants

Variable		number	percent
Gender	female	219	%45/3
	male	264	%54/7
Age	18-25	264	%54/7
	26- 35	78	%16/1
	36-45	132	%27/3
	40+	9	%1/9
Marital Status	Married	282	%58/4
	Single	201	%41/6
Job Status	students	246	%50/9
	staffs	111	%23
	Faculty Members	126	%26/1

In this paper; researcher tried to present descriptive statistic of educational-research, sociocultural and supervising factors.

Table 2: Descriptive statistics of restrictions cultural, social and supervising of public sport in Sahand Industrial University

Variable	mean	standard deviation
barriers and impediments in research-educational sector	2/83	0/69
barriers and impediments in social- cultural sector	2/75	0/69
barriers and impediments in Monitoring, assessment and control sector	2/79	0/70

According to table 2, the educational-research factor has suffered the highest average and sociocultural factor has suffered lowest average in barriers.

Table 3. Results Kolmogorov-Smirnov test for variables

Variable	Z	Sig
barriers and impediments in research-educational sector	1/87	0/002
barriers and impediments in social- cultural sector	1/70	0/006
barriers and impediments in Monitoring, assessment and control sector	1/28	0/007

Table 3 presented the result of Kolmogorov- Smirnov test. Finding of this test indicated that data are nonparametric; so using Friedman Nonparametric test for prioritized data (barriers in factors which mentioned before).

It is possible to examining sociocultural, educational-research and supervising by this way. After prioritizing the data, it is necessary to prioritize the subdivision of them.

Table 4, represented the average of variable data (Highest average has high importance).

Table 4. Mean of ranks restrictions cultural, social and supervising

ranks	
Mean of ranks	Variable
barriers and impediments in research-educational sector	2/06
barriers and impediments in social- cultural sector	1/99
barriers and impediments in Monitoring, assessment and control sector	1/95

The result of Table 4 can demonstrate the barriers sequential as their priority in Sahand Industrial University: 1) barriers and limitation in educational-research section. 2) barriers and limitation in sociocultural section. 3) barriers and limitation in supervising, evaluation and control section.

After prioritizing barriers of sport Sahand University of Technology, Now there will prioritize each sub.

Table 5, shows the Mean of rank in the barriers to education-research.

Table 5: Results Ranking barriers in education-research

barriers and impediments in research-educational sector	Mean of ranks
The lack or weakness of extensive research, effective and sufficient for development of in Sport University	2/58
The weakness of quality and quantity in scientific community to encourage people for engage in sport at the University	2/52
Lack of scientific seminars for educate and encourage people to engage in sport	2/50
The weakness of theoretical and scientific knowledge in the sports sector	2/40

According to Table 5, Subdivisions of educational and research Have different priorities.

Table 6, shows the Mean of rank in the barriers of Cultural and social.

Table 6: Results Ranking barriers in Cultural and social

barriers and impediments in social- cultural sector	Mean of ranks
The low level of information and public awareness about sport	2/98
The weakness or absence of festivals about sport for staff, students and faculty members	2/87
Cultural weakness and lack of adequate social security for women's sports in University sport places	2/73
Culture in society is incompatible with sports culture	3/21

According to Table 6, Subdivisions of social and cultural have different priorities.

Table 7, shows the Mean of rank in the barriers of Monitoring, assessment and control in sport.

Table 7: Results Ranking barriers in Monitoring, assessment and control in sport

barriers and impediments in Monitoring, assessment and control sector	Mean of ranks
Lack of standardization in places, equipment and sport stations of university	3/80
Lack of inspection culture at the Department of Physical Education in University	3/57
Lack of appropriate tools to assess and control in university sport	3/55
The weakness in monitoring and evaluation over the implementation of the University Sport programs	3/51

According to Table 7, Subdivisions of Monitoring, assessment and control have different priorities.

3. Analysis **and Discussion**

Any preventive factor is a hurdle for meeting individual's training needs one can

consider these hurdles as barriers for the individual to do his/her activities or challenges to his/her commitment towards his/her previous activities (15). The outcome of the research and statistics demonstrated that barriers are more in educational-research factor. Research findings regarding the acquired average of the barriers factor in Sahand Industrial University .These factors can be prioritized clearly and accurately by researcher as follow: 1) Barriers and limitations in educational-research, 2)Barriers and limitation in sociocultural factor 3)Barriers and limitation in supervising, evaluation and control factor. Outcome of this research indicated that the factor of educational-research has suffered the highest barriers and limitations in public sport of Sahand Industrial University. Regarding this factor, it can be stated that what subdivisions seen in throughout of this factor, are lack of theoretical and science knowledge for sport developed in university, lack of experts for encouragement and training, lack of developed and enough effective research for public sport developing. As a matter of fact, this developing needs more attention of authorities in universities. The findings of this research are consistent with findings of the previous research i.e Imeni, Azizi and et al. and GHafoori and et al. and also Felupeon and Jack. The other important factor is sociocultural barrier that has deep and serious effect in decreasing of women public sport (because of culture that governs on society). There are factors which increase women's problems in sport such as: male dominated culture in sport society, fear of hurting religious beliefs, wrong think such as changing appearance of women by exercise and etc. In order to remove cultural barriers, cultural department of universities and cultural organizations should offer efficient solutions in diction of public opinion reform about women's sport (16). Lack of enough awareness about sport and also its effect are important factor which can be barriers for growth excellence sport in every society. Sport's officials and authorities can implement plans by increasing awareness in society. Observations and examinations show the 3thd priority is allocated to the supervising barrier. The superior force can strengthen than before and average force can promote by managed supervising and evaluation as well as possible (17). In other word, organization will not achieve targets by poor supervising and evaluation management. Research findings show that subdivisions of educational-research do not mean the same. They prioritize as following classification: 1) Lack of extensive and effective studied on Sahand Universities public sport 2) Poor quality and quantity of scientific community in encourage people to exercise in university 3)Lack of necessary seminars for encourage and train people to public sport4) Weakness in theoretical and practical knowledge in sport. The research results suggest that the most important barrier to training and education is the weakness or lack of research on public university sports, which is caused by numerous reasons. For instance, researchers do not consider all issues in sports studies or fear entering some areas. The other reason might be the poor performance of the organization in supporting the researcher. In this regard, there is a serious lack of participation of the main sports authority of the state, i.e. the Ministry of Sports, and its weak collaboration with the Ministry of Education (18). Also, support from those organizations taking sport's development into account could be of great help for researchers. Today around the world success in sport; neither public nor championship; cannot be possible without scientific plan and research effort at institution such as institute of sport and cooperation with experienced trainers. Sport is observed as a multi- dimensional phenomenon in the world, because of that sport's officials are tries to developed sport by practical knowledge in phycology, bio chemistry and nutrition (19). In this situation, the officials and authorities can trained universities human resource by getting help from experienced faculty members and also communicate with other universities

such as Tabriz. They can decrease barriers according to previous research about sports and limitations.

Research findings and statistics show that sociocultural factor can prioritize in this classification: 1) low level of information and public sport's awareness and its effects.2) lack of competition in public sport for students, staff and faculty members.3) lack of social security in women facilities sport.4) lack of incompatibility of community with sport's culture.

Given that the most important subdivisions of sociocultural barriers are lack of information and awareness, it can be alarming for director of physical education and universities. Because continuation of this deficiency could have a negative effect on academic's physical and mental. In fact suitable sport's culture and plan must be done at the universities. Increase awareness about sport is possible by training about sport's benefits in workshops, publishing article in publications and sites and planning for competitions for dormitories members, staff and even faculty members. Another barrier is fanatic belief about women's sport in society. As previous mentioned; male dominated culture in society's sport , fear of hurting religious belief, change women's appearance by sport are cultural factors which contributing to this field. Cultural organizations, education's ministry and broadcasting must act to reform sport's women's view in society. Also universities officials can raise women's activity in sport by make secure in facilities (16).

The research results and analysis demonstrate that prioritize of problems in supervising, evaluation and control in Sahand Universities public sport are as follows:1) Lack of facilities standardization 2)Lack of culture of inspection at physical education's department and noticed that inspectors should check defects 3)Lack of suitable tools for evaluation and control in public sport by physical education's expert4)Lack of attention to trainer's evaluation and control 5)Lack of experts in universities.

Organization of evaluation and management has important role in achieve the goals. Officials in sport's departments always tries to increase the management and evaluation's quality (20). Superior force can be powerful than before and average force can promoted by managed supervising and evaluation as well as possible. For an efficient administrator not only appropriate evaluation of elements has high importance but also education of work has necessity. Evaluation of skill must be improved for public sport developing (17). Universities can be considered as small communities; so officials must care about implementation of plans and hardware's sport's projects. This results can be consistent to Fren Kel, Atilaad Arkanjelo (1996) and Sohrabi and Partners (2011).

Sohrabi and Partners (1390) studied about sport's problems and conducted that facilities built with traditional design regardless of modern design and scientific method and needs assessment and experts have few role in facilities design's projects. Moreover fail to full fill requirements for physically handicapped ones is another problem and deficiency. So officials have to care about their physical condition and make specific facilitis for their independent activities. This act can be helpful for their return to society and encourage them to doing more sport (21).

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Effect of Strength Exercises in the Horizontal (Vertical - Horizontal) Method in Some Physical and Kinetic Variables and the Achievement of Long Jump Efficiency

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Introduction:

The development and improvement of the level of achievement is the main objective of each athlete and coach through the correct numbers and built on the basis of scientific correct, leading to a quantum leap to a high level, in many sports movements and events depends on the high achievements achieved in specific technical stages should be taken care of and developed to the top A level and a possible level, for example in the jump and jump games track and field is the stage of upgrading is the main stage and planned for achievement, while in the payment and throwing games track and field is the stage of throwing or payment is the most important stage in these respects Or events. It is also the stage of pushing and upgrading from the important and major stages of many motor skills in various activities and sports. There are certain priorities for each activity in the proportions of interest by the coach or the percentages of the exercises used for each stage or sections of the movement technique or the performance of the skill of the movement, and the activities of the jump athletics the effectiveness of long jump with The technical stages are interrelated and are composed of (Rationalization - Upgrading - Aviation - Landing). Therefore, the trainer in the long jump must know the priorities of interest in these technical stages and focus on developing them to the best possible level. Therefore, these important stages must receive the necessary training to develop the most important ability to achieve achievement in these events. A long jump, for example, requires the ability of a man to advance in the shortest possible time and at a certain angle that requires the development and improvement of explosive thrust. We must develop and improve the power of the Force, the force or the explosive power (Explosive Power or Stringth

The Importance of Studying :

Therefore, the importance of the study in the preparation of horizontal and vertical divergent training exercises (Drop Jumps) in the development of explosive capability and some kinematic variables in long jump performance, level and achievement

Problem of the study :

Through most training programs for most jump and jump trainers, we observed most of the exercises for the development of muscle strength depends on weight and weights for the purpose of developing the level of achievement, as most exercises do not match the level of skill performance so the researchers saw the use of divergent jump and different methods deep jump (horizontal - Al-Amoudi) for the purpose of developing the muscular capacity of the muscles of the two men and their effect on some other physical characteristics that affect the achievement of the long jump as well as the effect of these exercises on the kinetic variables affecting the level of skill performance such as speed Oz -uzmn flight) when the

performance of the skill yardstick to indicate the extent of the development of the explosive power of the two men as well as the ability of the rider in the recruitment of this effort to improve the level of achievement of digital.

Purpose of the study:

The researchers aim to identify:

1. The effect of divergent jump in the method of deep jump on the development of explosive capacity and some kinetic variables and achievement in the long jump

Study hypotheses:

The researchers hypothesized:

1. Jumping in a deep jump style positively affects the explosive ability of the muscles of the two men in the long jump.
2. The development of the explosive capacity of the two men using the varied jump in a deep jump technique positively affects some kinetic variables (horizontal velocity, flight time, jump distance) for long jump and achievement.

Fields of Study :

1. The human field: Diwaniya clubs in the long jump (8) and the athletes for the sports season 2015-2016.
2. Spatial field: the field of jumping in the field of the University of Qadisiyah and the closed hall in the Faculty of Physical Education
3. Time domain: from 1/10/2016 to 8/12/2016

Table (1)
The sample of the study

Torsion coefficient	standard deviation	SMA	measruing unit	Basic variables
1.42	**0.54**	**18.22**	For the nearest month	Age
0.41	**2.83**	**172.33**	Centimeter	Length
0.45	**2.70**	**68.10**	Kg	the weight
1.01	**1.47**	**106.20**	Centimeter	Lower tip length
1.05	**10.57**	**225.45**	Centimeter	Long jump of constancy (cm).
0.75	**3.71**	**48.58**	Centimeter	**.**(The vertical jump of stability (cm
0.28	**0.39**	**11.45**	meter	**.**(Five-right man's space (m
0.45	**0.71**	**11.29**	meter	**.**(Five-legged left-footer (m
0.52	**0.23**	**5.84**	meter	Achievement

- Means, tools and devices used:

- Japanese electronic stopwatch number (2).
- Electronic computer type (pentum4) number (1).
- Tape measure metal class (50 m) number (1).

- Wooden shutters with different heights
- Different height barriers and boxes
- Long jump field
- Sanyo 3000 field / s camera.
- Three-way stand for the camera used.

Physical Tests

The researchers prepared physical capacity tests based on scientific sources in the field of sports training, testing and measurement, as follows:

- Test the enemy (30) m maximum speed from the start of the bird.

- Stability Test.

- Test (5) wheels with right man
- Test (5) wheels with left man
- Long jump completion test

The scientific basis for the tests:

Sincerity Tests:

The objective of these tests was found after presenting them to a group of experts in the field of sports training. These experts agreed that the tests reflect the physical reality to be measured in this research.

