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POWER QUALITY PROBLEM AND IMPROVEMENT

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ABSTRACT

The electrical vitality is one of the effortlessly utilized types of vitality. It can be effectively changed over to different types of vitality. With the headway of innovation, the reliance on the electrical vitality has been expanded extraordinarily. PC and telecom systems, railroad system saving money, post office, life emotionally supportive network are few applications that just can't work without power. In the meantime these applications request subjective vitality. The voltage list/plunge is the most regularly happening issue. There are numerous strategies to conquer this issue. Among them the utilization of FACT gadgets is a proficient one. This anticipates presents a diagram of the FACT gadgets like-DVR, D-STATCOM, and Auto-Transformer in relieving voltage droop.

1. INTRODUCTION

Electrical vitality is the most profitable and predominant kind of vitality and the front line society is energetically dependent on the electric supply. The life can't be imagined without the supply of force. Meanwhile the quality and soundness of the electric force supplied is furthermore fundamental for the profitable working of the end customer equipment. Ordinarily, some force quality issues identified with the voltage at the purpose of basic coupling (PCC) where different burdens are associated are the nearness of voltage music, surge, spikes, indents, droop/plunge, swell, unbalance, variances, glitches, flashes, blackouts, et cetera [1].

These issues are available in the supply framework because of different unsettling influences in the framework or because of the nearness of different nonlinear loads, for example, heaters, uninterruptible force supplies (UPSs), and flexible velocity drives (ASDs). In any case, some force quality issues identified with the current drawn from the AC mains are poor force element, receptive force trouble, symphonious streams, unequal ebbs and flows, and an unreasonable

unbiased current in polyphase frameworks because of unbalancing and consonant ebbs and flows produced by some nonlinear burdens.

These force quality issues cause disappointment of capacitor banks, expanded misfortunes in the circulation framework and electric machines, clamor, vibrations, over voltages and unnecessary current because of reverberation, negative succession streams in generators and engines, particularly rotor warming, derating of links, dielectric breakdown, impedance with correspondence frameworks, signal obstruction and transfer and breaker glitches, false metering, obstructions to the engine controllers and computerized controllers, et cetera.

2. POWER QUALITY PROBLEM AND SOLUTIONS

One of the most serious issues in force quality angles is the sounds content in the electrical framework. For the most part, sounds might be isolated into two sorts: voltage music and current music. Current sounds is generally created by music contained in voltage supply and relies on upon the sort of burden, for example, resistive burden, capacitive burden, and inductive burden. Both sounds can be created by either the source or the heap side.

Sounds produced by burden are brought about by nonlinear operation of gadgets, including power converters, circular segment heaters, gas release lighting gadgets, and so forth. Load music can bring about the overheating of the attractive centres of transformer and engines [2]. Then again, source sounds are for the most part created by force supply with non-sinusoidal voltage waveform. Voltage and current source music suggest power misfortunes, electromagnetic obstruction and throbbing torque in AC engine drives.

In an electric dissemination system [3], deficiencies may bring about voltage hang or transitory intrusion though exchanging off huge load or charging of a vast capacitor bank may prompt voltage swell. Then again, utilization of strong state exchanging gadgets and nonlinear and control electronically exchanged loads, for example, rectifiers or inverters may bring about symphonious twisting and indenting in the voltage and current. Utilization of circular segment heaters may prompt glints. Ferro-reverberation, transformer empowerment, or capacitor exchanging may bring about homeless people and lightning strikes may prompt spikes.Low voltage burdens are normally single-stage e.g. PCs or lighting frameworks, and the harmony between stages are subsequently hard to ensure. In the design of an electrical wiring framework

nourishing these heaps, the heap circuits are appropriated amongst the three-stage frameworks, for example one stage for each floor of a loft or office constructing or substituting associations in lines of houses. Still, the equalization of the identical burden at the focal transformer vacillates in light of the measurable spread of the obligation cycles of the diverse individual burdens [4]. Unusual framework conditions additionally cause stage unbalance. The framework conduct is then unequal by definition; however such marvels are generally arranged under voltage aggravations, since the power network's security framework ought to remove the deficiency.

Sources of Poor Power Quality:

Wellsprings of poor Power Quality are recorded as takes after:

- Adjustable –speed drives
- Switching Power supplies
- Arc heaters
- Electronic Fluorescent light stabilizer
- Lightning Strike
- L-G issue
- Non-direct load
- Starting of huge engines
- Power electronic gadgets

Impacts of Power Quality Problems:

The impacts of force quality issues change starting with one bit of hardware then onto the next and with the age of the gear. The nature of electric force is imperative for both, electric utilities and its clients. The significant issues confronted by the partners are

Purchaser Side *f* Intermittent disappointment of PC types of gear *f* Interference with information correspondence supplies *f* Malfunction of Process Controllers *f* Stalling of engines on start up *f* Inaccurate Power Metering *f* Constant danger of deadly electrical stun x Utility Side *f* Increased Transmission and Distribution misfortunes *f* Overloading of Cables, Transformers and Switchgears *f* Tripping of Circuit Breakers and remaining current gadgets *f* Incorrect operation of strong state transfers

Power Quality Solutions:

Taking care of force quality issues relies on upon getting significant information at the ideal area or areas and inside a practical time allotment. So as to gain valuable and significant information, instruments most suited for a specific application ought to be used [5]. The extensive variety of force quality arrangements utilized at present and found in writing might be classified as takes after:

- x Hardware *f* Active Harmonic Filters *f* Micro SMES for Power Quality *f* Large SMES for Transmission/Distribution *f* PWM Based Higher Power Compensators *f* FACTS Controller, Custom Power Devices *f* Transfer Switches x Software *f* Wavelet Theory *f* Expert Systems *f* Fuzzy Logic *f* Genetic Algorithms *f* Neural Network
- x Measuring and Monitoring *f* Artificial Intelligence Instruments *f* Remote Access *f* Integrated Diagnostic *f* Comprehensive System Monitoring *f* Centralized Monitoring (GPS)