Stability Tests:

The stability factor was found in the re-test method as it was applied to a group of 3 players on 20/8/2013 and the tests were repeated after (7). The stability of these tests was found through a correlation between the tests and the results were presented in Table (2) .

Table (2):

Shows the degrees of stability and self-confidence of the tests in the study sample

Objectivity	Stability coefficient	The name of the test	n
0.93	**0.88**	ran 30 meters	**1**
0.94	**0.89**	Long jump	**2**
0.90	**0.82**	Test (5) Partition of the right man	**3**
0.92	**0.85**	A test (5) with a man in the left	**4**
0.92	**0.87**	Long jump test	

- Objectivity Tests:

The objective of these tests was found using two arbitrators to record the results and the correlation between their results was found as in Table (2).

- Exploration Experience: -

The exploratory experiment was conducted on (1/10/2016) on (3) players for this purpose

- The working team knows the nature and time of the tests to accomplish their task.
- Ensure the validity of the camera and determine the appropriate place in the field of jump for photography.
- Organizing and controlling the imaging and motor analysis processes to determine the nature of the movement under study.

- Field Experience:

- Tribal Tests: -

The tribal tests were conducted on (2 - 3/10/2016) as follows:

1- The first day included:

- Test the enemy 30 m of the flying situation.
- Test five wheels with left man
- Test five wheels with a right man

2- The second day:

- Long jump test of stability
- Preparation of contestants for photography for the purpose of extracting the variables of the study of kinetics and achievement:

The researchers set up the contestants to capture and measure the digital level according to the following steps:

1. Bounce racers sportswear
2. Marking the anatomical points of the joints of the body in the shape of (X), from the white blister (viscous tape)

- Photography Attempts:

The researchers photographed three attempts for each contestant in the tribal measurement and three other attempts in the dimension measurement after the application of the program. The researcher chose the best attempt for each contestant in the tribal measurement as well as in the telemetry.

The following analysis was extracted:

- Flight time.

Horizontal speed is the moment of evolution.

Curriculum: *

- The duration of the training program (8) week by (2) training units per week and a total of (16) training units, as the curriculum was implemented from 5/10/2016 to 6/12/2016.
- The training program aims to develop the explosive capacity of the two men using the various jumps as one of the modern methods used for the development of this capacity as shown in Annex (1)
- The exercises are performed at full speed, to ensure that the tolerance character does not interfere with the muscular ability.
  (60% to 80%) of the maximum capacity of the rider for horizontal and vertical distances in those exercises and the number of groups (2-3) and the number of repeatations from (6-12) times with an active rest between the groups of (2) (3 - min) and between repetitions of (40-90) seconds.
- Program implementation time is between 50-60 minutes.
- Taking into account the principle of increasing intensity, through the maximum height of the wooden box for each contestant to be not exceeding the height of 100 cm
- Take into account the appropriate height measurement of the Fund every two weeks for both men and each man or for each individual man to determine the appropriate height for each individual for the next two weeks.

Remote tests:

The post-tests were carried out on 8/12/2016 and over two days with the same procedure and sequence of tribal tests.

Statistical processing:
Use the SPSS Statistics Program to obtain:
- SMA.
- standard deviation.
- Correlation coefficient.
- Test of differences.
- Evolution rate

Correlation coefficient.

- Presentation and discussion of the results of study variables in the tribal and post-test and the rate of development

Table (3)
Shows the arithmetic mean and the standard deviation of the study variables in the tribal test

Torsion coefficient	standard deviation	SMA	Variables
0.34	**0.38**	**3.59**	Running time 30 meters from the beginning of the bird -
0.05	**10.57**	**225.45**	(Long jump of constancy (cm -
0.75	**3.71**	**48.58**	.(Vertical jump of stability (cm -
0.28	**0.39**	**11.45**	.(Five-minute gap in the right man (m -
0.45	**0.71**	**11.29**	.(Five minutes left-footed (m -
0.34	**0.001**	**0.56**	(Flight Time (seconds
0.87	**0.13**	**7.97**	Horizontal speed of the moment of elevation ((meters / sec -
0.52	**0.23**	**5.84**	(Digital level (m -

Table (4)
Shows the arithmetic mean and the standard deviation of the study variables in the variable post-test

Torsion coefficient	standard deviation	SMA	Variables
1.25	**0.25**	**3.17**	Running time 30 meters from the beginning of the bird -
0	**4.84**	**258.00**	(Long jump of constancy (cm
0.11	**3.33**	**67.25**	(Vertical jump of stability (cm
0.40	**0.20**	**12.34**	.(Five-minute gap in the right man (m
0	**0.16**	**12.25**	.(Five minutes left-footed (m
0.47	**0.02**	**0.70**	(Flight Time (seconds
0.45	**0.12**	**9.27**	Horizontal speed of the moment of (elevation (meters / sec -
0.64	**0.16**	**6.49**	.(Digital level (m -

Table (5)

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Shows the significance of the differences between the average of the tribal measurements and the deviation of the variables of the study

t-test	Post -test		Per-test		Variables
	standard deviation	SMA	standard deviation	SMA	
4.64	**0.25**	**3.17**	**0.38**	**3.59**	Running time 30 meters from the beginning of the bird
9.43	**4.84**	**258.00**	**10.57**	**225.45**	(Long jump of constancy (cm -
5.62	**3.33**	**67.25**	**3.71**	**48.58**	(Vertical jump of stability (cm
12.47	**0.20**	**12.24**	**0.39**	**11.45**	Five-minute gap in the right man .((m
18.90	**0.16**	**12.35**	**0.71**	**11.29**	.(Five minutes left-footed (m
5.35	**0.12**	**0.70**	**0.41**	**0.56**	(Flight Time (seconds
6.36	**0.17**	**9.25**	**0.23**	**7.97**	Horizontal speed of the moment of (elevation (meters / sec
11.02	**0.16**	**6.42**	**0.28**	**5.84**	.(Digital level (m -

*** The value of (t) tabular at 0.05 = 2.36**

(Table (6
The percentage of the development of the mean and the standard deviation between the two tests and the deviation of the variables of the study

standard deviation	SMA	Variables
-34.2	**11.69**	Running time 30 meters from (%) the beginning of the bird
-54.21	**14.45**	Long jump of stability(%)
-10.24	**38.43**	The vertical jump of stability(%)
-48.71	**6.89**	Five-point margin in right-hand man (%)
-77.46	**9.38**	Five-point margin in the left man (%)
-26.08	**16.06**	Flight time(%)
-42.85	**9.93**	Horizontal speed moment of elevation .(%)
-34.2	**11.69**	Digital level.(%)

Table (7)
The correlation coefficient between the variables of the study and the numerical level In the long jump competition

error coefficient	Variable
***0.79-**	Time of 30 meters of starting flight
***0.78**	Long jump of stability
***0.78**	The vertical jump
***0.80**	A five-point distance from the right-hand man of stability
***0.77**	point left-hand margin of stability
***0.71**	Flight Time
***0.75**	Horizontal Speed

- Discussion of results:

It is clear from Table (5-6) that there are statistically significant differences between the tribal and remote measurements in the study variables (30 meters from the beginning of the bird and the vertical jump and the long jump of stability and the distance of five wheels with the right man and the left man of stability and achievement) On the effectiveness of the codification of the exercises used to improve the motor and skill abilities in the long jump distance, in addition to kinetic variables. These results are consistent with what George Dunn (1999) pointed out that there are many types of retraining training confined to the wheels and bounds on the barriers, The development of the explosive capacity of the two men and give high results and response and this is evidenced by the test of the vertical jump and long jump and test the enemy.

- Discuss the results of the jump of stability:

The results of the jump test from the stability in the table, which is the test of the rapid ability of the two men, showed that there are significant differences between the pre-test and the post-test and the benefit of the post-test. This is due to the training method used by the researchers in these exercises for the purpose of developing the fast force scientifically according to the requirements of these exercises Had the effect in stimulating muscle groups working, which led to the improvement of performance economically and in less time, and as a result, the strength of the muscles of the article and the second of the two men in the horizontal and vertical direction, which led to a better achievement, "The development of the strength of the muscles of the two men to the athlete leads to the development of the strength of the muscles of the thigh and leg and thus give the strength and agility of the player." The exercises used in the style of jump (vertical - horizontal) have a clear impact in the development of the rapid strength of the muscles of the two men, To develop the work of the nervous system - muscle to respond more strongly and faster during the performance of movements requires a range of muscle followed directly directly in the muscle itself. In general, the training used is a successful training tool for the development and development of the rapid force for its active contribution in stimulating the work of muscle fiber for rapid action.

- Discussing the test results of the five-part left-right man:

The results were significant between the tribal and remote tests and for the benefit of the post for the different training in deep jump, whether horizontal or vertical, which led to

the development of rapid power effectively and through the speed of performance of the cells due to the work of the contraction of the muscles working through the effective muscle matrix, Allawi, Abul-Ela Abdel-Fattah) that "the ability of muscle laxity contribute to increase the speed of motor performance of the exercises used" and the deep jump exercises are consensual exercises between the arms and legs, which positively affected the level of performance of the calves carried out by members of the group " This is consistent with what Muhammad Reza and Akherun (1988) concluded, "Deep jump exercises help to learn the compatibility between arms and legs movement and improve"

- Discussion of the selection of running 30 meters (maximum speed)

The results were significant between the tribal and remote tests in the maximum speed and in favor of the dimension as in Table (5) to use the various jump training and deep jump technique, as the speed of the speed has improved, which contributed to the development of muscle strength of the two men and thus improved the level of jogging where he (Mohamed Osman, 1990) That there is a significant correlation between the elements of speed and strength, as the muscle or muscle group can not contract quickly unless it has enough strength for such performance. "Since speed training depends on the first system and depends on the stored energy and existing and free muscle (ATP - PC)), So jump off Type jogging user depends on this system, which led to the development of extra power and speed and explosive, which are considered important in the workforce in the fast sprinting muscles.

Sharkey (1990) points out that "the various jumps that have increased the explosive capacity of the two men, especially in the jumping competitions," where the results of the research indicated that the training is a powerful and effective way to improve the strength and speed of movement, allowing the nervous system to alert the largest number of The muscular fibers and improve the constriction sequence, which contributes to the production of greater strength, and adds that this type of training has become common in Europe and America. It is clear from the above that the use of divergent jump is an effective factor in the long jump competition, which requires the work to integrate the maximum strength of muscles with the maximum speed of performance to achieve a high degree of ability to performance, especially if the explosive capacity of the two men is one of the qualities required development.

- Discussion of the results of kinetic variables:

The results showed a significant difference between the tribal and remote tests in the results of kinematic variables and in favor of the dimension, as in Table (5). When looking at the variable "horizontal speed of the moment of elevation", the rider is trying to achieve the highest vertical height possible so that he can get to the highest point This is governed by two basic variables: horizontal velocity and momentum, from which the rider moves from the ground to achieve the flying stage. This development is the result of the varied jump and its methods (deep horizontal and vertical jump) and similar to the long jump style. "The increase in the long jump distance is determined by three basic elements: horizontal velocity, vertical velocity and height of the center of the body weight during the lift, which is affected by the moving force resulting from the lift. "As for the variable (flight time), the differences were significant between the tribal and the remote and for the benefit of the distance as a result of the various exercises from the exercises jumping up and down to the bottom of the boxes of different height, which led to the development of aviation time, as we see" the more difference between leaving The ground and landing increased the flight time of the player to move his body in different situations suitable for movement such as walking or hanging in the

air and thus increased the chance of movement under the influence of the horizontal vehicle of speed, increasing the additional horizontal distance achieved by the level of departure, "This is confirmed by Talha Hossam Eddin and Wafa Salah Din et al. (1998). "The test of the training method depends on the diagnosis and characterization of the skilled performance, a precise description that determines the role of muscle strength as a basic basic variable in this performance and the method of strength training for performance based on kinetic and dynamic characteristics of skill performance as a basic basis for selecting the training method and Where the shape or in terms of resistors and the pace of performance and the number of repetitions and other technical specifications for the construction of specialized training.

The researcher considers that the identification of the results of the development of the explosive capacity of the muscles of the two men using the usual physical tests may not give sufficient indication of the possibility of the contestant to employ this physical development in the performance of the competition, so it can be used some mechanical indications that reflect the development of performance level (horizontal speed - Vertical - flight time) in the performance of skill as a sign to indicate the development of the explosive capacity of the two men as well as the ability of the contestant to employ this effort to improve the level of digital achievement.

CONCLUSIONS:

Through the results, the researchers concluded:

- The varied jump in the style of deep jump (horizontal - vertical) had a significant impact on the development of muscular capacity of the two men.
- The divergent jump in the style of deep jump (horizontal - vertical) had a significant impact on the development of variables (speed, flight time and horizontal speed), which led to the development of the level of achievement
- Different types of jumps of performance influenced the variables of study in the development of achievement

- Recommendations:

Researchers recommend:

1 **-** the need to use the various jump and different jumping methods in the jump and jump

2 - the need to use the various jump and different jump methods in the events of rapid water and that requires the strength and speed

3 - the need to use the various jump and different jump methods in the activities of the need to use the various jump and different jump methods in the events of the Games (basketball, plane, hand and foot)

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Flattening of the Foot and Its Impact on the Walk, Jogging and Achievement

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Introduction

The sport is close to achieving public and private goals through the use of related sciences, and measurements and tests textures One area addressed by specialists in the field of physical education research and investigation because of their importance in the performance skills and level of achievement, and textures sound depends on the muscles that run on power make the body balanced mechanically in the face of gravity and other forces working muscle strength and constantly requires this work enough strength and energy to maintain the normal position of the body .The tension in the scene working muscles and one interview of the things that keeps the balance and weakness or drowsiness or sagging muscles that lead to curvature and deviations from the normal physiological range that causes deformation textures .The main test to estimate the strength is the feet so that the correct mode for the feet is based upon the situation textures of the body as a whole since any distribution improper weight of the body on the feet will affect the reaction of one part of the body to deal with it, and thus would lead to deformation in that place

Importance of the study

The foot is a vital part which supports it in all sports the difference of which the individual as it is responsible for the direction of the force (line of work) and the path of movement and weight of the athlete to them from distributing it on the ground, and here the importance of the study appear in the study of the impact of some skeleton distortions in the sports performance.