3. RESULTS & DISCUSSION

Waveform Analysis

1. DSTATCOM

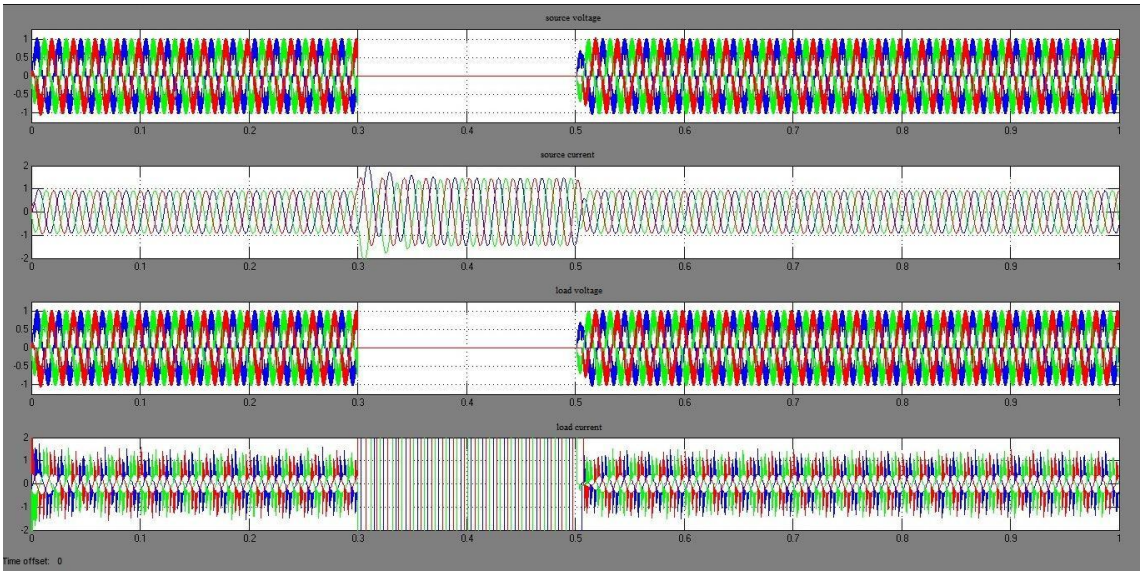

Fig. 1: Source Voltage/Current, Load Voltage/Current of DSTATCOM

2. DVR

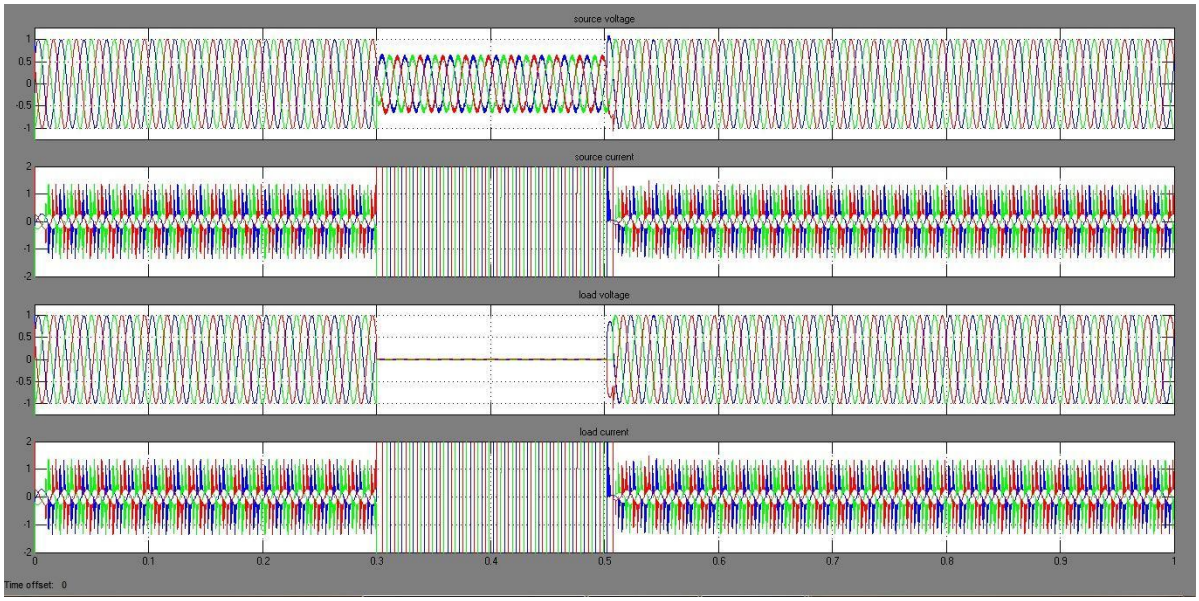

Fig. 2: Source Voltage/Current, Load Voltage/Current Waveform of DVR

Spectrum Analysis

1. DSTATCOM

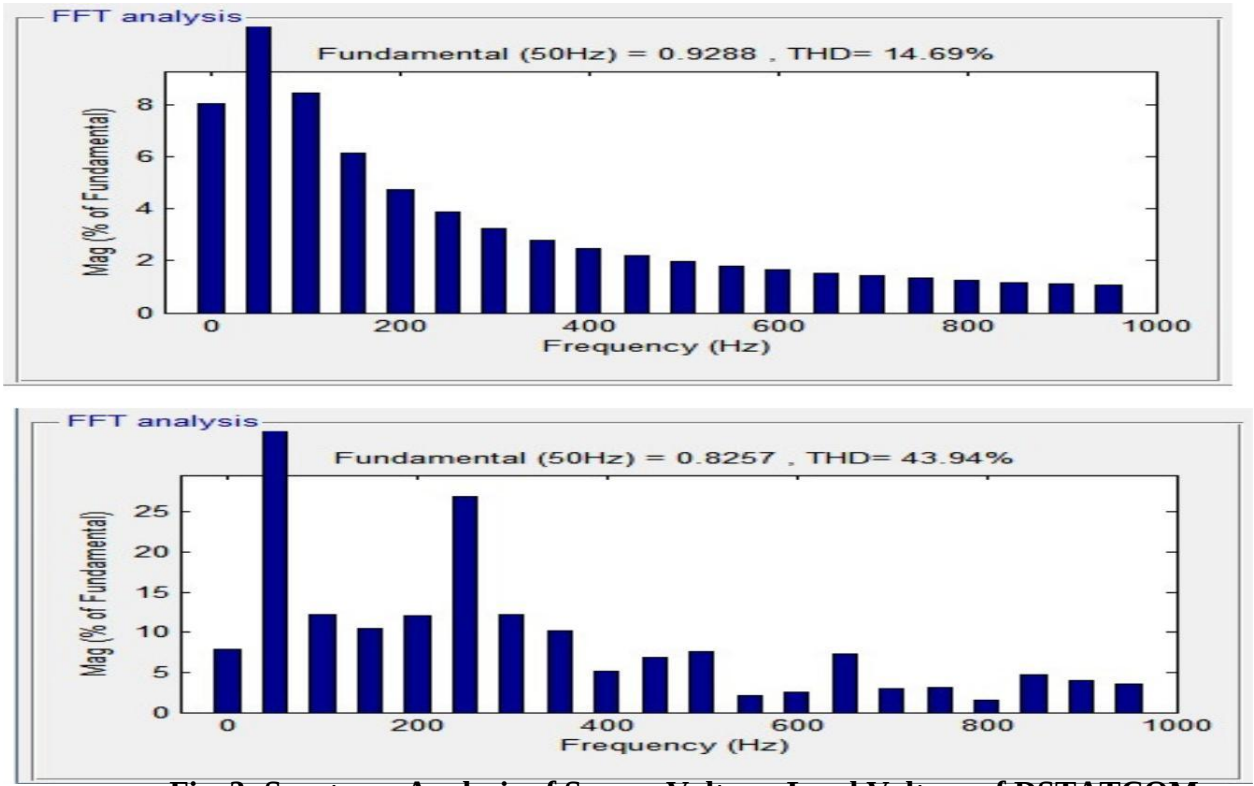

Fig. 3: Spectrum Analysis of Source Voltage, Load Voltage of DSTATCOM

2. DVR

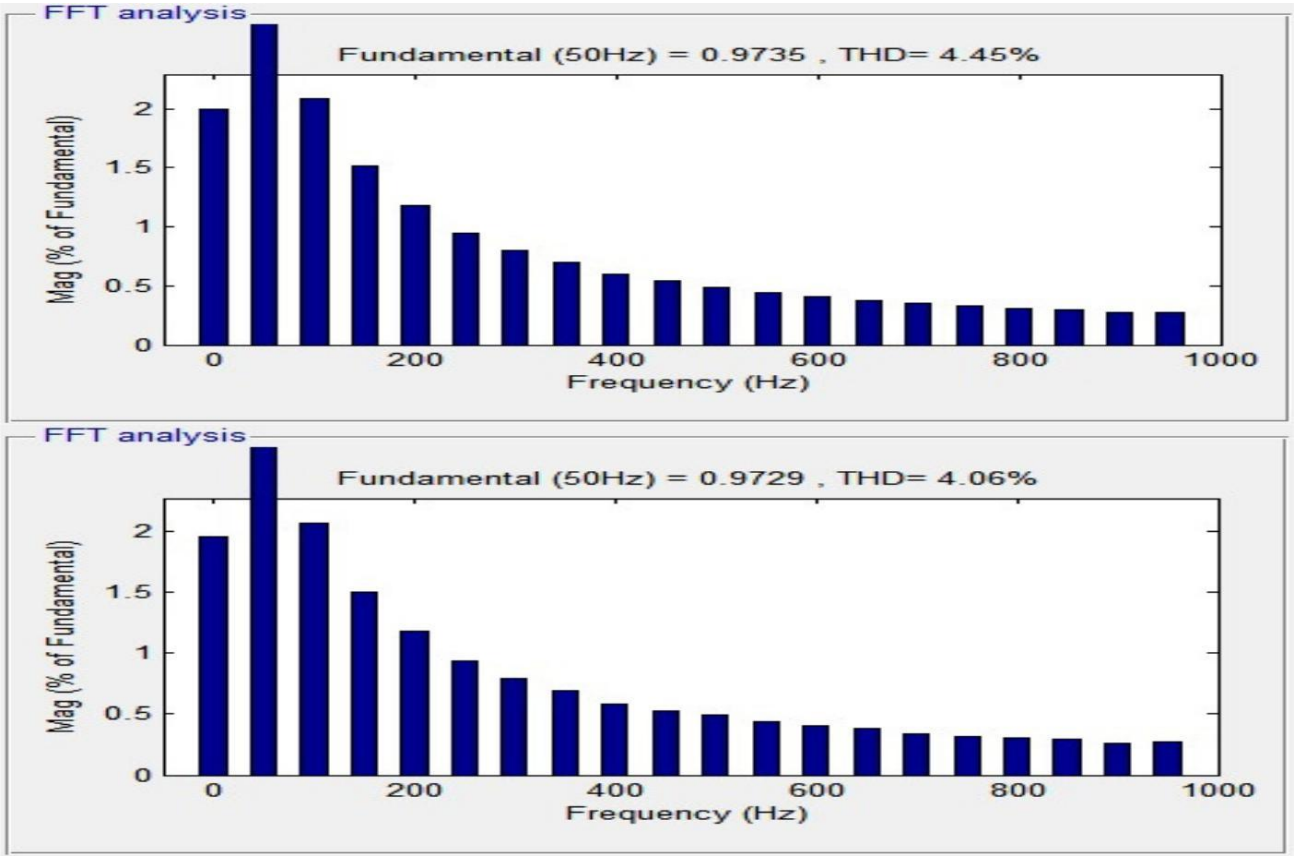

Fig. 4: Spectrum Analysis of Source Voltage, Load Voltage of DVR

System parameters used for DVR simulation

Main Supply Voltage	415V
Line impedance	Ls =0.5mH Rs = 0.1
Series transformer turns ratio	1:1
DC Bus Voltage	100V
Filter Inductance	1mH
Filter Capacitance	1μF
Load Active Power	3KW
Load Inductance	60mH
Line Frequency	60Hz

Voltage hang is started in the framework by associating an additional heap for certain timeframe. Here the additional heap is associated with the framework from 0.2s to 0.4s

Consequently, amid this time period the voltage at the heap transport i.e., at the purpose of coupling (PCC) drops as appeared in Fig. 1 by waveform analysis. In Fig. 2 voltage drops in a time period by using DVR. Spectrum analysis of the voltage, current, load voltage of DSTATCOME and DVR explained in Fig. 3 and Fig. 4.

Comparative Study

Under faulty condition, DSTATCOM is used to maintain the current level. Current Harmonics has been reduced significantly. At the load side harmonics generated contains THD of 43.94% & which has been balanced to 14.69% at PCC. Moreover, the current level which is increased during faulty condition has also been compensated to a required level.

Under faulty condition, DVR is used to maintain the voltage level. Voltage Harmonics has been reduced significantly. At the load side harmonics generated contains THD of 4.45% & which has been balanced to 4.06 % at load end. Moreover, the voltage sag during fault duration has also been compensated to a required level.

A similar study is made between three above talked about gadgets for moderating voltage list. The relative study depends on the THD of the heap voltage and is appeared in Table-IV. From this study unmistakably the Auto-Transformer is more productive in alleviating the voltage list. Furthermore the benefit of auto transformer is that the quantity of force electronic switches utilized is diminished. Thus the exchanging misfortunes are decreased. Among DVR and D-STATCOM, DVR is better regarding consonant lessening. In spite of the fact that D-STATCOM acts speedier than DVR, it presents sounds. Furthermore D-STATCOM requires more clear power infusion than DVR for a given voltage droop.

4. CONCLUSION

The interest for electric force is expanding at an exponential rate and in the meantime the nature of force conveyed turned into the most noticeable issue in the force segment. In this way, to keep up the nature of force the issues influencing the force quality ought to be dealt with effectively.

From this anticipate, the accompanying conclusions are made-

- Among the distinctive techniques to relieve the voltage droop, the utilization of FACT gadgets is the best strategy

- The FACT gadgets like DVR, D-STATCOM are useful in beating the voltage unbalance issues in force framework
- DVR is an arrangement associated gadget and infuses voltage to repay the voltage irregularity

D-STATCOM is a shunt associated gadget and infuses current into the framework

- These gadgets are associated with the force system at the purpose important to ensure the basic burdens
- These gadgets likewise have different focal points like symphonies decrease, power element rectification
- The measure of obvious force implantation required by D-STATCOM is higher than that of DVR for a given voltage hang

DVR acts gradually however is great in lessening the symphonies substance

- Both DVR and D-STATCOM require more number of force electronic switches and capacity gadgets for their operation
- To beat this issue, PWM exchanged auto-transformer is utilized for alleviating the voltage list
- Here the quantity of switches required are less and henceforth the exchanging misfortunes are additionally lessened
- The size and cost of the gadget are less and henceforth PWM exchanged auto transformer is an effective and practical answer for voltage hang relief

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AN EVOLUTIONARY MULTIPROCESSOR TASK SCHEDULING ALGORITHM

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ABSTRACT

The scheduling of application tasks is a problem that occurs in all multiprocessor systems. This problem becomes even more complicated if the tasks are not independent but are interrelated by mutual exclusion and precedence constraints. This paper presents an approach for pre-runtime scheduling of periodic tasks on multiple processors for a real-time system that must meet hard deadlines. The tasks can be related to each other bymutual exclusion and precedence forming an acyclic graph. The proposed scheduler is based on Evolutionary Algorithms, which relieves the user from knowing how to construct a solution. The main benefit of the approach is that it is scalable to any number of processors and can easily be extended to incorporate further requirements.

1. INTRODUCTION

Optimization is a commonly encountered mathematical problem in all engineering disciplines. It literally means finding the best possible/desirable solution. Optimization problems are wide ranging and numerous, hence methods for solving these problems ought to be, an active research topic. Optimization algorithms can be either deterministic or stochastic in nature. Former methods to solve optimization problems require enormous computational efforts, which tend to fail as the problem size increases. This is the motivation for employing bio inspired stochastic optimization algorithms as computationally efficient alternatives to deterministic approach. Meta-heuristics are based on the iterative improvement of either a population of solutions (as in Evolutionary algorithms, Swarm based algorithms) or a single solution (eg. Tabu Search) and mostly employ randomization and local search to solve a given optimization problem. In this paper we present the evolutionary approches that are capable of scheduling tasks that are interrelated by mutual exclusion and precedence constraints on multiple processors. We assume that the tasks have a given processor allocation. The problem of preemptively scheduling a set of tasks with arbitrary computation times on only two processors is known to be NP-complete. The problem here is even more complicated since the number of processors may be larger than two and the tasks are not independent. Consequently, heuristic approaches have to be applied in order to solve the scheduling problem in polynomial time.

2. TASK MODEL

We assume a computer system that consists of N identical processors that are interconnected by a communication link. The algorithm presented in this paper does not explicitly take into account the effects of communication between the processors. A comprehensive treatment of the overall scheduling algorithm that also deals with communication is contained in [Noss97]. The message scheduling algorithm itself, which is also based on Genetic Algorithms, is described in [Noss98].

The envisioned real-time application comprises one or more extended precedence graphs (EPG). An EPG is a time-constrained chain of interrelated tasks that form an acyclic graph. Each EPG starts with a stimulus task and ends with a response task. The temporal constraints of an EPG are the period p_{epg} at which the EPG must be executed and the deadline dlepg applying to the EPG.

An EPG comprises several simple tasks i.e., tasks that do not have any synchronization points in their bodies. A simple task executes from the time it is started to the time it finishes without being blocked. Hence the worst-case execution time of the task depends only on its structure. As static task scheduling is applied in the architecture, the worst-case execution time (WCET) must be known and bounded. Besides its worst-case execution time denoted by $wcet_t$, a task is characterized by its static allocation to a processor.

Tasks in the proposed task model are preemptive. A task may be interrupted by another task at any time during its execution. If certain parts of a task, so called critical sections, must not be preempted by another task, the respective tasks must be related to each other by a mutual exclusion relation.

All tasks of an EPG are related to each other by two types of relations, the above mentioned mutual exclusion and precedence relations. A variant of precedence relations is the so-called timed precedence. Timed precedence specifies a certain distance between the executions of the tasks the relation connects. This interval can be semi-open or closed. The scheduler tries to build a task schedule for each processor that satisfies the given task relations while at the same time minimizing the lateness of the EPGs. Since the algorithm is intended for real-time scheduling the lateness of the entire application should ideally be 0, i.e., no EPG misses its deadline.

3 THE SCHEDULING ALGORITHM

3.1 Introduction to Genetic Algorithms

Genetic Algorithms (GA) [Holl75] are a heuristic method used to solve NP-hard optimization problems in many fields. GAs constitute a so-called “uninformed" search strategy. This term refers to the fact that the algorithm itself does not have any knowledge on the problem it solves. The problem specific knowledge is entirely incorporated into the fitness function. This function calculates a basic fitness value of a candidate solution produced by the GA according to an optimization criterion; additional constraints can be incorporated into the function by so-called

penalty terms. A penalty term reduces the fitness of a solution provided that it violates a constraint. The resulting, overall fitness value is used as a feedback to the algorithm.

A problem to be solved by a GA has to be encoded in an appropriate way, because GAs act upon bit strings. Each bit string encodes one part of the information on the problem solution and is called a gene. Genes are grouped to chromosomes; one or more chromosomes form an individual. Each individual encodes a complete solution to the given problem. The quality of this solution, i.e., the fitness of the individual is assessed by the fitness function. A certain number of individuals form a population.

The GA imitates nature's process of evolution by taking one population as parent generation and creating an offspring generation. The algorithm selects the best, i.e., fittest, individuals of the parent population. Here the fitness of an individual comes into play. The better the fitness value of an individual, the greater is the probability that it is selected for reproduction. After the selection the GA mutates some of the genes of the selected individuals by flipping a bit according to a given mutation rate and performs cross-over between the individuals by swapping parts of chromosomes. As a result of this process a new population, a child generation, is created, which is then evaluated. The whole process iterates until a solution of sufficient quality is found. While the GA is capable of generating new solutions to a problem that has been properly encoded, the derivation of an encoding scheme and the selection of a fitness function are up to the user. For a comprehensive description of GAs and their function the reader is referred to [Srin94]. A GA that has been developed for the use as the basis of the scheduler is presented in [Nossa98].

3.2 Swarm Intelligence

Swarm Intelligence [Bana95] is a recent and emerging paradigm in bio inspired computing for implementing adaptive systems. In this sense, it is an extension of Evolutionary computation (EC)[1]. While Evolutionary algorithms (EAs) are based on genetic adaptation of organisms swarm intelligence (si) is based on collective social behavior of organisms. as per definitions in literature, swarm intelligent encompasses the implementation of collective intelligence of groups of simple agents that are based on the behavior of real world insect swarms, as a problem solving tool. The word swarm comes from the irregular movements of the particles in the problem space.SI has been developed alongside with EAs. Some most well-known strategies in this area are discussed below. These trajectory tracking algorithms being inspired by the collective behavior of animals, exhibit decentralized, self-organized patterns in the foraging process.