Study Problem

Some deformation measurements characterized by textures easily diagnosed noteworthy, such as flattening of the foot and the other is characterized by abnormalities such as the difficulty of diagnosis, the amount of printed foot angle deviation Achilles tendonitis and even degrees of flatness, as it is not only through the direct standardized tests in the diagnosis, such as appliances and measurements. The athletic performance and achievement in the field of education and training requires a diagnosis of difficulties or weaknesses in those parts which are located on the large muscle work. And distortions textures present but undiagnosed in the opinion of the researchers (and therefore difficult to measure) in the faculties of Physical Education, and the reason is the economy in time at the expense of quality. Researchers believe that this problem still exists even now, a lack of interest by individuals and colleges working in the field of sports deformities textures.

Objective of the study

*Identify some injuries, foot deformity and types with students applying to the Faculty of Physical Education, University of Qadisiya.

*Know the effect of foot deformities in the performance of normal and complete the march ran 400 meters.

Study hypotheses

*Some anomalies are associated with each other (in perpetuating the carrier to its effect) relationship spirits.

*There are significant differences between the three research groups (non-infected group,

centrist group, the infected group(

Areas of study

The human sphere: the first-grade students in the College of Physical Education, University of Qadisiyah and the 47 students.

Field time: the period between 12.02.2011 till 20.01.2012.

Spatial area: Internal hall and canned track and field at the College of Physical Education, University of Qadisiyah

-Study terms

Foot deformity

There are many attempts to determine the unit The standard by which verify the validity of parts of the body fit. And textures associated with many of the public areas of the human being, he is linked to health and the person and work, growth and success of the psychological and behavioral aspects of the practice of public movements and sports activities .The physical requirements for a particular game apart from other games and reflected on the specifications to be provided by those who practice it is no doubt that gives greater availability to accommodate the skills of the game and arts and achieve high achievements opportunity .The deformation textures is the kind of distractions that occur to one or more parts of the body may be simple (in the muscles limits and ligaments or large affected by the bones and muscles) and where a simple deformation can be remedied with some compensatory exercises that aim to achieve muscular balance between muscle groups opposite in the body, while the second distortion setting calls for surgeons to repair the situation overlapping textures (Mohamed Sobhi 1987.137) The textures bad a significant impact in the health and personal situation, work and grow and succeed, mental and behavioral aspects and on the joints, muscles and vital organs.

Sculptural installation of the foot

Based foot on the ground at three points are illustrated in Figure No. (1) which is (A - B - C) and the foot so buttressed by three arches: each arc of the levers consecutive formed (AB - BC - CA) shown in Fig. (2) , known as pillars (BC- CA) my husband assign foot

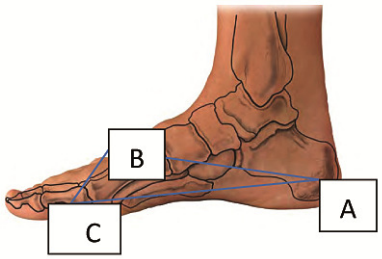

Figure 1 illustrates the fulcrum foot on the ground at three points

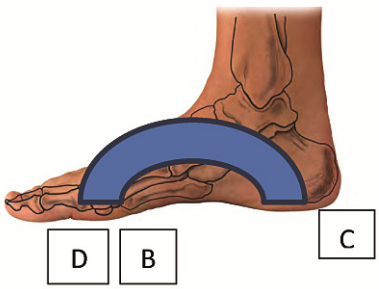

Figure 2 illustrates the formation of each arc of the levers consecutive

Which consists of two points (AB) as a shorter and lower three brackets, as characterized by (BC) long and medium-sized high, and the so-called Third East Sagittarius (CA), the longest and most senior arcs as well as being the most important part of the stability of the body .Sagittarius East consists of five bones touching the first Earth headed in Anakzh (A) The second one is quite far from Earth and is located between the bones first and third either basis bow is bone III is located approximately (18 mm) above the ground and connects former bones with bone (Tal) and pick this bone any fourth all-borne forces of the leg to the flatness and distribution trends to three points as shown in Figure No. (3) the fifth bone (Calc.) touches the ground at the outer end.And keeps the bow East on concavity with the help of links and muscle and there are several superficial links connecting these five bones, but the most important (and Kalmkonfakilr Tayukalōtan) and its violent pressure that occur in a short period of time resistance (strength characteristic speed).

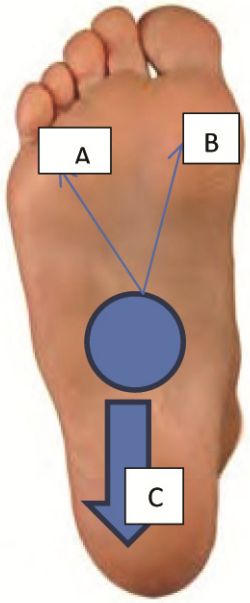

Figure 3 shows the distribution of powers to the three points of the feet by the fourth bone

Flatten feet (Flat Feet) to walk on foot to all inflexibility arch of the foot as it is shaken in a good distribution of the weight of the body on the feet happen. The ability to absorb shocks in each step are also affected, and lose pay for the front and the direction of the work of the horizontal force

Detailed Byumkanikih foot movements

The skeletal composition, as well as strengthening the joint by ligaments in the ankle at a high level of stability .... and keep muscles strong all this detailed directions helps to balance textures in general, and any imbalance between the forces of these muscles or flexibility or both may lead to the line of the body's center of gravity away from the articulation centers and therefore will need to determined the resultant equation determination or muscle strain on the ligaments that lead to many of the distortions skeleton .Composed walking style kinetic than 65% fulcrum distributed on both feet, while the weighted phase related to foot flattened by the heel first, with a tendency instep out with a little light to the

outside hip rotation, and during the foot contact time flattened spins hip to the inside even touch the combs and fingers surface earth, where the foot is in the development of heart out to some extent, and by pushing the foot of the land phase of moving the body weight of the situation behind the foot even up to exponential axis of the ankle and the inside a little bit ... and made the payment through the remote head first combs the second ... Once that line of gravity up to the situation in front of the foot center, the ground reaction plays a role in increasing the acceleration body where all of the thigh and knee starts to tide effectively while football continues to rear arrested even left heel ground, and tensile strength that occurs on the Achilles tendonitis leads to reply reflex reaction causes internal arrested or front of the ankle. When the normal knee, the bones of the trachea and in a position courses within a little start to spin out to return to normal and the arrest of Internal to the ankle leads to the heart of the outside of the ankle joint, this, as well as setting foot roughly to some extent. During the payment stage light surface of the foot notes when it reaches almost line of gravity between the first and second combs.

-Methodology

The researchers used a descriptive approach in a manner survey of relevance in solving the problem of the research.

The study sample

Find sample consisted of (47 students) were chosen randomly from the first row in the Faculty of Physical Education - University of Basra, they make up the sample (52%) of the original community after excluding students and students who represent clubs and sports teams.

Tools and equipment used

.Review of the Arab and foreign sources.
.Electronic stopwatch to measure achievement ran 400 meters.
.Tape measure.
.Planning paint.
.Ruler (T Square) to set foot on the path to walk and run.
.Powder to take the foot prints.
.Measuring device deviation Achilles tendon (Figure 4)
.Measure the height of your arch of the foot (Fig. 5)
.Listed ruler to measure the deflection direction of the foot.
. Vernier caliper (to measure the arch of the foot).

Measurements and tests

Measuring the deflection Achilles tendonitis

.The purpose of the test: measuring the deflection. Achilles tendonitis

.Tools used: wood panel dimensions (40 × 18 cm) proves the rib accidental single mother (Figure one) glass rectangle so that it is perpendicular to the plate to be high (25 cm) and display it in the same wooden panel display, and draws a rectangle parallel lines distance between each line the last distance (0.5 cm) distinguishes line in the middle of a different color. The one of the researchers by making the bottle instead of moving his feet moving (Figure 4) so as to ease the development of the middle line on the heel. Turns out that this amendment has objectively of (0.977)

. Performance specifications: the laboratory stand so that the vertical leg on the foot and feet are equal in height and then puts the laboratory foot on the plate, so that comes into contact with a rectangular glass rear Steering for the heel to be the East Line in the painting in the

middle of the heel and parallel to completely Achilles tendonitis uncle through the fonts installed on rectangle glass can be specified deviation tendon.

Measure the height of the foot arch

.The purpose of the test: measuring the height of the foot arch.

.Tools: a plate of wood dimensions (40 × 20 cm) proves on the edge of one of them costal length triangle of glass or transparent plastic, height (18 cm) so that it is parallel to the staging zero surface wood panel (Fig. 5)

. Performance specifications: puts laboratory foot on the wooden surface of the painting so that they are parallel to the triangle that touches Ansi side of the foot triangle from the inside with a note that the middle of the foot perfectly parallel to the line of vertical Decree on the triangle by looking from the outer side of the triangle can be identified foot high Balsntmitr, either when you use Vernier caliper are measurement according to past performance and uses the edges of Alvernih to extend the distance where the distance appear in the high arch of the foot are included on the device. Placed on the far edge of the gradient on the ground and is moving near the edge Bbmr grab device (Figure 6). Show that the use of this device by any person for measuring high arch of the foot has objectively of (0.982).

Measuring the angle of the foot print

.The purpose of the test: measuring the angle of the foot print.

.Gadgets: powder, black wooden panel, protractor.

. Performance specifications: the player stands above the area containing the powder in one of his feet and then taken the stands (and a leg to be perpendicular to the foot) on a black plate and then leave measured Print foot angle by drawing a straight line from the most prominent and brutal point in the bottom of the thumb to the most prominent humanism point in the heel bone, then draws another line from the main point of the brutality of the bottom of the finger, but Bahame even the deepest point in following the arch of the foot print, connect the lines arise thumbs down angle measured in this corner of the protractor

Normal for a distance of 30 meters walk

Using gypsum powder or where the lab puts his feet on the powder and then give it to end up walking a specified distance of 20 meters. The purpose of this test is to measure the deviation from the true direction foot using a ruler (T Square) passes a distance of half the distance between the ankles.

Ran 400 meters

Is measured deviation foot in the last 10 meters of the competition after spraying powder on this distance and on four areas. Is measured as the time direction and the number of steps cut in the competition.

Measure the length of the foot

Exploratory experiment

Researchers conducted after collecting exploratory experiment tools on 25/11/2011 on a sample (5 students) were chosen at random from the first row and were excluded. The purpose of this test:

- Identify staff help.
- the time taken for each measurement or test.
- the amount of gypsum powder or disbursed.
- understand the extent of the sample selected for the tests and measurements.
- Identify the dump data form.

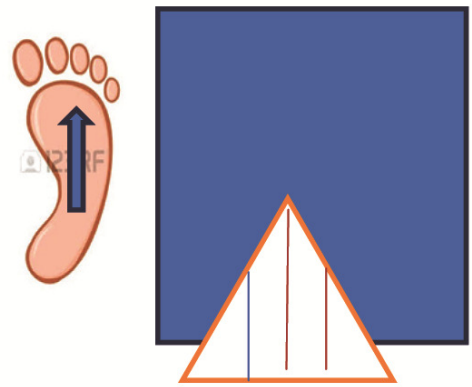

Figure (4)
Measuring the deflection device Achilles tendonitis

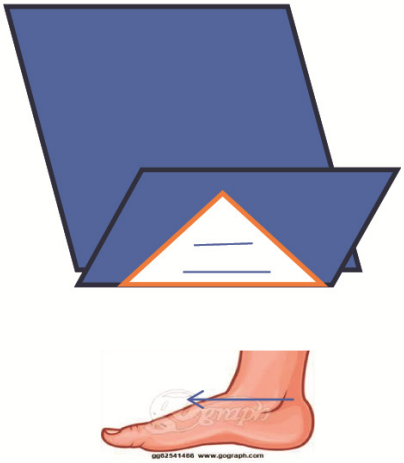

Figure 5
Measure the height of the foot arch device

Figure 6
Listed ruler to measure the deflection direction of the foot

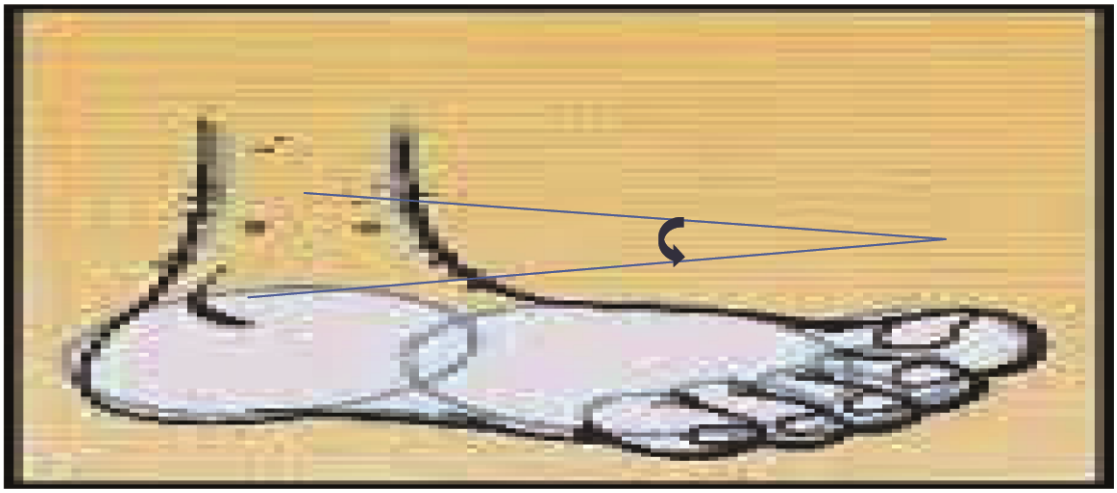

Figure 7
Measuring the angle of the foot print

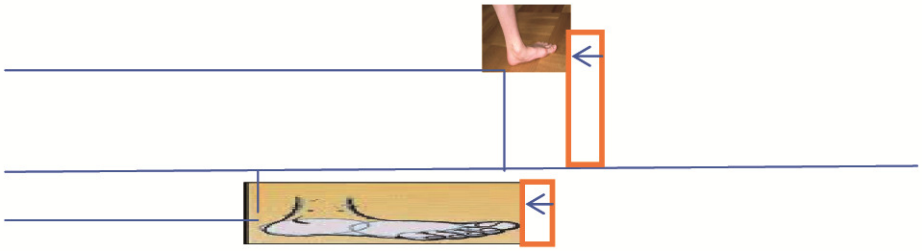

Figure 8
Measuring the deviation from the true direction foot

Experience Home

This experiment was conducted on 02.12.1998 until 01.20.1999 where researchers testing and measuring what previously has been mentioned on a sample (47 students) were randomly selected. Was obtained data dump of the sample in a special form.