Swarm Intelligence Principles: SI can be described by considering five fundamental principles.

1) ***Proximity Principle*:** the population should be able to carry out simple space and time computations.

2) ***Quality Principle*:** the population should be able to respond to quality factors in the environment.

3) ***Diverse Response Principle*:** the population should not commit its activity along excessively narrow channels.

4) ***Stability Principle*:** the population should not change its mode of behavior every time the environment changes.

5) ***Adaptability Principle*:** the population should be able to change its behavior mode when it is worth the computational price

-Particle Swarm Optimization

Particle swarm optimization (PSO) is a computational intelligence oriented, stochastic, population-based global optimization technique proposed by Kennedy and Eberhart in 1995[Kenn95]. It is inspired by the social behavior of bird flocking searching for food. PSO has been extensively applied to many engineering optimization areas due to its unique searching mechanism, simple concept, computational efficiency, and easy implementation. In PSO, the term-particles refers to population members which are mass-less and volume-less (or with an arbitrarily small mass or volume) and are subject to velocities and accelerations towards a better mode of behavior. Each particle in the swarm represents a solution in a high-dimensional space with four vectors, its current position, best position found so far, the best position found by its neighborhood so far and its velocity and adjusts its position in the search space based on the best position reached by itself (pbest) and on the best position reached by its neighborhood (gbest) during the search process. In each iteration, each particle updates its position and velocity as follows:

$$x_{k+1}^{i} = x_{k}^{i} + v_{k+1}^{i}$$

$$v_{k+1}^{i} = v_{k}^{i} + c_1 r_1 (v_{k+1}^{i} - x_{k}^{i}) + c_{2k} r_{2k} (p^{g} - x^{i})$$

where, x_k^i represents Particle position
v_k^i represents Particle velocity
p_k^i represents Best "remembered" position

c_1 & c_2 represents cognitive and social parameters,
and r_1 & r_2 are random numbers between 0 and 1.

Steps in PSO algorithm can be briefed as below:

1) Initialize the swarm by assigning a random position in the problem space to each particle.
2) Evaluate the fitness function for each particle.
3) For each individual particle, compare the particle‘s fitness value with its pbest . If the current value is better than the pbest value, then set this value as the pbest and the current particle‘s position, xi, as pi.
4) Identify the particle that has the best fitness value. The value of its fitness function is identified as guest and its position as pg.
5) Update the velocities and positions of all the particles using (1) and (2).
6) Repeat steps 2-5 until a stopping criterion is met (e.g., maximum number of iterations or a sufficiently good fitness value).

4. Conclusion

In the evolutionary algorithm PSO have the good advantages over the Genetic Algorithm:

(a) PSO is easier to implement and there are fewer parameters to adjust.

(b)PSO has a more effective memory capability than GA.

(c)PSO is more efficient in maintaining the diversity of the swarm, since all the particles use the information related to the most successful particle in order to improve themselves, whereas in Genetic algorithm, the worse solutions are discarded and only the new ones are saved; i.e. in GA the population evolve around a subset of the best individuals.

There are many similarities between the PSO and EAs. Both of them initialize solutions and update generations, while the PSO has no evolution operators as does the latter. In a PSO, particles try to reach the optimum by following the current global optimum instead of using evolutionary operators, such as mutation and crossover.

It is claimed that the PSO, in addition to continuous functions, has been showing stability and convergence in a multidimensional complex space also.

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Colored Revolutions, NATO's Expansionism and Russian Strategic Concerns

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ABSTRACT

The collapse of the Soviet Union opened way for new interventions by the United States (US) in the affairs of its erstwhile Republics in a bid to establish control in the region and countervail the Russian advantage in the region. In the changed global setting when the hostilities of the Cold War era were largely expected to end, the mode of intervention also had to be reoriented. The strategy of the US seems to have been two-pronged. On the one hand its time-tested strategy of incorporating friendly regimes into military alliances was continued by expanding the North Atlantic Treaty Organization (NATO) and including members from the region. On the other hand a new strategy of engineering anarchy in the CIS (Former Soviet Republics) as well as Balkan States and then through a network of NGOs and INGOs propping up regimes favorably disposed to the USA was also adopted. Both these measures met with considerable success in the objective of encircling and countervailing the Russian influence in the region.

***Keywords**: Colored Revolutions, NATO, International Non-Governmental Organizations (INGOs)*

The process of regime change has been largely seen as the "spread of freedom and democracy" in the Central Asian Republics. In the new millennium there have been a spate of protests against Governments seen as corrupt and authoritarian, advocating democracy in the erstwhile Soviet Republics and have come to be known in the parlance of international relations as 'colored revolutions'. These movements adopted a specific colour or flower as their symbol. The Colored Revolutions are notable for the important role of Non-Governmental Organizations (NGOs) and student activists have been in the forefront of these movements which have often taken anarchic character and drifted from non-violent protests to sporadic violence. The Rose Revolution in Georgia (2003), the Orange Revolution in Ukraine (2004) and the Tulip Revolution in Kyrgyzstan (2005) are the most prominent of the colored revolutions in the erstwhile Soviet Republics. The turn of events in most of these cases have been remarkably predictable. Massive street protests followed disputed elections or in the wake of corruption

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charges against existing rulers and continued till they managed to secure the resignations or overthrow the leaders who have also been described as authoritarian.

International experts have documented overt and covert role of whole arsenal of US think tanks and foundations- the National Endowment for Democracy (NED); its affiliates the International Republican Institute (IRI), the National Democratic Institute for International Affairs (NDI), the Center for International Private Enterprise (CIPE), and the American Center for International Labor Solidarity (ACILS), International Foundation for Electoral Systems, the Carnegie Endowment for International Peace, Freedom House and George Soros' Open Society Institute, Eurasia Foundation, Inter News, among others in these US franchised revolutions by street action. This has led to the accusation of the Colored Revolutions being engineered to prop up pro-American regimes in the region.

The reality is that the regimes installed by such colored revolutions soon deteriorated into puppet regimes which went in for market-driven reforms and gave huge concessions to the USA. Corruption and families of emergent leaders amassing wealth was common. Unemployment levels rose and there was further impoverishment of the people. Soon neighboring countries and Russia saw the moves at "democratization" as an affront on their security. The Eastern republics and Russia closed ranks and the Shanghai Cooperation Organization where even China and India were included was a direct response. The closing of ranks by the East against US led Western unilateralism is not a sudden development but culmination of a growing backlash against open and blatant US-led Western interventions in the internal affairs of many countries, beginning from Orthodox Slav Serbia, a traditional Russian friend to its near abroad i.e. Azerbaijan, Georgia, Belarus, Ukraine and then finally right into the heart of Central Asia in Kyrgyzstan and Uzbekistan, which made Shanghai Cooperation Organisation (SCO) members to intervene. The SCO call to leave Central Asia alone is the first challenge in the ongoing strategic East and West rivalry which is as old as history.

Recently, Russia and US reestablished inter-governmental commissions to improve bilateral relations. Despite such efforts there is existence of serious confrontation and calls into question the solidity and durability of this partnership between Russia and US due to expansion of NATO. NATO has become far bigger with the incorporation of former Warsaw Pact members like Poland, Hungary, and Czech Republic making it one of the most important international players.

NATO expansion diminishes Russia politically and does so at a time when Russia is already weakened, fairly accommodating and facing great instability at home and on its southern borders. In 2004, Bulgaria, Estonia, Latvia, Lithuania, Slovakia and Slovenia joined NATO. And above all NATO establishing special relation with Ukraine and NATO's east ward expansion provokes Russia to redefine its foreign policy especially in context of US and to reconsider its defense strategy. US continues to perceive Russia as an enemy, thereby pushing NATO troops to Russian borders, attempting to establish ring of military bases and also supporting leaders

hostile to Russia in former Soviet States, hence attempting to gain control over former soviet states. Russia justified establishment of military base in Romania and Bulgaria to deal with terrorist activities in West Asia.

However, Russia sees military bases in Poland and Baltic states as beyond the need or requirement. Rather they perceive such acts were meant to weaken Russia's significance and influence in neighboring states. Russia strongly objects US plans to deploy strategic missile defenses in Europe and offering NATO membership to Georgia and Ukraine. It is apparent that it is in both nations' interest to have strong bilateral relations especially to prevent spread of terrorist activities in Central Asia and Caucasus regions.

Expansion by the US is perceived by Russia as following Cold War fashion in order to contain Russia. Russia's loss in the arms market and arms trade partners in Central and Eastern European countries resulted in a setback as that was a major source of revenue for Russia. Expansion of NATO if it gets into Black Sea region (Ukraine, Moldova) and Caucasus (Azerbaijan, Georgia) would harm vital economic interests of Russia because oil reserves are located in these regions and pipelines to the West pass through these regions. Black Sea is important for Russia for its trade relation. Moreover the coast of Black Sea and Caspian Sea supply wheat and maize needs of Russia. NATO's expansion without raising any serious question about inclusion of Russia poses serious security threat to its integrity and security. It imposes serious threat to strategic interests of Russia.