-The sample was divided into groups procedures

The study sample was divided into three groups based on the equations are:

-Foot angle

.Average natural angle 42 degrees.

.From 30 degrees to 35 degrees can be treated.

.Less than 30 degrees need surgical interference.

-Terslo equation which is the value derived from the following equation:

High arch of the foot / foot length) × 100

Whenever stand during the 8% figure rose across it on foot hollow may cause a deficit similar to the inability of flat foot.

.The lower the ratio 8% increased likelihood of having flat feet.

.Is a ratio of 8% average percentage during the regular foot stand.

Show after these treatments to sample the following:

.I was privileged to set foot corners have a higher than 35 degrees, and the proportion of high

arch of the foot to a length equal to 8% and the number (10 students). This group was named the group is infected.

.Characterized by others to set foot angles have equal to or less than 35 degrees, and the proportion of high arch of the foot to the length of less than 8% and the number (15 students). This group was named the infected group.

.Characterized by a third set turned out to be consistent with the specifications in the first set foot angle and consistent with the second set specifications in the proportion of high arc to the length and number (22 students). This group was named the group moderation.

Statistical methods

.Mean
.The standard deviation.
.T test for independent samples,
.Simple Pearson correlation coefficient.
.The percentage contribution..
. Multiple correlation coefficient.

- Results and discussion

Is to present and discuss the findings of the researcher in two paragraphs, the first looking at the combined sample and the second paragraph are looking at any of the three groups after the sample was divided into three groups. The reason for this is to support the results of aggregates when data has been dealt with as a society in the presence or absence of a correlation between the variables.

Showing variables link in the sample results and discussion

Has been linked to five foot length measurements and tests, as shown in Table (1) including an inverse relationship The first has shown that the longer a foot less high arch of the foot and the second showed that he told the longer foot print angle. These two measurements are linked with each function explain the relationship that one followed by the other link link

It also has been associated with foot length relationship with a positive deviation in the foot march and ran 400 meters and these tests linked to a relationship full function shows the interrelation to the goal and objective measurement and display the fact that the deviation in the foot march offset deviation in ran 400 meters .It also has been associated with foot length deviation Achilles tendonitis. The researcher did not reach to support physiologic of these links, though all of these Commitments tend to logical justification, when our observation of the form (2) contained in Chapter II, we find that the points (A, B) will move away from the point (2) the longer the foot and provides an opportunity to lower arch of the foot and an increase in the amount of surface contact area bottom of the foot, causing a decline in the value of the angle of the foot print. And when you walk to repeat that with age the individual tends to deflection direction of the foot to the outside to reduce the contact foot flattened space, creating a mechanical succession put heels (2 points) and then comb (points B and A) to assist in the march without fatigue which creates a distortion in the Achilles tendonitis, and resort individual inclination to the direction of the foot when interviewed for the land in the pivot are walking basing a foot facing out which affects the foot .During rubber balance ligament foot of the internal and external sides and which supports what was interpreted by the researcher that the function links that have emerged between the deflection foot variables in ran 400 meters in the march and deviation Achilles tendonitis high arch of the foot and the angle of print, and as shown in Table (1.)

Table 1
Correlations between tests and measurements matrix illustrates the subject of study

Tests and Measurements	Foot length	The number of steps in the 400-meter run	Time ran 400 meters	Deviation foot ran 400 meters	Deviation foot in an admin	High arch of the foot	Deviation tendon Achilles	Print foot angle
Foot length	1	0.127	0.029	*0.420	*0.496	*0.349-	*0.326	*0.332
The number of steps in the 400-meter run		1	*0.725	*0.532	*0.494	*0.350-	*0.459	0.351*
Time ran 400 meters			1	0.289	0.311	*0.160-	*0.204	*0.191-
Deviation foot ran 400 meters				1	*0.925	*0.658-	*0.787	*0.746-
Deviation foot in an admin					1	*0.662-	*0.778	*0.734-
High arch of the foot						1	0.650-	*0.712
Deviation tendon Achilles							1	*0.843
Print foot angle								1

*Tabular value when the degree of freedom (45) and the level of significance is (0.312)

The number of steps link in ran 400 meters a time of completion of this distance, which was not indicative of the reason is the fact that the sample selected from the first grade, which is unaware of planning to overcome ran 400 meters, where the contest requires endurance speed dramatically element shows researcher Ray-Ban ill Technique and sprinting tactic was the cause of prolonging the time. On the other hand, the big time is caused by the length of the foot in contact with the ground in the front and rear pivot or even increase the time of flight phase in the running. Thus, the distortions skeleton was another reason to prolong the time ran (440 meters) and explains the signifier and the reverse link that has emerged between the number of steps and the high arch of the foot any steps that increase because of the low arch of the foot .The time ran 400 meters is not associated with any of the studied variables, but is overcome ran 400 meters regardless effort and energy large distance and there are some distortions account, that the presence of distortions skeleton reduce the efficiency of the work of the joints and muscles working deformity point ... and the dispersion of power occurs not economy of effort and energy (4: 154) and the sample tend to an injury, so that the proportion of people with a 32% and 47% of the group moderation any rate out of 79 (47 students)

Presentation and discussion of the results of the three groups

Illustrated in Table (2) that the three groups were equal in the foot length, as were all calculated value smaller than the tabular values clear at the bottom of the table, and when a simple comparison between the circles computational clear in Table (3) actually find that these differences did not exceed (0.85 cm). Despite the fact that this variable has been linked to a number of variables (already mentioned in Table (1)), the values of the correlation coefficient was less than the amount of alienation coefficient (0.70) *, which indicates the presence of other variables were not studied in this extraneous links. Summary and so that the foot length was not effective and clear in performance.

As can be seen from Table 2 that the three groups Veer equal (no differences) in distortions textures variables (foot deviation in ran 400 meters and an admin and deviation Achilles tendonitis high arch of the foot and angle Print foot) which confirms the payment of the existence of these three groups, and one of them is different on the other they were the calculated values greater than the tabular values.

Is clear from Figure 9 that the infected group was skew presented abroad by (2.59 cm) in march and (4.16 cm) in sprinting, that the model of the foot planning can be seen at the follow-up of the feet movement for the axis of the sagittal main body as a whole and where parallel to the longitudinal axis of the foot with the main sagittal axis of the body. ...

Table 2
Explains the differences that have emerged between the three groups in tests and measurements

Tests and Measurements	Group is infected with moderation Group	Group is infected with the infected group	Group average with infected group
Foot length	1.71	1.61	0.02
The number of steps in the 400-meter run	*2.79	3.20*	0.99
Time ran 400 meters	0.733	1.07	0.35
Deviation foot ran 400 meters	*5.76	15.81*	*3.87
Deviation foot in an admin	*5.90	13.11*	*11.98
High arch of the foot	*12.14	14.00*	*4.58
Deviation tendon Achilles	*2.87	14.11*	*9.41
Print foot angle	*3.74	10.62*	*7.73

Table (3)
Shows circles and standard deviations of measurements and tests

Groups	Media computational and deviations	Infected	Intermediate	Non-infected
Print foot angle	M	25.73	46.59	56
	S	8.25	7.78	5.98
Deviation tendon Achilles	M	1.53	0.530	0.235
	S	0.256	0.391	0.202
High arch of the foot	M	1.01	1.34	2.03
	S	0.233	0.182	0.132
Deviation foot in an admin	M	2.59	1.53	0.21
	S	0.683	1.093	0.144
Deviation foot ran 400 meters	M	4.16	2.47	0.34
	S	0.924	1.724	0.128
Time ran 400 meters	M	1.13.6	1.11.9	1.10.14
	S	0.053	0.069	0.058
The number of steps in the 400-meter run	M	222.8	218.8	208.1
	S	5.52	6.603	5.103
Foot length	M	26.18	26.19	25.35
	S	1.19	1.25	1.304

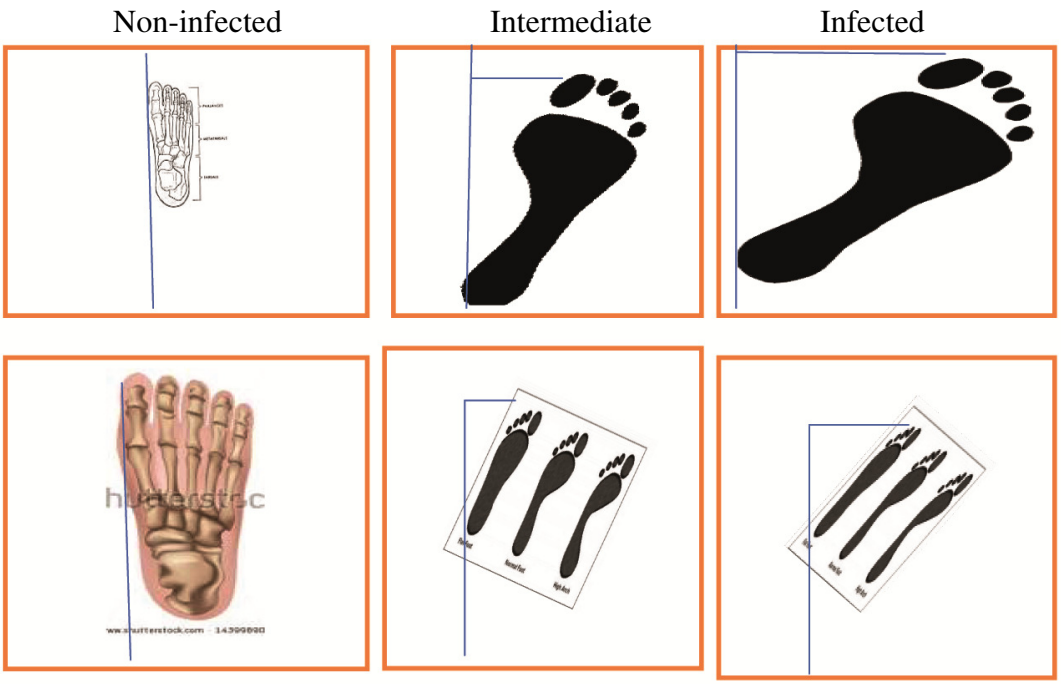

Figure 9
Explains foot deviation in the path, jogging totals Tuesday

Proved the lack of statistically significant differences in the time ran the 400 meters, which means that the infected group acted extra effort to overcome the time because of the evidence of the existence of distortions, and if that does not appear in ran 400 meters may Bel definitely the difference will appear in ran 800 meters or 1,500 meters. And will enhance researcher Raya discuss the number of steps it has proved the existence of statistically significant differences between non-infected groups and the other two groups, since the three groups after cutting them off a number of steps and a 200 step, we find that the group is infected close (8 steps) from the finish line. The other two groups close in a row and also that shown in Figure (10)

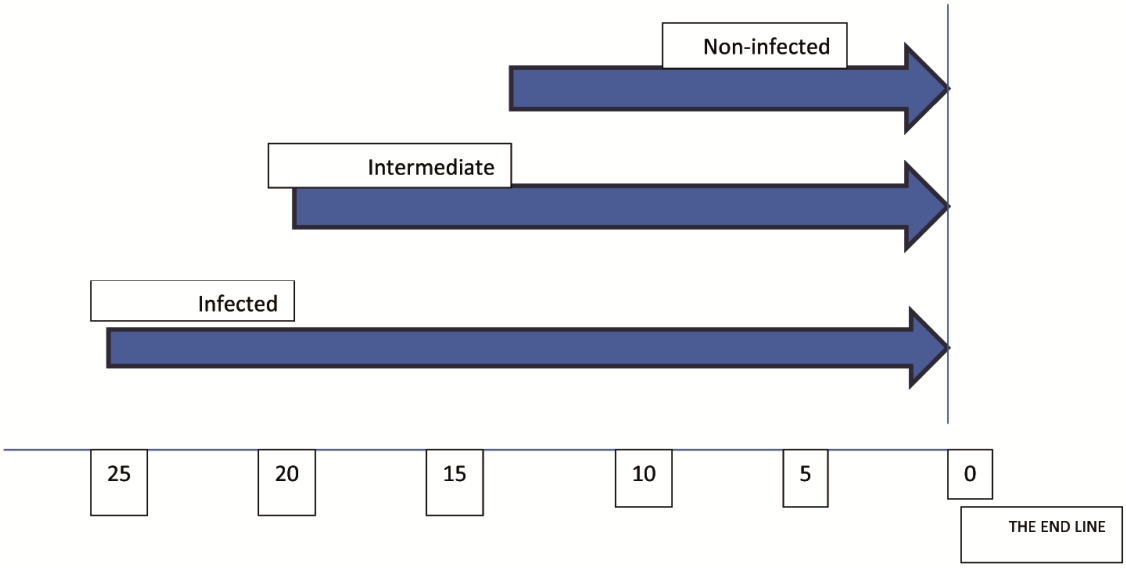

Figure 10
Teams illustrates the steps in the running

The deviation in the foot ran 400 meters was the reason influential in the achievement and the differences were statistically significant between the groups function. The researcher attributed the reason for this incident to the deformation in the arch of the foot and the deflection tendon Achilles and small foot print angle as previously proven correlation of these variables aslant foot.