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पिछड़ी जातीय महिलाओं में शिक्षा के प्रति जागरुकता

डॉ0 सीमा पाण्डेय
असि0 प्रो0–समाजशास्त्र

एस0 एस0 खन्ना गर्ल्स डिग्री कॉलेज, इलाहाबाद

स्वतंत्रता के बाद महिलाओं की स्थिति में व्यापक सुधार हो रहा है। स्वतंत्रता के समय महिलाओं की साक्षरता प्रतिशत 8.86 था जबकि वर्तमान में 65.46 प्रतिशत हो गया है। महिलाओं के साथ जुड़ी सभी समस्याओं का सीधा सम्बन्ध उनकी शैक्षिक स्थिति से जुड़ा हुआ है क्योंकि समाज में हो रहे भ्रूण हत्या, घरेलू हिंसा, दहेज, बाल विवाह, वेश्यावृत्ति आदि बुराईयों से महिलाएं शिक्षित हुए बिना नही लड़ सकती। महिलाए समाज में समानता का अधिकार शिक्षा के माध्यम से ही प्राप्त कर सकती हैं। पिछड़ी जाति वर्ग तथा महिलाएँ प्राचीन काल से ही शोषित रही हैं। इन महिलाओं को विकास की मुख्य धारा से जोड़ना अति आवश्यक हैं। प्रस्तुत शोध लेख बहादुरपुर ब्लाक में निवास करने वाली पिछड़ी जाति की महिलाओं में शिक्षा के प्रति जागरुकता के अध्ययन पर आधारित है।

<u>प्रस्तावना</u> :– वैदिक काल से ही शिक्षा को वह प्रकाश माना गया है जो के जीवन प्रत्येक क्षेत्र को प्रकाशित करने की क्षमता रखता है। इसीलिए विद्वानों ने शिक्षा को तीसरा नेत्र भी कहा है। (ज्ञानम्, तृतीयम्, मनुजस्य, नेत्रम्)

स्वतंत्र भारत के प्रथम शिक्षा मंत्री मौलाना अब्दुल कलाम ने 1948 में एक शिक्षा सम्मेलन में कहा था, "बुनियादी शिक्षा प्रत्येक व्यक्ति का जन्म सिद्ध अधिकार है क्योंकि इसके बगैर वह बतौर नागरिक जिम्मेदारियाँ बखूबी नही निभा सकता।" व्यक्ति, समाज और देश के विकास में भी शिक्षा की भूमिका को स्वीकार करते हुए शिक्षा को विकास की सीढ़ी, परिवर्तन का माध्यम और उम्मीद के अग्रदूत के रुप में परिभाषित किया गया है। देश के भूतपूर्व राष्ट्रपति अब्दुल कलाम ने राष्ट्र के विकास व समृद्धि के लिए शिक्षा को आवश्यक माना है। राष्ट्र प्रणेता स्वामी विवेकानन्द ने शिक्षा के महत्व को प्रतिपादित करते हुए कहा है कि, "राष्ट्रीय शिक्षा की अवहेलना पाप है। साक्षरता से महिलाओं और कमजोंर वर्गों को समर्थ बनाया जा सकता है।"

निः सन्देह रुप से महिलाओं के सामाजिक व आर्थिक सशक्तिकरण का पहला और मूलभूत साधन शिक्षा ही है। अब यह तथ्य स्वीकार किया जाने लगा है कि शिक्षा के माध्यम से ही महिलाओं को शसक्त समान अधिकारों से युक्त व देश के विकास की मुख्य धारा से जोड़ना सम्भव है। "व्यापक अर्थ में शिक्षा का तात्पर्य है, अपने को सभ्य और उन्नत बनाना हैं और यह कार्य जीवन पर्यन्त चलता रहता है।" शिक्षा ने ही भारतीय नारी को जीवन के प्रत्येक क्षेत्र में सफलता प्राप्त करने के लिए प्रेरित किया हैं। तभी नारी ने अपने निज महत्व एंव जीवनगत मूल्य को समझा है और फिर उसे पाने के लिए उसने संघर्ष भी किया हैं।"

शिक्षित महिला से पूरे परिवार समाज, देश व विश्व को लाभ मिलता है। इसलिए स्वामी विवेकानन्द ने कहा था कि " महिलाओं की अवस्था में सुधार लाये बिना विश्व कल्याण असंभव हैं।"

किन्तु दुख का विषय है कि विश्व के सर्वाधिक निरक्षर भारत में हैं और निरक्षरों में अधिकांश महिलाएँ हैं। ऐसी स्थिति में देश में महिलाओं में साक्षरता का प्रकाश फैलाना बहुत जरुरी है, खासकर पिछड़ी, अनुसूचित व दलित महिलाओं में क्योंकि सशक्तिकरण का सशक्त माध्यम शिक्षा ही है। शिक्षा ही वह उपकरण है जिसकी सहायता से महिलाएँ समाज में अपनी सशक्त, सम्मानपूर्ण व उपयोगी भूमिका दर्ज करवा सकती हैं। शिक्षा के जरिये ही महिलाओं की दक्षता, कौशल, ज्ञान एंव क्षमताओं का पूर्ण विकास सम्भव हैं।

स्वतंत्रता प्राप्ति के दौरान देश की महिलाएँ निरक्षर, रुढ़िवादी व परम्परागत नियमों से जकड़ी हुई थी अधिकांश पिछड़ी जाति की महिलाओं के लिए शिक्षा के महत्व को देखते हुए स्वतंत्रता के पश्चात देश में पूर्ण साक्षरता की लक्ष्य प्राप्ति हेतु संविधान लागू होने के दस वर्षो के दौरान चौदह वर्ष तक की आयु के सभी बच्चों के लिए अनिवार्य एंव निशुल्क शिक्षा का प्रावधान किया गया। देश में पिछड़ी जाति की महिलाओं को साक्षर, शिक्षित व सशक्त बनाने हेतु अनेक नीतियों, कार्यक्रमों व योजनाओं को साकार रुप प्रदान किया गया।

<u>उद्देश्य</u> :–

(1) अध्ययन का उद्देश्य पिछड़ी जाति की महिलाओं की शैक्षिक स्थिति जानना।

(2) पिछड़ी जाति की महिलाओं में शिक्षा के प्रति जागरुकता का अध्ययन करना।

<u>शोध प्रारुप</u> :– प्रस्तुत शोध अध्ययन के लिए इलाहाबाद जिले की बहादुरपुर ब्लाक के अर्न्तगत गाँवों को चुना गया है। इन गाँवों में पिछड़ी जाति का बाहुल्य है। अध्ययन के लिये ऐसी 100 महिलाओं को देव निदर्शन के आधार पर चुना गया है जो पिछड़ी जाति की है। तथ्य संकलन के लिए साक्षात्कार अनुसूची का प्रयोग किया गया है। अनुसूची में विषय से सम्बन्धित छोटे तथा सामान्य प्रश्नों को सम्मिलित किया गया जिनमें महिलाओं में शिक्षा से प्रभावित होने वाले आर्थिक, सामाजिक एंव राजनीतिक पहलुओं का अध्ययन किया गया। अशिक्षित महिलाओं से साक्षात्कार द्वारा सूचना प्राप्त करने का प्रयास किया गया तथा हितीयक स्तर पर समाचार पत्र, पत्र–पत्रिकाओं पुस्तकों के माध्यम से आँकड़ों को संकलित किया गया।

<u>उपलब्धियाँ</u> :– भारत में कुल आबादी 121 करोड़ है, वहीं भारत में जनसंख्या वृद्धि दर 17,64 प्रतिशत है। भारत में 10 साल (2001–2011) में 18,1 करोड़ लोग बढ़े हैं। देश में 62 करोड़ 37 लाख पुरूष और 58 करोड़ 65 लाख महिलाऐं हैं, देश में 1000 पुरूषों पर 914 महिलायें हैं। देश में 74 प्रतिशत लोग साक्षर हैं।

तालिका न0–1

पिछड़ी जाति की महिलाओं के अशिक्षित होने के कारण

अशिक्षित होने के कारण	प्रतिशत
गरीबी	40
स्कूल /कॉलेज दूर	15
पुरूष प्रधान समाज	18
जागरूकता की कमी	9
सामाजिक रूढ़िवादिता	12
महिलाओं की अनिक्षा	06
कुल योग	100