The presence of these distortions led to the loss of the integrity of the distribution of body weight on the foot, causing it to veer As a result, the reason for this deviation contestant loss of a few centimeters in each step are added and cumulatively to the race distance without feeling the rider out, that any medical condition caused by deformation textures and deviation in this section will increase or decrease the curvature of this part, and flexibility in awarding me and affects the body dramatically and be big influences in admin and running and balance.

And to conduct a calculation of the amount of deviation at each step, we find that the infected group runs a distance of (409.28 meters) instead of the original race distance, and as shown in Table 4 and Figure (11) that it shows the extent of the effort by the affected group to overcome the clocked a time of almost non-infected group time.

Table 4
Illustrates the distance added to the contest ran 400 meters for each group

Groups	Deviation foot per step	The number of steps in ran 400 meters	The distance added to run 400 meters	The real race distance
Non-infected	0.34 CM	208	0.71 M	400.71 M
Intermediate	2.47 CM	219	5.41 M	405.28 M
Infected	4.16 CM	223	9.28 M	409.28 M

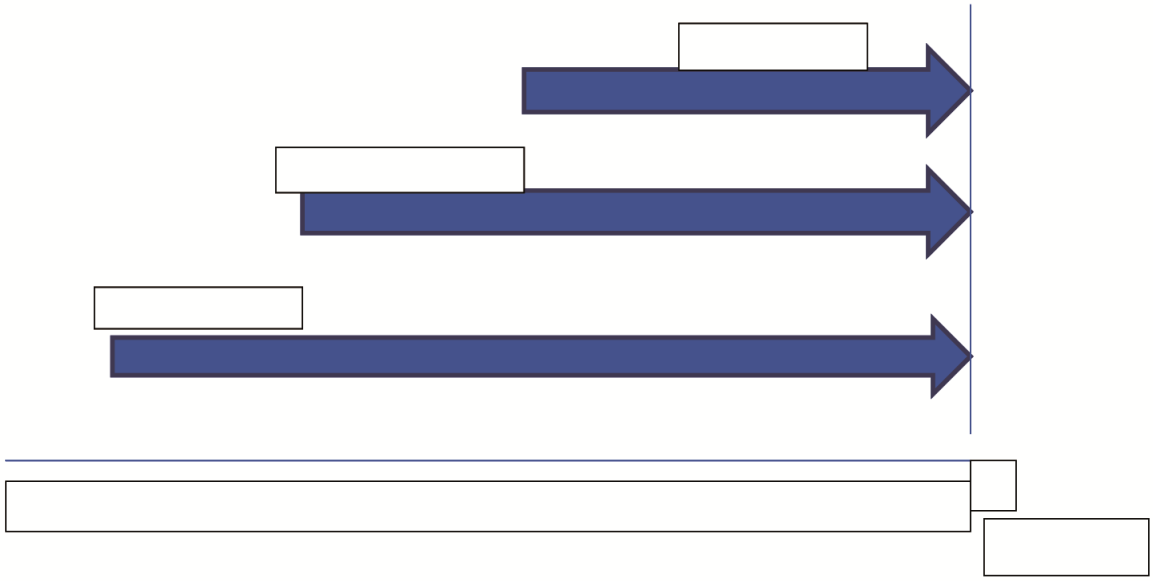

Figure 11
Illustrates the difference when sprinting distance of the three groups

Presentation and discussion of results ran 400 meters

Shown previously that the distortions skeleton impact badly on the achievement is particularly evident in the number of steps and time ran 400 meters and as a last resort due to the lack of evidence in the matrix of correlations (Table 1) with respect to the relationship running time (400 meters) of all Messier solo and the number of steps each variable solo, the researcher using the statistical law of the coefficient of multiple correlation, this law provides for the study of the effect of more than one variable in another variable and found, as shown in Table (5) that the variables collectively affect associated with a time ran (400 meters), as well as the number of steps, and it turns out that (57%) of the time ran the 400 meters can be interpreted by the distortions and the subject of the remaining percentage to the requirements of the game or effectiveness, and (67%) of cases, increase the number of steps interpret distortions skeleton.

Table 5
The contribution rates for the variables of time and number of steps multiple correlation coefficient shows ran 400 meters

Variables	Multiple correlation coefficient	Contribution rates
Time ran 400 meters	0.768	0.57
The number of steps in ran 400 meters	0.815	0.67

Conclusions

After the presentation and discussion of results found among the findings of a researcher in the following form:

.Some deformities of the foot skeleton link to each other.

.According to equation Terslo angle Print foot appeared group tended to injury in some parts of the sample were classified into three groups are:

•group is infected.

•centrist group.

•infected group.

.No statistically significant differences between some of the deformities of the foot skeleton in the three groups, namely:

•high arch of the foot.

•deviation tendon Achilles.

•Print foot angle.

•deviation in the direction of the foot ran 400 meters.

.Infected Group acted extra effort to overcome the increase in the time he ran 400 meters.

.Increased the number of steps in the 400-meter run at the infected group.

.The added distance to run 400 meters in the infected group affinity (7-9 meters) because of the direction of deviation foot.

.Distortions skeleton contribute to the increase in the number of steps ran 400 meters by 67%.

.Distortions skeleton contribute to the increased time ran 400 meters by 57%.

.Most individuals infected with the flatness deviation tendon Achilles and small foot print East corner.

Recommendations

The researcher recommends the following:

.Perform tests and measurements distortions skeleton in the selection process for the athletes.

.Attention skeleton deformities of the foot because of their impact on the level of achievement through:

•Increase deviation instep.

•improper distribution of body weight on the foot.

•Increase the number of steps and waste of effort and energy during the performance.

.Conduct similar research in the deformation textures of the foot and create impact on performance skills or direction of the force to the reaction speed.

.Study other arches in the foot any side of the square and procedure.

. Find the percentage deviation foot ran curves

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A Study on Comparison between Indian Accounting Standards and International Financial Reporting Standards

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Abstract:-

IFRS can be explained in a narrow as well as a broad sense. In the narrow sense IFRS is the new numbered series of proclamations that IASB has issued. In the broad sense IFRS includes standards and interpretations approved by the IASB, IASC & SIC. These new set of accounting standards is more principles based as compared to the earlier standards that were basically a principle based. In India, so far as the ICAI and the Governmental authorities such as the National Advisory Committee on Accounting Standards established under the Companies Act and various regulators such as Securities and Exchange Board of India and Reserve Bank of India are concerned, the aim has always been to comply with the IFRSs to the extent possible with the objective to formulate sound financial reporting standards. The ICAI, being a member of the International Federation of Accountants (IFAC), considers the IFRSs and tries to integrate them, to the extent possible, in the light of the laws, customs, practices and business environment prevailing in India. The present paper mainly attempts to focus on comparison between Ind AS and IFRS and challenges being faced in the convergence of IFRS with Indian Accounting Standards by using secondary data collection method.

Key Words: IFRS and Accounting Standards

I) Introduction

International Financial Reporting Standards (IFRS) are standards based on principles approved by IASB. The IFRS was known earlier as International Accounting Standards (IAS) and Board of the IASC started it after 1973. Later in 2001, on the 1st of the month the International Accounting Standards Board (IASB) took the inventiveness and accountability for the implementation of the Standards. The Board implemented the International Standards in the very first meet itself. IASB has developed standards calling them IFRS. Both IASC and the IASB issue elucidation of Standards. The International Accounting Standards Board (IASB) is the autonomous, personal division and was shaped in 2001 to substitute the International Accounting Standards Committee (IASC). It emerges and endorses International Financial Reporting Standards. It is screened by the IFRS Foundation. The International Financial Reporting Standards Foundation is the sovereign, non-profit establishment, formed in 2000 to supervise the IASB. From 1973 until an inclusive wide-ranging in 2000, the constitution for setting up International book keeping principles was known as the worldwide book keeping Standards Committee. There was no exact "committee" of the similar name. The normal setting panel was known as the IASC Board. IASC aims to establish and publish book keeping principles to encourage their universal approval and observance for the public. It also works usually for the development and management of policy, accounting principles and measures involving the presentation of monetary statements. The objectives of

IFRS are to build up a particular set of superior quality, easy to comprehend, easy to enforce (IFRSs) through the IASB. It also aims at encouraging the use and fast implementation of those standards. International Financial Reporting Standards (IFRSs) are from the IASB Standards. Many countries including European Union, Hong Kong, Malaysia, Turkey, Australia, Russia, India, South Africa, Singapore and Pakistan accept IFRS. The objective of this paper is to: To understand the similarities and distinction between IFRS and Ind AS.

II) Comparative Summary of Indian Accounting Standards & International Financial Reporting Standards

AS No.	Existing Indian Standard	IFRS No.	Ind AS No.	Converged IFRS
AS 1	Disclosure of Accounting Policies	IAS 1	Ind AS 1	Presentation of Financial Statements
AS 2	Valuation of Inventories	IAS 2	Ind AS 2	Inventories
AS 3	Cash Flow Statements	IAS 7	Ind AS 7	Statements of Cash Flows
AS 4	Events Occurring after the Balance Sheet Date	IAS 10	Ind AS 10	Events after the Reporting Period
AS 5	Net Profit or Loss for the Period, Prior Period Items and Changes in Accounting Policies	IAS 8	Ind AS 8	Accounting Policies, Changes in Accounting Estimates and Errors
AS 6	Depreciation Accounting	-	-	-
AS 7	Construction Contracts	IAS 11	Ind AS 115	Revenue
AS 9	Revenue Recognition	IAS 18	Ind AS 115	Revenue
AS 10	Accounting for Fixed Assets	IAS 16	Ind AS 16	Property, Plant and Equipment
AS 11	The Effects of Changes in Foreign Exchange Rates	IAS 21	Ind AS 21	The Effects of Changes in Foreign Exchange Rates
AS 12	Accounting for Government Grants	IAS 20	Ind AS 20	Accounting for Government Grants and Disclosure of Government Assistance
AS 13	Accounting for Investments	IAS 40 IAS 27	Ind AS 40 Ind AS 27	Investment Property Separate Financial Statements

AS 14	Accounting for amalgamations	IFRS 3	Ind AS 103	Business combinations
AS 15	Employee Benefits	IAS 19	Ind AS 19	Employee Benefits
AS 16	Borrowing costs	IAS 23	Ind AS 23	Borrowing costs
AS 17	Segment Reporting	IFRS 8	Ind AS 108	Operating Segments
AS 18	Related Party Disclosures	IFRS 12	Ind AS 24	Disclosure of Interests in other Entities
AS 19	Leases	IAS 17	Ind AS 17	Leases
AS 20	Earnings Per Share	IAS 33	Ind AS 33	Earnings Per Share
AS 21	Consolidated Financial Statements	IFRS 10 IAS 27 IFRS 12	Ind AS 110 Ind AS 27 Ind AS 112	Consolidated Financial Statements Separate Financial Statements Disclosure of Interest in other entities
AS 22	Accounting for Taxes on Income	IAS 12	Ind AS 12	Income taxes
AS 23	Accounting for Investments in Associates in Consolidated Financial Statements	IAS 28	Ind AS 28	Investments in Associates and Joint Ventures
AS 24	Discontinuing operations	IFRS 5	Ind AS 105	Non Current Assets Held for Sale and Discontinued operations
AS 25	Interim financial reporting	IAS 34	Ind AS 34	Interim Financial Reporting
AS 26	Intangible assets	IAS 38	Ind AS 38	Intangible Assets
AS 27	Financial Reporting of Interests in Joint Ventures	IAS 28 IAS 27 IFRS 11 IFRS 12	Ind AS 28 Ind AS 27 Ind AS 111 Ind AS 112	Investments in Associates and Joint Ventures Separate Financial Statements Joint Arrangements Disclosure of Interest in other entities
AS 28	Impairment of assets	IAS 36	Ind AS 36	Impairment of assets

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AS 29	Provisions, Contingent Liabilities and Contingent Assets	IAS 37	Ind AS 37	Provisions, Contingent Liabilities and Contingent Assets
AS 30	Financial Instruments Accounting	IAS 39	Ind AS 109	Financial Instruments
AS 31	Financial Instruments Presentation	IAS 32	Ind AS 32	Financial Instruments – Presentation
AS 32	Financial Instruments-Disclosures	IFRS 7	Ind AS 107	Financial Instruments: Disclosures
-	-	IFRS 2	Ind AS 102	Share based payment
-	-	IAS 29	Ind AS 29	Financial Reporting in hyperinflationary Economies
-	-	IFRS 6	Ind AS 106	Exploration for and Evaluation of Mineral Resources
-	-	IAS 26	Ind AS 26	Accounting and Reporting of Retirement Benefit Plans*
-	-	IAS 41	Ind AS 41	Agriculture
-	-	IFRS 4	Ind AS 104	Insurance Contracts
-	-	IFRS 1	Ind AS 101	First Time Adoption of Indian Accounting Standards
-	-	IFRS 12	Ind AS 114	Regulatory Deferral Accounts
-	-	IFRS 13	Ind AS 113	Fair Value Measurement

III Challenges to India

1) Shortage of Resources: India has about 145,000 Chartered Accountants, which is far below the number what is required. There is a huge demand of Chartered Accountants because of IFRS implementation. So, at present we see a shortage of accounting professionals, at least in a short run.
2) Training: If India wants to implement IFRS effectively, there is a need to train all the stakeholders, auditors, audit committees, teachers, students, analysts, regulators, and tax authorities.
3) Information systems: The computer systems and the software, which are going to handle financial accounting and reporting must be designed and made available in such a way that they produce robust and consistent data for reporting financial information. These

systems have to be reliable. The companies need to enhance their IT security so that their business is at minimum risk from potential fraud, cyber terrorism, and data corruption.

4) Financial statements more complex under IFRS and thereby would pose challenge making useful decision. The law and regulations of a country is a land specific and so of India too.

IV Conclusion:-

The forces of globalization prompt more and more countries to open their doors to foreign investment and as businesses expand across borders the need arises to recognize the benefits of having commonly accepted and understood financial reporting standards. In this scenario of globalization, India cannot insulate itself from the developments taking place worldwide. The Preface to the Statements of Accounting Standards, issued by the ICAI, categorically recognizes the same. Although, the focus has always been on developing high quality standards, resulting in transparent and comparable financial statements, deviations from IFRSs were made where it was considered that these were not consistent with the laws and business environment prevailing within the country. Now, as the world globalizes, it has become imperative for India also to make a formal strategy for convergence with IFRSs with the objective to harmonise with globally accepted accounting standards. Indian companies using the Indian accounting standards are experiencing fewer difficulties accessing international financial markets, as Indian accounting standards are becoming closer to IFRS. Indian standards are expected to converge even further in the future, especially after the challenges mentioned in study are addressed properly.

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Identifying Causes to Poor Performance in Mathematics: A Study of CBSE Schools in Bastar District of Chhattisgarh State

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Abstract:

It is a remarkable fact that, in almost every country, mathematics occupies a central place in the school curriculum. At the level of primary school, there is general agreement what mathematics should be taught, though there are differences of approach and timing, which is hardly surprising when one considers the diversity of cultures around the world. But when we turn to secondary schools, we note a remarkable variety in the content of the courses. Despite the alleged universality of mathematics, it is possible to find countries in which the secondary mathematics curricula have almost nothing in common. It is generally agreed that mathematics makes an essential contribution to a good rounded education, playing a vital role in our culture and civilization. Without a sound understanding of mathematics appreciation of a range of other educational disciplines such as music, the sciences, geography and economics is compromised. The objective of this research paper is to identify the factors responsible for poor academic performance of mathematics in CBSE affiliated schools in Bastar district of Chhattisgarh.

Keywords: School education, Curriculum, Mathematics, CBSE

1. Introduction

It is a remarkable fact that, in almost every country, mathematics occupies a central place in the school curriculum. At the level of primary school, there is general agreement what mathematics should be taught, though there are differences of approach and timing, which is hardly surprising when one considers the diversity of cultures around the world. But when we turn to secondary schools, we note a remarkable variety in the content of the courses. Despite the alleged universality of mathematics, it is possible to find countries in which the secondary mathematics curricula have almost nothing in common. And this must make us ask: 'Is mathematics really as important as is claimed?' When this question is discussed, there is often much confusion about the sense in which the word 'mathematics' is used. So perhaps we should begin by attempting to clarify our thoughts about this.

Mathematics is a pillar of almost all the streams in academic sectors. Given the important role mathematics plays in tertiary education and most careers, it is not only beneficial but also essential to establish some of the factors that facilitate achievement in mathematics in disadvantaged schools. It is generally agreed that mathematics makes an essential contribution to a good rounded education, playing a vital role in our culture and civilization. Without a sound understanding of mathematics appreciation of a range of other educational disciplines such as music, the sciences, geography and economics is compromised. A further argument is made that mathematics is important because it encourages and develops important ways of thinking.

Most researcher explore that the most important conclusions from qualitative research on factors related to achievement in education within the schools are:

(a) Teachers are critical resources

(b) The composition of the student body matters
(c) Schools make a difference in terms of physical facilities, class size, curriculum, instructional strategies and other resources
(d) Influence of teachers behavior in student learning

2. Literature Review

The review of related literature is an essential aspect of the investigation. This helps to gather up to date information about what has been done in the particular area so that detailed input must be given in the study**.** Literature review of related studies further avoids duplication of effort that has already been done and it helps to go further deep into the problem in hand. It also helps to study the different facts of the problem and provides the opportunity of giving an insight into the methods measures and various other parameters adopted by other as a reference, which helps in the improvement of the research design significantly. Previous research and the writings of recognized materials provide evidence that the researcher is familiar with what is still unknown and untested. Literature review also proves to be a valuable guide in defining the problem recognizing its significance suggesting the promising data gathering devices appropriate study design and source of data. Hence, effective research must be based upon past knowledge, which provides useful hypothesis and helpful suggestions for significant investigations. Some researchers have suggested that achievement in mathematics in secondary schools is influenced by a number of variables. These variables include learners abilities, attitudes and perceptions, family and socio economic status, parent and peer influences, school related variables such as poor learning environment, learning cultures, past racial discrimination and low expectations by principals and teachers. Many of these variables are home and family-related and thus are difficult to change and beyond control of educators. Such factors alone cannot account for the lack of mathematics achievement and persistent differences among traditionally disadvantaged learners. In particular these explanations fail to account for achievement and the success of some students. Some well achieving learners come from the same communities and share similar socio - economic backgrounds, schools and classrooms. Researcher like O. N. Alsawaie showed that generally teachers did not play roles that support problem solving or help students become problem solvers. Teachers did not seem to recognize the importance of the first stage in the problem solving process (understanding the problem). During solving the problem, teachers tended to intervene inappropriately with students' work. At the final stage, teachers generally did not encourage students to reflect on their work.

3. Factors Causing Poor Performance in Mathematics

Mathematics is a pillar of almost all the streams in academic sectors. Given the important role mathematics plays in tertiary education and most careers, it is not only beneficial but also essential to establish some of the factors that facilitate achievement in mathematics in disadvantaged schools.

There are several factors that cause to poor performance in mathematics:

3.1 Curriculum and Learning Environment

Curriculum traditionally means a list of content topics in a national or school syllabus and examination prescription, generally referred to as course outline. Mathematics curriculum, which is often a focus in education reforms, has not received extensive research attention until recently. Ongoing mathematics curriculum changes in many education systems call for further research and sharing of effective curriculum policies and practices that can help lead to the improvement of school education. A learning environment comprises teacher,

existing curriculum, instructional equipment as well as the institutional and larger learner community. In this regard school environment is the broader climate or context of the school that either facilitates or constrains classroom instruction and learning.

3.2 School and Class Size

School size and class size have been shown to have an impact on achievement. Few researcher observed that larger schools had a negative influence on academic achievement in high school mathematics and science. In contrast, they also found that there is no relationship between the size of the school and scholastic achievement; effective schools can be very small, very large or somewhat in-between.

3.3 Cultural Factor

Some researchers had point out that culture is the aggregate of attitudes, traditions, and ethical codes peculiar to the particular society. Internationally much has been written about the relationships between culture, mathematics learning and teaching. The topics range from cultural bases for mathematics, mathematics development from different cultures, the effect of culture on mathematics learning and political effects of societies on mathematics. Research in mathematics education has sought to understand how cultural differences affect learners' performance in mathematics. Analyses of studies on culture and mathematics reveal some general cultural factors that affect mathematics performance, namely:

3.4 Effectiveness of Schools

Effective school characteristics are what help to create a fertile school culture that facilitates learners' achievement. Several researchers have identified such characteristics. Their findings indicate that learners excel when the following factors are present:

- Strong leadership is provided by a principal who works with the staff to communicate the mission of the school; provide reliable support for staff; and meet with teachers and other members of the staff frequently to discuss classroom practices.
- High learner achievement is the foremost priority of the school, and the school is organized around this goal as shown by teachers who demonstrate high expectations for learners' achievement and make learners aware of and understand these expectations.
- Parents are aware of, understand, and support the basic objective of the school and believe they have an important role to play in their children' education.
- Teachers work together to provide an orderly and safe school environment.

3.5 Learner Related Factors of Poor Performance

According to some researchers factors such as attitudes and beliefs play an important role in mathematics achievement. The general relationship between attitude and achievement is based on the concept that the better the attitude a learner has towards a subject or task, the higher the achievement or performance level in mathematics. Some researchers argues that teacher, peer and family attitudes toward mathematics may either positively or negatively influence on learners confidence in mathematics. The findings also suggest that learners who have positive attitudes towards their teachers have high achievement levels. It was also found that at all grades a sense of personal relatedness with the teacher is important in determining a learner's frequency in seeking help from the teacher. Such type of atmosphere in the classroom climate has been shown to be related to good academic outcome and student influence of liking their subject.

3.6 Parents Role

Research shows that nature of parental discipline affect academic performance of children, Aremu (2010), parents in their bid to discipline their children have been bound to be

authoritative, democratic or permissive. Children, whose parents are authoritative, live in constant fear of such parents and May most likely to transfer such fear to significant others in the school environment. Such children have low self worth, insecurity and may found it difficult to consult teachers, however (Oluwole & Oluwole, 2010), found that the degree of self efficacy and anxiety manifest by learners determine their academic performance, On other hand children from permissive home are complacent unmotivated and lack personal will to succeed.

3.7 Career Choice and Mathematics Achievement Factor

Research on attitudes towards career choice and towards mathematics teachers is extensively done by many researchers. They found that self-perceptions of mathematics ability influence mathematics achievement. It was also concluded from a wide review of literature that there is a positive correlation between career choice and mathematics achievement. Subsequently it was also reported that learner attitudes impact on later career choices in mathematics had an important role to play. Accordingly, it was also found that the career aspirations of high school learners influence their participation in mathematics, which in turn influenced their mathematics achievement. It was also reported that self-perception mathematics ability has relatively strong effects on later career choices.

3.8 Peer Pressure

Peer pressure in mathematics affects all learners, successful ones as well as those who are less successful. The effect of negative peer pressure has been recorded in numerous. In this regard researchers argues that peer and family attitudes towards mathematics may either positively or negatively influence learners' confidence in the subject. In their review of literature it was found that learners' attitudes towards mathematics have been associated with peer group attitudes. Accordingly, some researchers identified peer attitudes as one of the most influential factors in learner's mathematical achievements. Further, it was also reported that learners are ridiculed by their peers for taking challenging mathematics while others are encouraged by their peers to pursue academic excellence in mathematics.

3.9 Interest Factor

Some research has suggested that, compared to other subjects, there is a relatively strong relationship between interest and achievement in mathematics. In this regard, it was stated that the following factors are of significance in the learner's interest in mathematics:

- Learners' feelings play an important role in mathematics interest.
- Learners' interest and ability are positively related.

3.10 Language factor

Language is an important factor in the learning and teaching of mathematics. While for most students a mathematics lesson is generally a language lesson within the mathematics part, the sequence seems more complicated for second-language learners. For many Pacific Islanders, learning in English and Mathematical English creates serous cognitive difficulties. Using appropriate language(s) in context must be a consideration. Mother tongue is very important to the clear formulation of mathematical concepts as all ideas are communicated between the teacher and the learner, either through oral or written material.

3.11 Student Teacher Ratio Effect

Researchers had studied to find out the impact of student teacher ratio, class size and per student expenditure on the academic achievement of students. Student teacher ratio, class size and per student expenditure are very important in academic achievement of school. The finding revealed that there was statistically significant relationship and the differential impact

of student-teacher ratio for science students. However, these were insignificant for arts students. There was positive correlation which means that higher student-teacher ratio produced the higher level of academic achievement.

3.12 Family Related Factor

For many minority and lower-income students, it has been shown that family backgrounds can significantly impact a student's scientific and mathematical achievement. When it comes to participation and achievement in sciences and mathematics education, it has been shown that family background characteristics have a considerable influence on how a child performs. Socioeconomic status - parental occupation, education, and income - accounts for a substantial amount of the disparities in math and science accomplishment. Other influential factors involve a parent's choice of profession. For instance, it is common for children of mathematicians and scientists to also pursue careers in math or science because their parents chose to concentrate in those areas.

Conclusion

Poor performance of tribal students in mathematics subjects in Bastar is due to various factors like negative attitude of tribal students towards mathematics subjects, lack of exposure of both teachers and students , lack of support of teachers, family background of the students, lack of support by their family members, habit of students developed due to socio-culture etc. Various studies cited similar reasons as causes of poor performance in mathematics subjects. Other causes of poor performance in mathematics among senior secondary school students include misconception of the subject mathematics as difficult one, fear and anxiety.

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A Study on the Mechanism of Oxidation of Organic Substances by Potassium Permanganate

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Abstract:

Many kinetic studies have been made to elucidate the mechanism of oxidation of organic substances by Potassium Permanganate particularly in acidic media. Skrabal has suggested that di, tri, tetravalent ions may be formed slowly, followed by the stages in which the oxidation of intermediate valence react rapidly with O- Toluidine. oxidation and reduction reactions seem to follow simultaneously and takes place in steps. The principal commercial use of o-Toluidine is in the manufacture of dyes. It is also used in the manufacture of rubber vulcanization accelerators, hypnotic and anesthetic pharmaceuticals and pesticides. O-Toluidine was considered by previous working groups in June 1977(IARC,1978), February 1981 (IARC,1982) and March 1982(IARC,1978a). Since that time new data have become available and taken into consideration in the evaluation.