तालिका सं01 से स्पष्ट होता हैं कि 40 प्रतिशत महिलाओं के अशिक्षित होने का कारण उनकी आर्थिक स्थिति का निम्न होना है, पारिवारिक खासकर पुरूष सदस्यों के असहयोग करने पर 18 प्रतिशत महिलाओं ने अपनी पढ़ाई को पूरा नहीं किया। 15 प्रतिशत महिलाओं ने स्कूल दूर होने के कारण अपनी पढ़ाई छोड़ दिया। जागरूकता की कमी के कारण शिक्षा के महत्व को न समझते हुए 09 प्रतिशत महिलाओं ने पढ़ाई को प्राथमिक तथा माध्यमिक स्तर पर छोड़ दिया। 12 प्रतिशत महिलायें सामाजिक रूढ़िवादिता के कारण अर्थात लड़कियों का अधिक नही पढ़ना चाहिए उन्हें आगे चलकर घर गृहस्थी ही सम्भालनी है जैसी रूढ़ियों की शिकार हुई। 06 प्रतिशत महिलाओं ने पढ़ाई में रूचि न होने के कारण अपनी पढ़ाई को प्राथमिक स्तर पर ही छोड़ दिया।

तालिका न0 2

क्षा प्राप्त करने के लिए प्रेरित करने वाले सदस्य

प्रेरित करने वाले सदस्य	प्रतिशत
माता–पिता	8
पति	4
स्वयं	70
कोई भी नही	18
कुल योग	100

अध्ययन के अर्न्तगत पढ़ाई बीच मे छोड़ देने पर आगे की शिक्षा प्राप्त करने के लिए क्या उन्हें प्रेरित किया जाता है ? अध्ययन में यह पाया गया कि 70 प्रतिशत महिलाएँ स्वयं ही शिक्षा की आवश्यकता को देखते हुए प्रेरित होती रही है। वह इस बात को समझ रही है कि शिक्षा द्वारा ही विकास सम्भव है।

तालिका न0 3

आगे पढ़ाई जारी रखना चाहती हैं

आगे पढ़ाई जारी रखना चाहती है	प्रतिशत
हाँ	90
नहीं	02
शायद	08
कुल योग	100

आगे अपनी पढ़ाई जारी रखना चाहती हैं या रूकी हुई पढ़ाई दूबारा शुरू करना चाहती है के प्रश्न पर 90 प्रतिशत महिलाओं ने हाँ में जवाब दिया। मात्र 02 प्रतिशत महिलाएँ ऐसी थी जिन्हें आगे पढ़ने की इच्छा नहीं थी। 08 प्रतिशत महिलाओं ने टालते हुए शायद में हाँ बोला।

निष्कष :– प्रस्तुत अध्ययन में पाया गया कि महिलाओं की साक्षरता स्थिति में सुधार हुआ है। किन्तु पिछड़ी जाती की महिलाओं की अशिक्षा के कारण विभिन्न सामाजिक, आर्थिक, राजनीतिक समस्याओं का सामना करना पड़ता है।

सुझाव :–

(1) पिछड़ी जाति की महिला शिक्षा को बढ़ावा देने के लिए गाँवों में महिला समितियों का गठन किया जाए। ताकि वें महिलाओं को शिक्षा के महत्व को समझा सकें, शिक्षा के लिए प्रेरित व प्रोत्साहित कर सकें।

(2) पिछड़ी जाति की बालिका–शिक्षा के प्रति जागरूकता, जाग्रति व संवेदना उत्पन्न करने के लिए स्वयं सेवी संगठनों की सक्रिय सहभागिता प्राप्त की जा सकती है।

(3) गरीब वर्ग की छात्राओं की फीस परिधान व शिक्षण सामग्री की व्यवस्था के लिए ठोस नीति को क्रियान्वित किया जाए।

(4) विद्यालयों की घर से भौगोलिक दूरी भी शिक्षा में बाधक है। इस बाधा को दूर करने के लिए बालिकाओं के लिए सरकारी बसों में निःशुल्क यात्रा की व्यवस्था, साईकिल आदि की व्यवस्था की जा सकती है।

(5) महिलाओं के लिए शिक्षा अनिवार्य करना चाहिए।

अध्ययन के सुझावों को क्रियान्वित करके महिलाओं की शैक्षणिक स्थिति में अवश्य सुधार लाया जा सकता है क्योंकि जब तक महिलाएँ साक्षर नही होगी देश का विश्व गुरू के पद को पुनः प्राप्त करना सम्भव न होगा क्योंकि शिक्षा जैसी मौलिक आवश्यकता को पूरा करना एक चुनौती है। अतः इस चुनौती का सामना करने के लिए शिक्षा से सम्बन्धित सभी योजनाओं का क्रियान्वयन प्रभावी ढंग से व ईमानदारी से किया जाना आवश्यक है।

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A Review of Privacy Protection of Cloud Storage By Steganography Techniques

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Abstract: *Cloud computing is one among the most recent growing area in the field of IT industry also called on-demand computing.The growth in field of cloud computing can increase threat security aspects. So security has remained a relentless concern for day today usage of internet, networking and cloud computing is affected. However the general public communication channels are liable to security attacks that may cause unauthorized access to some info. Encryption has been accustomed persist and forestall these attacks. However once the data is decrypted it'll be exposed to the attackers once more and it'll not have any security protection. Steganography is that the science of embedding the secret information among different medium files (text, audio, image, and video) during a method that hides the existence of the secret message at all. This paper provides the details of Cloud computing and steganography presents with a quick review of cloud services, trust, privacy, security and also projected numerous steganography techniques recently introduced by various researchers around the globe. The main motive of concerning this paper is to make more secured your cloud data and also introduce the technique to make it better approach. So that user has full trust on cloud data. Hence, it provides responsibleness, measurability, high performance and relatively low value feasible solution as compared to devoted infrastructures.*

Keywords: Cloud Computing, Cloud Services, Data-centers, Encryption, Hybrid Cloud, Steganography, Third Party Auditor (TPA).

1. Introduction

The paper will mainly focus on Cloud security with your confidential data. For dealing this term, we've discussed various terminologies but mainly focus on two terms such as

"Cloud Computing" and "Steganography". Also, we've explained about the how security can be enhanced the cloud security data using steganography. We've also walk through about different kind of cloud services and current issue, challenges and Methods.

1.1. Cloud Computing

Cloud computing one of the fast growing field in IT industry because of various functionality

which makes very easy life in terms of work. Before going into deep into cloud, then first let me introduce the exactly what is cloud? For answering this question, very simple manner. “Instead of saving everything in your local machine, save somewhere itself and access your information the same manner via internet.” Cloud is not limit with your personal PC but we can access this service with any device where you can access internet as shown in fig.1.

The fundamental idea of cloud computing originated within the 1950s, once companies and learning institutes prioritized the potency of their large-scale mainframe computers, permitting multiple users each physical access to the pc from multiple terminals also as shared central process unit time. However it extremely wasn't till the past decade roughly that cloud computing extremely began to change into the behemoth. We all know these days, after the long dot-com, finally the development of cloud computing has e-trail with in 2000s by big company like Amazon and really they played a vital role for enhancing the functionality.

This accessibility of high-capacity networks and affordable computers, along with the widespread adoption of virtualization and service-oriented design. In this paper the focus on cloud computing overview to enhanced the cloud data security and why it become more popular in now-a-days. How cloud computig providing data privacy, Trust and security for cloud users. It will also give you better understanding about the confidentials information hinding technique using steganography.

1.1.1 Cloud Deployment Models

Table1 1: Types of Cloud and Related Associations

Deployment model	*User*	*Accomplished By*
Private cloud	Private association	An organizations or a third party.
Public Cloud	General public or a large industry group.	An organization or selling cloud services.
Hybrid Cloud	Combination of multiple clouds (private, community, or public)	An specifics organization or a third party vendor
Community Cloud	Shared by several groups and supports a specific community.	An organization or selling cloud services.

1.1.2. Cloud Services

A. Types of Cloud Computing

Cloud computing infrastructure providers provide leverage cloud computing for access to software [5], development platforms and physical hardware as shown in fig.2. These assets

become virtualized and available as a service from the host these services can be classified in three categories [4].

a) **Saas:** Software-as-a-Service provides an application andInformation service on cloud, this type of cloud is referring to a business-level service. Typically available over the public Internet (Google App Engine).

b) **PaaS:** Platform-as-a-Service provides developmentservice on cloud; cloud development platforms enable application authoring and provide runtime environments without hardware investment (Windows Azure).

c) **IaaS:** Infrastructure-as-a-Service provides Infrastructureservices on cloud, this type of cloud enables IT infrastructure to be deployed and used via remote access and made available on an elastic basis (Amazon Web services).

The above characterization is very much acknowledged in the business. David Linthicum depicts a more granular grouping on the premise of administration gave. These are:

- Backups-data-as-a-service
- DB-as-a-service
- Information-as-a-service
- Process-as-a-service
- Application-as-a-service
- Remote-Platform-as-a-service
- Integration-Service-as-a-service
- Security/Privacy-as-a-service
- Administration/Governance-as-a-service
- Testing-as-a-service

1.2 Steganography

this paper, we have a tendency to specialize in the various steganography strategies. Steganography is be a Greek work which implies the covered writing. Steganography is associate art of hiding data in an exceedingly covered media (image, audio, video, text). In Steganography, we have a tendency to hide the mere presence of that it'll be undetectable and basic process as shown in fig.3. The lined media is chosen in such a fashion that it's capability to cover the information and hardiness that has quality to the stego image. As within the future years the requirement of knowledge activity, copyright protection, and confidentiality will increase, steganography plays a crucial role in this field as a result of its some distinctive options. In

Steganography thus not only emphasize on the art of hiding information but also the art and science of hiding the communication that take place [14]. First applications of Steganography were documented by Herodotus, a Greek historian. During the century, the methods of using

invisible inks were extremely popular [16]. During the World War II where people used ink for writing hidden messages, this was true [15]. The mixture will turn darker and the written message becomes visible upon heating. After some time, the Germans introduced the microdot technique, where microdotsare considered as photographs as small as a printed period, but with a clear format of a typewritten page [13, 20]. They were included in a letter or an envelope, and because of their tiny sizes, they could be indiscernible. Microdots were also hidden in body parts including nostrils, ears, or under fingernails [14].The military and several governmental agencies are looking into steganography for their own secret transmissions of information.