Key words: Oxidation, Potassium, Tetravalent, Toluidine, Pesticides.

Experimental:

All the chemicals used were AR Grade, O-Toluidine, (E.Merck) Potassium Permanganate A.R,B.D.H, Sulphuric Acid(A.R,B.D.H).

0.23 mole (25 gm) of O-Toluidine was taken on a clock glass and weighted accurately. It was then transferred to a clean and dry porcelain mortar provided with pestle. It was powdered to fine mesh. 0.25 mole (39.5 gm.) of Potassium Permanganate was mixed gradually with the substrate in proportions and after each addition it was triturated with the substrate to make a homogeneous redox mixture.

This homogeneous mixture in a fine solids state was ultimately transferred to a clean and dry 500 ml round bottle flask provided with a reflux condenser. Sulphuric Acid (1M) which acted as a medium was gradually added to the condenser and after each addition it was thoroughly stirred for five to ten minute. After completion of the addition of the entire amount of Sulphuric Acid, the redox reaction was refluxed for nine hours on a water bath maintained at 60^0-70^0C. This concentration of acid favoured the oxidation specially at higher temperature. Any change of colour right from the beginning to the completion stage was minutely observed and recorded.

The pinkish shade was decolourised leading to a brownish shade. The reaction seemed slow at the initial stage and then proceeded rather quickly, owing to the catalytic effect of Mn(II) produced in the reaction. It was filtered and neutralized with Sodium Carbonate solution (2N) and then decomposed with dilute Sulphuric Acid. A dirty precipitate was obtained. This product was isolated by filtration and dried within the folds of filter filter paper. After the separation of the crude product, the purification was done by following the procedure of usual recrystallisation. The solvent was selected by trial and error method. Rectified spirit was found suitable. In order to have the crystalline product (leaf lets), the saturated mother liquor was left over night in the refrigerator. Later on, the leaf lets (dark brown) were dried in a desiccators over fused Calcium Chloride for two days. This solid and

dry crystalline substance (sample-DP1) was subjected to melting point determination by DTA which was done at Central Mining Research Station, Dhanbad. The melting point was observed 141^0C(curve-B). This indicated the compound to be O-Amino Benzoic Acid (m.p 144^0C), the other chemical tests of O-Amino Benzoic Acid were carried out to support it. The final confirmation was accomplished by I.R attached at the end(sample No. –DP1,Curve-IRb)

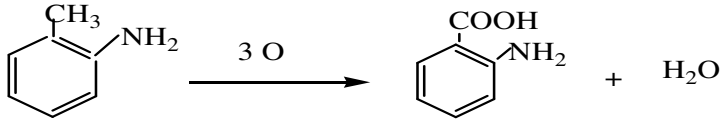
When the direct oxidation of O-Toluidine by acidic Potassium Permanganate was carried out to know the final product, O-Amino Benzoic Acid was recognized as the ultimate product.

The overall reaction has been outlined below:

$$5C_7H_9N + 6\,KMnO_4 + 9\,H_2SO_4 \longrightarrow 5C_7H_7NO_2 + 3\,K_2SO_4 + 6\,MnSO_4 + 14\,H_2O \ldots.(i)$$

(O-Toluidine) (o-Amino Benzoic acid)

More precisely, the sequence of the reaction may also be written as:

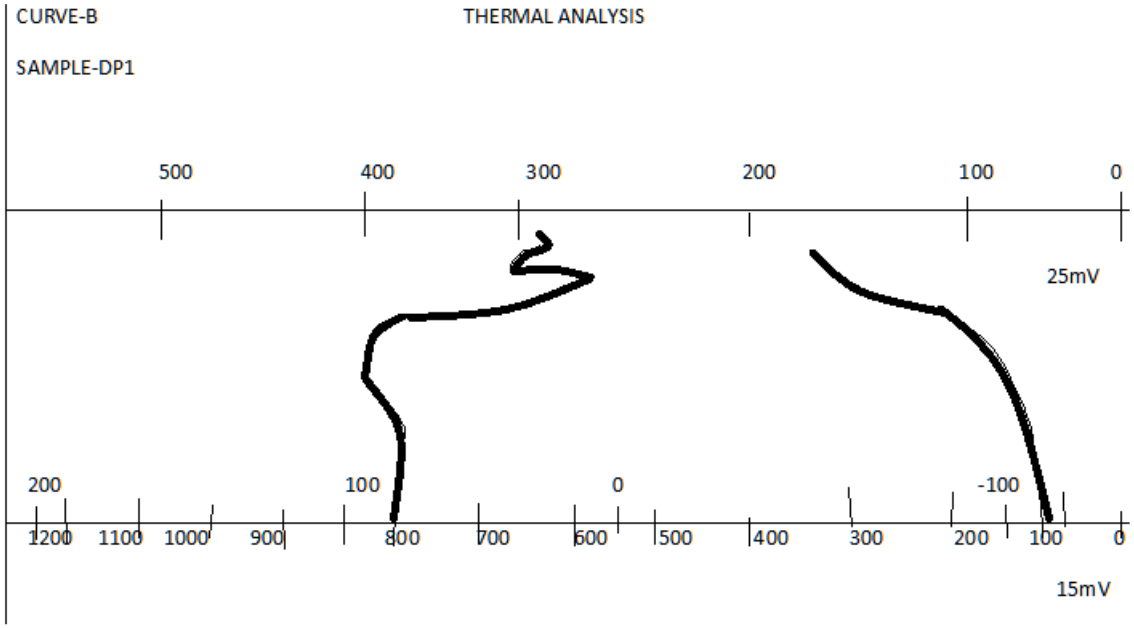


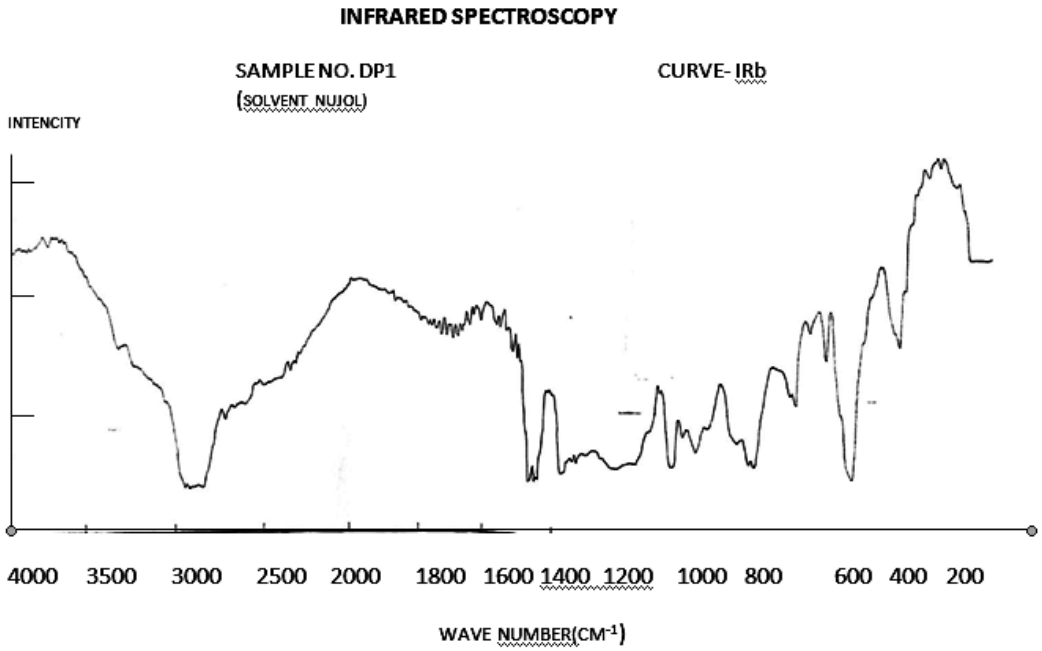
O-Toluidine O-Amino Benzoic Acid

The formation of O-Amino Benzoic Acid via 2,2-Di Methyl Azo Benzene can not be denied,

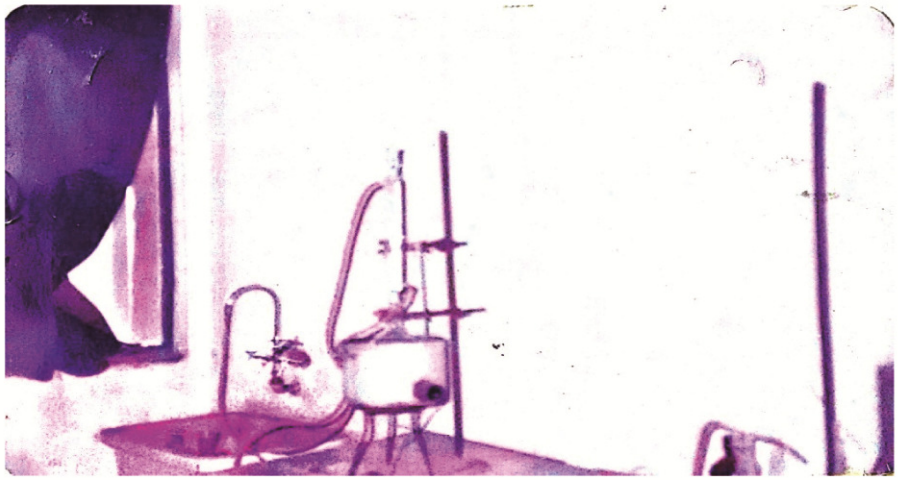
$$5\,C_{14}H_{14}N_2 + KMnO_4 + 12\,H_2SO_4 \longrightarrow 10\,C_7H_7NO_2 + 4\,K_2SO_4 + 8\,MnSO_4 + 12\,H_2O$$

2,2-Dimethyl Azobenzene O-Amino Benzoic Acid





ARRANGEMENT OF APPARATUS FOR DIRECT OXIDATION STUDIES



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Speed and Endurance of Wrestling and Kabaddi Players of B.N.N. College Boys: A Comparative Study

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Introduction:

The relative importance of each of the components varies for each sport. Physical fitness is not only sport specific it may also be position specific, combined good health and physical development. The object of any program of Physical fitness is to maximize any individuals health, strength, indorance and skill relative to age , sex, body build and physiology. This ends can only be realized through conscientious regulation of exercise, rest, diet and periodic medical examination. Exercise should be regular and vigorous, but begun slowly and only gradually increased in strenuousness,. Popular exercise methods include jogging, cycling and the use of body-building machines. It is more important that's periods of sleep be regular and restful than that they extend any fixed number of hours.

Physical fitness is a multifaceted continuum extending from birth to death, affected by physical activity. It ranges from optimal activities in all aspects of life through high and low levels of different physical fitness to serve disease and dysfunction. The ability to function efficiently and effectively is to enjoy leisure, to be healthy, to resist disease and to co-operate with emergency situations. Health related components of physical fitness include body composition, cardiovascular fitness, flexibility, muscular endurance and strength. Skill related components include agility, balance, co-ordination, power, reaction time and speed.

Statement of the Study:

The study is to determine speed and endurance of the boys wrestling and kabaddi players of B.N.N. college, Bhiwandi, Thane.

Hypotheses:

1. There may not be any significant difference between boys wrestling and kabaddi players of B.N.N. college, Bhiwandi. In relation to their speed (50 mtr. run).
2. There may not be any significant difference between boys wrestling and kabaddi players of B.N.N. college, Bhiwandi. In relation to their endurance (Cooper Test – 12 min. run & walk test).

Sample of the Study:

The study was formulated best on the simple random sampling. The samples were collected from the boys 20 each from wrestling and kabaddi players in the age group of 18 to 25 years from B.N.N. college, Bhiwandi.

Tools:

The present study under investigation selected the following test perform are

1. For speed – 50 mtr. run
2. For endurance – Cooper Test (12 min. run & walk test).

Collection of Data:

The study under report focuses the boys speed and endurance. The study was formulated based on the simple random sampling. The samples collected were 20 wrestling and 20 kabaddi boys players from B.N.N. college, Bhiwandi. In the age group of 18 to 25 years were considered. Test was administrated on B.N.N. college players i.e. on the speed (50 mtr. run). Is measured in seconds and endurance (Cooper Test – 12 min. run & walk Test). Is

measured in meters. Statistical tools used were Mean, Standard Diversion, t-test and P value.

Result of the Study:

The results pertaining to the study are present in the following tables

Table-1 : Showing the Mean values, SD, df,'t' value and p-value between wrestling and kabaddi players in relation to their speed (50 mtr. run)

Sr.no.	Subject	N	Mean	S.D.	't' ratio	P value
1	Wrestling Players	20	7.4	0.41	9.3905	0.0001
2	Kabaddi Players	20	6.2	0.44		

P value and statistical significance: the two-tailed p-value is less than 0.0001, by convential criteria; this difference is considered to be extremely statistical significant.

Table-2 : : Showing the Mean values, SD, df,'t' value and p-value between wrestling and kabaddi players in relation to their Endurance (Cooper Test)

Sr.no.	Subject	N	Mean	S.D.	't' ratio	P value
1	Wrestling Players	20	1915	215.35	4.9830	0.0001
2	Kabaddi Players	20	2135	238.39		

P value and statistical significance: the two-tailed P value is less than 0.0001 by conventional criteria; this difference is considered to be extremely statistical significant.