1.2.1. Types of Steganography

Text Steganography: It consists of concealing data withinthe text files. In this methodology, the key data is hidden behind each ordinal letter of each words of text message. Numbers of ways are accessible for concealing knowledge in document. These ways are i) Format based mostly methodology; ii) Random and statistical Method; iii) Linguistics Method.

Image Steganography: It concealing the info by takingthe duvet object as image is referred as image steganography. In image steganography element intensities are accustomed hide the info. In digital steganography, pictures are widely used cover source as a result of there is range of bits presents in digital illustration of a picture.

Audio Steganography: It involves concealing data inaudio files. This methodology hides the info in WAV, AU and MP3 sound files. There are completely different ways of audio steganography. These ways are i) Low Bit encryption ii) phase coding iii) spread Spectrum.

Video Steganography: it's a method of concealing anykind of files or data into digital video format. In this case video (combination of pictures) is employed as carrier for concealing the info. Typically separate trigonometric function transform (DCT) alter the values (e.g., 8.667 to 9) that is employed to cover the info in every of the images within the video, that is unnoticeable by the human eye. H.264, Mp4, MPEG, AVI are the formats used by video steganography.

Network or Protocol Steganography:

It involves concealing the knowledge by taking the network protocol like TCP, UDP, ICMP, IP etc., as cover object. In the OSI layer network model there exist covert channels wherever steganography are often used.

1.2.2. Steganography Techniques

A. Spatial Domain Methods: In this technique the secretinformation is embedded directly in the intensity of pixels. It means that some pixel values of the image are modified directly throughout hiding information. spatial domain techniques are classified into following categories: i)Least significant bit (LSB) ii) pixel value differencing (PVD) iii) Edges based} information embedding

technique (EBE) iv) Random pixel embedding technique (RPE) v)Mapping pixel to hidden data technique vi) Labelling or connectivity method and vii) pixel intensity based.

LSB: In this technique the embedding is finished bycommutation the least significant bits of image pixels with the bits of secret information. The image obtained after embedding is nearly the same as original image as a result of the modification in the LSB of image pixel doesn't bring too much variations in the image.

PVD: In this technique, 2 consecutive pixels aredesignated for embedding the information. Payload is set by checking the distinction between 2 consecutive pixels and it serves as basis for distinctive whether or not the 2 pixels belong to a grip space or smooth area.

Spread Spectrum Technique: In this methodology thesecret data is spread over a good frequency bandwidth. The quantitative relation of signal to noise in each frequency band should be therefore tiny that it become tough to discover the presence of information. Even if parts of information are off from many bands, there would be still enough data is present in different bands to recover the data.

Statistical Technique: In the technique message isembedded by changing many properties of the cover. It involves the ripping of cover into blocks and then embedding one message bit in every block. The cover block is changed only if the scale of message bit is one otherwise no modification is needed.

Transform Domain Technique: In this technique; thesecret message is embedded within the transform or frequency domain of the cover. This can be an additional advanced approach of hiding message in a picture. There is a different algorithms and transformations are used on the image to hide message in it. The transform domain techniques are loosely classified like i) discrete Fourier transformation technique (DFT) ii) discrete cosine transformation technique (DCT) iii) discrete wavelet transformation technique (DWT) iv) lossless or reversible technique (DCT) and v) Embedding in coefficient bits.

Distortion Techniques: In this technique the key messageis hold on by distorting the signal. A sequence of modification is applied to the cover by the encoder. The decoder measures the variations between the initial cover and the distorted cover to discover the sequence of modifications and consequently recover the key message.

Masking and Filtering: These techniques hide data bymarking a picture. Steganography only hides the data wherever as watermarks becomes a beverage of the image.

These techniques inserted the data in the more significant areas instead of hiding it into the amplitude level. The watermarking techniques can be applied without the concern of image destruction due to lossy compression as they're additional integrated into the image. This methodology is basically used for 24-bit and grey scale pictures.

2. Related Work

An Efficient Certificate less Encryption for Secure Data Sharing in Public Clouds [1]

Here the authors give a really solid technique of maintaining the integrity of information. In this paper, first data is getting encrypted with Mediated certificateless public key encryption (mCL-PKE) scheme without using pairing operations which help to secure the data on public cloud. For getting back, based upon successful authorization, the cloud partially decrypts the encrypted data for the users and vice-versa.

Cloud Information Security Using Third Party Auditor and Cryptographic Concepts [2]

In this paper the authors has mainly focus an abstract view of different schemes proposed in recent past for cloud data security using Third party Auditor (TPA). The proposed model of the scheme in which the (TPA) will not have any kind of data stored in it. It will just maintain the log of each incoming request and outgoing response through Message Digests i.e. as its name suggests it will just audit all the transactions happening, and as the data encryption/decryption is done at client side only this scheme also solves the problem of integrity.

Secure Erasure Code-Based Cloud Storage System with Secure Data Forwarding [3]

In this paper, the authors have deal about the storage system with new technique. The proposed system considering a cloud storage system that consists of storage servers and key servers. We need to integrate a newly the proposed threshold proxy re-encryption scheme and erasure codes over exponents. The threshold proxy re-encryption theme supports secret writing, forwarding, and partial decipherment operations in an exceedingly distributed method. By using the threshold proxy re- encoding scheme, we have a tendency to present a secure cloud storage system that gives secure information storage and secure data forwarding practicality in a redistributed structure.

Robust Data Security for Cloud while using Third Party Auditor [4]

This paper discussed about the cloud computing security specially when data is in the plain format and also points that, how we can make data much more secured. Here, it present some way to implement Third Party Auditing (TPA) who not only check the re-liableness of Cloud Service provider (CSP) however additionally check the consistency and accountability of information. It also addresses this challenging open issue of integrity and data dynamics.

Spatial Domain Image Steganography based on Security and Randomization [5]

The objective of the paper is to increase the capacity of hidden data in a way that security could be maintained. Here they have introduced the technique called steganography. The Proposed method is achieving highest capacity among all existing methods without any distortion in image. When proposed method has been performed on different images, it has given constant

result but other existing methods gave different results on different images.

A Review on Steganography Methods [6]

The authors of this paper have review about all steganography methods and how it's much more secured while traveling your data into network. This paper provides an overview of different steganography methods that satisfy the most important factors of steganography design. Moreover, this also explores the different method of data hiding: image steganography, audio steganography, video steganography, text steganography, steganography in spatial domain, transform domain and adaptive steganography.

Capacity of Steganographic Channels [7]

In this paper, it deals regarding the "how much information will safely be hidden without being detected?" For respondent this question, the planned technique uses an information-spectrum approach that permits for the analysis of absolute detection functions and channels. This provides machinery necessary to investigate a really broad vary of Steganographic channels. This approach permits for the analysis of absolute steganalyzers further as nonstationary, non-ergodic encoder and attack channels.

3. Security Issues, Challenges andMethodology

3.1 Factor affecting for cloud Users

Normally the cloud users can have differing types of logins, however it'll direct to the authentication problem. The only sign up provides the user level authentication. To extend the info handiness by using dynamic cloud storage servers among the cloud infrastructure proper intrusion prevention and detection elements are enforced with virtual firewall and IPS should be put in to protect the cloud network. In addition, the single management console is used for safeguarding the cloud network. The virtual management clients are Virtual Network Computing (VNC), Secure Shell (SSH) protocol, Secure Sockets Layer (SSL) protocol.

3.2 Challenges of Existing Cloud Computing Solutions

Like any new mechanism of technology, we tend to must address some challenges that cloud computing poses before we are able to acknowledge its full value, these includes lack of interoperability. The word interoperability is combination of 2 terms internal and portability, which means of the term movability, is ability to move a system one platform to another thus it provides the feature of internal movability capability to the cloud infrastructure; the cloud ability has the nice attention in literature.

The absence of standardization across cloud computing platforms creates unneeded complexness and leads to high shift costs. Every compute cloud vendor incorporates a completely different application model, several of that are proprietary, vertically integrated stacks that limit platform selection. Customers don't wish to be locked into one supplier and are usually reluctant to relinquish management of their mission-critical applications to hosting service providers.