Conclusions:

There exists significant difference between boy wrestling and kabaddi players in both speed and endurance. The boys wrestllers are better than kabaddi players in both speed and endurance. The study under report has scientifically examined the various factors which influence the power game, especially the boys pertinent to speed and endurance. A trained individual is in a better state of physical fitness than the person who follows a sedentary, inactive life. When two persons, one trained and one untrained or approximately the same build are performing the same amount of moderate muscular work, evidence indicates that the trained individual has a lower oxygen consumption, lower pulse rate, larger stroke volume poor heartbeat, less in blood pressure, grester red and white blood cell counts, slower rate of breadthing, lower rate of lactic acid formation, and a faster return to normal of blood pressure and heart rate.

The heart becomes more efficient and is able to circulate more blood while bearing less frequently. Furthermore, in work of a strenuous nature that cannot be performed for an great period of time the trained individuals has greater endurance, a capacity for higher oxygen consumption, and a faster return to normal of heart rate and blood pressure. Training results in a more efficient organism. Since a greater efficiency of heart action enables a larger flow of blood to reach the muscles and thus ensure and increase supply of fuel and oxygen, more work is performed at less cost; improvement in strength, power neuro muscular co-ordination, and endurance occur , co-ordination and timing of moments as better, and an improve state of physical fitness results. Physical fitness is a multifaceted continuum extending from birth to death, affect by physical activity. It ranges from optimal activities in all aspects of life through high and low levels of different physical fitness to serve disease and dysfunction.

Hence it is concluded that the physical fitness plays a vital role on the performance of the players. Physical activity can act as an antidote to some kinds of fatigue; youngsters will be harm through sustained exercise – if they are fit, their physical endurance is great, and the exercise will be conductive to good health.

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XSSLock: Blocking out Cross-Site Scripting Attack Vectors from user' Input

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Abstract

These days Internet has become handy and most advanced useful technology due to use of various electronic gadgets. Various online services provided by Internet helps the present human civilization to such a greater extend that life without internet seems to be impossible. Due to its omnipresence, Internet has started attracting hackers/attackers who keep looking for new techniques to create maliciousness in web application. According to researchers and industry experts, the Cross-Site Scripting (XSS) is the one of the top most vulnerability found in the web application. Here, injected malicious code executes on the browser's site which affects victims badly. This paper focuses on Cross-Site Scripting attacks and its countermeasures. This paper further discusses the proposed algorithm which protects web application against stored XSS and reflected XSS attacks by verifying user's input.

Keywords: XSS, stored XSS, reflected XSS, tag array, encoding charset

Introduction

In this current age of information and technology, most of the tech-savvy population of the world became heavily dependent on the Internet. Various services provided by Internet has changed present civilization to climb its new and wider dimensions. It is bitter truth that without Internet our day-to-day life seems to be impossible.

Today thousands of web sites including customized services have become key part of most of the human activities. But on the other side unfortunately, it has attracted hackers or attackers too who always keep eyes and tries to create new techniques to sabotage fruitful-skilled advance technology by intruding in to web application. XSS is one of the top most vulnerability in the web application.

XSS is one kind of application layer web attack in which they try to inject malicious scripts to perform malicious actions on any trusted web sites to fulfill only their nominal or bigger self-interest. According to Shalini & Usha (2011) [1], it is called "cross-site" because it involves interaction between two web sites to achieve attacker's goal. In XSS, malicious code executes on web browser side which badly affects users.

In normal case, XSS executes when the web page is loaded or associated event occurs. XSS is not only embedded in JavaScript and HTML, but also in VBScript, ActiveX, AJAX, action script like flash or any other browser executable scripting language and mark-up language.

For many reasons XSS can be used such as Take over user' account, Spread worms, Trojan horse, Control access of browser, Phishing, Expose of the user's session cookie, Redirect the user to some other page or site, Modify presentation of content, Bypass restrictions, Malware attacks & DoS attack, Fake advertisement, Click fraud, etc.

1. TYPES of XSS Attacks

Before 2005 there were only two types of XSS attacks were identified: stored XSS and reflected XSS attacks. Later Amit Klein defined third type of XSS called DOM-Based XSS. These three types are defined as follow:

(A) Stored XSS (persistent XSS)

Stored XSS usually occurs when user' input contains XSS vectors and is stored in database on the target server. It may be injected through blog, forum, visitor log, bulletin board, comment field of feedback, etc. In this case whenever users open that web page in the browser, script executes automatically.

(B) Reflected XSS (non-persistent XSS)

Reflected attacks are those where the attack vector is ruminated off the web server, for example in search result, an error message, or any other response that contains user's inputted attack vector which is sent to the server as a request. Victim gets reflected attacks as specially crafted links received via an e-mail message or which is available openly on some web site.

When a victim is misguided by clicking on vulnerable link, by filling a crafted form, or by referring to a malicious site, the inputted attack vector travels through the vulnerable web sites which ruminates the attack back to the victim's browser. The web browser then runs the code as if it comes from a reliable server.

(C) DOM-Based XSS

This attack is only possible when improper handling if data related with DOM (Document Object Model) present in HTML page. Every HTML entity present in page can be accessed and modified by using DOM properties such as document.referrer, document.url and document.location.

Attacker can manipulate or access DOM properties to execute such type of attack. In DOM-Based XSS, the attack vectors do not arrive at the web server. It is executed at client site only. This type of attack is only possible when user provided untrusted data is interpreted as JavaScript using method such as eval(), document.write() or innerHTML

2. Review of Literatures

Patil and Patil (2015) [2] explained working scenario of web application. They also stated different types of cross-site scripting attacks and existing sanitizer solutions. Their system architecture contains DOM module which creates DOM tree for each web page, input field capture module fetches user inputs, input analyzer module categorized given user input, link module maintains list of links of current web page, text are module maintains inputted text data of current web page, these list of links and texts are passes to sanitizer module which detects XSS attacks and XSS notification module gives message to web user regarding XSS vulnerabilities. This approach implemented as browser extension using Jetpack framework.

Maheswari and Anita (2015) [3] present intrusion detection system which analyze web request to detect miserable behavior. The proposed system contains various modules like user interface, preprocessing module, decision manager, attack analyzer and temporal rule manager. User interface module allow user to register them then it accept data request and response. Preprocessing module fetches suspected attributes and compares them with dataset to identify attacks using pattern matching algorithm. Decision manager module takes decision about new facts. Temporal rule manager contains query processor which executes rules on intrusion domain. Attack analyzer module analyzes response of decision manager. It also updates input validation rule library.

Tiwari and Jeysree (2015) [4] discussed about new class of XSS called mutation-based XSS that occur in innerHTML related properties. This paper stated various examples of mutated XSS attack vectors. It basically presents as inactive markup which turns into active attack after transformation occur and bypass client site XSS filters. Authors also denoted that generally mutation occurs in web application to perform vulnerabilities due to serialization and deserialization of data in DOM-tree. Authors described automation technique to search vulnerable code in innerHTML properties. If mutants are available, it reported to tester module.

Gupta (2015) [5] used XSS checker at client-site as well as server site to verify invalid characters available in given input. This approach follows guidelines defined by OWASP. Accordingly it blocks all invalid character inserted as input. For this, it fetches all parameters of request, and checks one by one value of these parameters. If parameters of given request contains clean values, then it checks for contents. If malicious code is present in contents then it gives error message to user. Author also performs chi-square hypothesis testing to measure this methodology.

Canfora *et al.* (2014) [6] defines thee assumptions: 1. malicious web site required more resources to fire attacks. For this two things need to be computed i.e. average execution time and maximum execution time, 2. Malicious site executes only few JavaScript functions. For this, number of function calls should be count, 3. It uses vulnerable URL for many motives. For this, total numbers of URLs must be count and count of outside domain URL should be maintained. This paper proposed methodology based on these three assumption works on JavaScript execution time, calls to JavaScript functions and URL referred by JavaScript. To examine JavaScript execution time and to figure out calls for JavaScript functions, authors performed dynamic analysis. To monitor URL referrer from outside domain, authors follows static analysis.

Dong *et al.* (2014) [7] studied about tags and attributes of HTML5. During this analysis, authors identify fourteen different cross-site scripting attack vectors. For this webmail system is developed which also maintains cross-site scripting attack repository. This tool also identifies seven new loopholes which leads cross-site scripting explosions.

Doupe *et al.* (2013) [8] present approach that automatically recreates application in which code and data is separated in new web pages. It also keeps application's semantics as it is. Here, all JavaScript inline code is shifted to external files that browser will execute on Content Security Policy basis. DeDacota only protects against server-side XSS attacks. If attack vector is available in HTML attributes than it does not detected.

Gupta and Sharma (2012) [9] introduced a sandbox environment which protects cookies against XSS attacks. This environment set at client-side. It prevents unknown threats that make change in program or data. Its only protect against changes, one can make attempt to read cookies value stored in client computer.

Kotha *et al.* (2012) [10] present two mitigation techniques- using database and replace function- to protect against XSS attacks. Database mitigation technique is implemented at server site that creates vector for tag key value for HTML and scripts and verifies whether tags are vulnerable or not using Blacklisted tag cluster. Replace mitigation technique uses a Replace function that replaces or deletes some code of script so that it doesn't run.

3. Research Objectives

The main objectives of this research paper are as follow:

- Identifying all possible patterns and aspects of embedded XSS attack vectors from user's input.
- Securing web application against stored and reflected XSS attacks.

4. Methodology

Stored cross-site scripting attack generally found where web page requires user input and is also stored in related data table of database for future use. In this case, attack vector is inserted as user input in some form field. Then every time, when this user provided information is requested to view, attack vector is also fetched and executed.

Reflected cross-site scripting attack vector generally found in HTML tag or script based functions which contains 'href' or 'src' attribute which reflect off the web page or in some case simply redirect web user to some other malicious place (i.e. malicious web site).

Attack vectors are inserted in form fields as plain readable text or as encoded text using charset like: HTML entities, Hex, UTF-8, Base64, etc. Here, if attack vectors are stored in some data table of database successfully then every time when this particular record is fetched from this data table then these attack vectors are executed, which harm web site or web user who request this web page of web site. So before user input is directly stored in data table, checking is required to filter out such kind of harmful attack vectors. Thus, it cannot affect web site or web user.

To identify stored XSS and reflected XSS, following procedure is required to be followed: Here, proposed XSSLock module's algorithm can be implemented as web service routine. When user provides inputs in given web page, web developer need to call this web service routine to detect vulnerable script attack by providing user input as parameter to this web service routine.

Algorithm for XSSLock module:

Step 1: Attacker/hacker may provide attack vectors as inputted data using encoding charset by using some readymade functions. Encoded data can be available as: contents of HTML, HTML attributes, event handler attributes, URL path in attribute, HTML style attribute and CSS or in JavaScript functions. If it is encoded then decode the given inputted string so that the attack signatures can be easily identified. Encoded code can be decoded by performing following sub steps:

a) Let,

str= user input which may be encoded
encodeType= Name of encoding charset
decodeStr= decode version of encoded user input

b) Fetch all system supported encoding charset one by one in variable encodeType.

c) Check for each encoding charset i.e. whether the given encoding charset is either UTF-7/8/16/32, Base64 or HTML entities by comparing given encoding type of str with encodeType.

d) If charset encoding mentioned in step c) is matched, decode it into plain text by using conversion function.

e) If given user input is encoded through HEX, Octal, Decimal charset then fetch one by one character from variable str and decode it in plain text.

f) Store decoded plain text into variable decodeStr.

Step 2: Once given user input is decoded, the next step is identifying attack vectors of stored cross-site scripting and reflected cross-site scripting in user provided input. To find out attack vectors, perform following procedures step by step:

a) Let,
decodeStr= decoded plain text which contains user provided data isAttackFound= flag variable set to true if attack is present in user provided data
tagArray= array of crafted HTML tags
eventArray= array of event handlers
cnt= number of vulnerable tag or event found

b) Replace all non-printable characters (including new line character, tab space character, carriage return character, and padded zeros) with single space of decoded user input (i.e. from decodeStr).

c) Remove special characters (like !, @, #, $, %, ^, &, *, (,), ', ;, ~, `, ", :, ?, +, /, =, {, }, [,], -, _, |, \, \\, etc.) from decodeStr.

d) Check whether decodeStr contains any malicious HTML tag or event handler by comparing decodeStr with tagArray and eventArray.

e) If decodeStr contains such malicious HTML tag or event handler mentioned in tagArray and eventArray, increment cnt by one.

f) Set isAttackFound to true, if attack vector is matched with at least one of the element of tagArray and eventArray. Otherwise set isAttackFound to false.

Step 3: If attack vector is matched with at least one of the element of tagArray and eventArray (i.e. isAttackFound is set to true), then block the user's input and store attack details for reference.

Step 4: If attack vector is not matched with any elements of tagArray and eventArray (i.e. isAttackFound is set to false) then allow further necessary web page processing.

5. Results and discussion

The methodology described is implemented and results are obtained for the purpose of data analysis and interpretation. The vulnerability performance test (VPT) is conducted using 120 sites randomly selected which are highly ranked commercial sites based on the popularity index of various popularity search rank index. During this test, the listed sites were checked for different types of attacks. It is observed that 76.67% sites were vulnerable to XSS attacks. Without implementing proposed methodology, XSS attack detection rate is observed to be 17.07 %. By implementing proposed methodology, accuracy protection level against XSS attacks observed to be 97.98%. The accuracy obtained is highly significant. This methodology improves detection rate from 96.67% to 100%.

6. Conclusion

Web sites are introduced to provide worldwide connectivity, to provide information and services, to make user's work easier, to save transaction time and human efforts. World Wide Web (WWW) is one of the valuable resources which provides communication channel to the entire globe. So no one has right to misuse it for personal gain or for harassment. Cross-Site Scripting is the simplest way for an attacker to gain user's confidential information. This paper presents technique that identifies XSS attack vectors i.e. stored XSS as well as reflected XSS attack vectors by observing user's input pattern. If attack vectors are detected, it blocks the request otherwise it allows further processing.

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