3.3. Factors Affecting a Steganographic Methodology

The effectiveness of any Steganographic methodology may be determined by comparing stego-image with the cover Image. There are some factors that determine the potency of a method. These factors are:

1. **Robustness:** Robustness refers to the power of embeddeddata to stay intact if the stego-image undergoes transformations, like linear and non-linear filtering, sharpening or blurring. In addition of random noise, rotations and scaling, cropping or devastation, lossy compression.
2. **Imperceptibility:** The physical property means thatinvisibleness of a Steganographic algorithmic rule. It's the primary and foremost demand, since the strength of steganography lies in its ability to be ignored by the human eye.
3. **Payload Capacity:** It refers to the number of secret infowhich will be hidden in the cover source. Watermarking sometimes embed only a little quantity of copyright info, whereas, steganography focus at hidden communication and thus have comfortable embedding capability.
4. **PSNR (Peak Signal to Noise Ratio):** it's outlined as the ratio between the utmost possible power of a symptom and also the power of corrupting noise that affects the fidelity of its illustration. This ratio measures the standard between the original and a compressed image. The upper value of PSNR represents the higher quality of the compressed image.
5. **MSE (Mean sq. Error):** it's outlined as the averagesquared difference between a reference image and a distorted image. The smaller the MSE, the additional efficient the image steganography technique. MSE is computed constituent-by-pixel by adding up the squared variations of all the pixels and dividing by the entire pixel count.
6. **SNR (Signal to Noise Ratio):** it's the ratio between thesignal power and also the noise power. It compares the amount of a desired signal to the level of background noise.

3.4. Solution for Steganographic Methodology with cloud:

If users try to saved, stored and share cloud data with stego-technique then the information will become highly confidential. There will be no chance for loss information for any point of view until the sender and receiver has licked the information. Using this technique, each user can access the information across the globe without any data loss.

4. Benefits and Applications

- The main benefits of cloud computing using across various platform in terms of i) Scalability, ii) Improved reliability, Less infrastructure costs, iv) Enhance utilization, v) Improve end-user productivity, vi) Highly secure and vii)) Energy efficient.
- The main benefits of the steganography is used to hiding the secret information with any kind of multimedia items and share, save and store your confidential data across the globe. The most benefits is using this technique, only sender and receiver are able to get the actual information.
- It is used mainly in almost all IT company such as Amazon, Google, Microsoft, Salesforce and so on for providing and getting service from provider to enhance the data portability, Remote IT infrastructure and backups for future purpose.
- It is used mainly in i) Copyright Protection, ii) Feature Tagging such as Captions, annotations, time stamps, iii) Secret Communications iv) Digital Watermark and also v) Uses by terrorists.

5. Conclusion

In this paper we have a tendency to present brief review of cloud computing that scope is huge in space of knowledge technology accessible by everybody. Here we tend to describe cloud threats, benefits, challenges, provides reliability, scalability, high performance and relatively low value feasible resolution as compared to devoted infrastructures. Here we main focus on security privacy and trust and publically cloud infrastructure. In the past few years, Steganography has become an interested field of information hiding techniques. This paper provides an outline of various steganography strategies that satisfy the foremost important factors of steganography design. These are un-detectability, capability and robustness.

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Birth of 'Dhatri Devota': A museum in Memory of Tarashankar Bandyopadhyay at Labhpur.

Samima Nasrin

Abstract : Labhpur is known for the Fullara Shakti peeth. But it has another attraction too. As it is the birth place of Tara Shankar Bandyopadhyaya, a famous literary person of post Sarat Chandra era in Bengal. His novel 'Dhatri Devata' published in 1939. Besides, his cutcherry is also known as the same. After 1997, the author's ancestors donated it to the Panchayat Samiti with certain conditions. But 'Tarashankar Shotobarshiki Committee failed to fulfill its purposes. Palash Bandyopadhyaya, the athor's ancestor, converted it into legal issue. After a major political change in 2011, the new government showed a positive attitude towards the project. 'Birbhum Sangskriti Bahini' and its polar star Ujjwal Mukherjee played a spontaneous and active role in restoration and preservation of the cultural heritage. Now, 'Dhatri Devota' becomes one of the major attractions to the travelers.

Keywords : Shakti peeth, author, Dhatri Devota', author's ancestors, panchayat samiti, guest house, Birbhum Sangskriti Bahini.

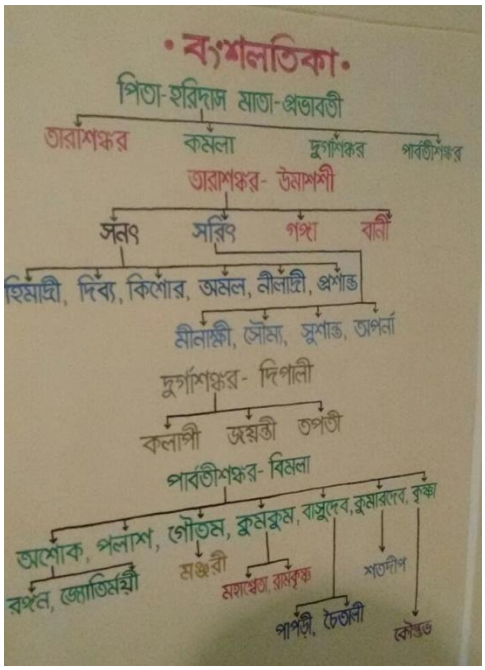
Labhpur is situated 11 KM towards the east from Ahmedpur and 32 KM towards the east from Suri (District head quarter), Birbhum. The place is popularly known for the Goddess Fullara. According to the legend, Daksha performed a yajna with a desire to insult Lord Shiva. He invited all the deities except his daughter Sati and his son-in-law Lord Shiva. Though Sati was eager to attend in that ceremony and expressed her desired to her husband who persuaded her not to go but all was in vain. Being an uninvited guest, Sati was not given any respect at the yajna. Besides, Daksha insulted Lord Shiva. Being unable to bear her father's insults towards Lord Shiva, Sati immolated herself. For this, Lord Shiva cut the head of Daksha with trident and picking up the Sati's body, he performed the celestial dance of destruction (Tandava) across all creation. Being terrified all the deities requested to Lord Vishnu to protect the creation and that is why Lord Vishnu cut the Sati's body off several pieces. These pieces fell at several places all through the Indian subcontinent and formed pilgrimage sites. Birbhum is blessed with possession of five Shakti Peethas among the famous fifty one Shakti Peethas. These are Bakreswar ("Bakreswar Monoh Pato Bakronathastha Bhairab/Nadi Pap Hora Totro Devi Mohishamordini" – Peethmala Mahatantra) near Suri, Nandipur or Nandiswari at Sainthia ("Har Patee Nandipure Bhairav Nandikeswarah/Nandini Sa Mahadevi Tatro Siddhimobastoyam" – Peetha Mahatantra), Attahasa at Labhpur ("Attahaso Chosto Patee Devi Sa Phullara Smrita/Bisweso Bharavstotra Sirdhinrinsongsoi" – Peethmala Mahatanta), Kankalitala near Bolpur ("Kanchideshe Kankali, Bhairab-ruru namak/Debata Debogorbhyobhikhya Nitambakal Madhabe" – Peethmala

Mahatantra) as well as Nalhati2. The lower lip of Sati fell at Attahasa Shakti Peetha Labhpur. The religious people come to this place for inner peace. But Labhpur has another attraction too. It is known to the cultured people as birthplace of the famous literary person Tarashankar Bandyopadhyaya.

The red soil of Birbhum gave birth of many literary person. For example, Jaidev who was court poet of Laxman Sena, was born at Kendubilba on the bank of Ajoy. Likewise, Bhavadev Bhatta (wrote 'Praioschitto Prakoron', 'Dashokormo Paddhati') of Siddhal village, Murari Mishra (wrote Anarghyo Raghab'), Gango Narayan (Wrote 'Bhabani Mongol Kavya') of Hatikanda, Mrasingha Basu (wrote 'Dharma Mongol' Thakur Jgadananda (wrote Vaishnav Padavali) of ……., Mrismimhaballav Mitrathakur (wrote kirtan songs) of Mainadal, Maharaja Nandakumar (lyrical ballads) of Bhadrapur, Chandidas (wrote Vaishnav Padavali) of Nanur, Dvija Amar Sinha & Bikol Chattopadhyay (wrote Satynarayan Kotha), Dakshinaranjan Mukherjii (wrote 'Apurvo Swopno Kavya' Shobdo Ratnakar') of Suri, Shiv Ratan Mishra (poet) of Barora Nilratan Mukhopadhyaya (researcher and article writer) of Jamna, Mahimaniranjan Chakraborty (the prince of Hetampur who ……. 'Birbhum Anusandhan Samiti and edited 'Birbhum Bibaran') etc. 3

Tarashankar Bandyopadhyaya (1898-1971) is no doubt the best novelist in post Sarat Chandra Chattopadhyaya period. He at first enlisted among the 'Kallol' and wrote a few poems. In the later period, he become conscious of his own individuality and freed himself from the 'Kallol' shelf to the largest field of novel. The dying feudal life and its replacement by industrial life was described vividly in his novel. The villages suddenly turned into town blessed by giant machines. Characterless people took shelter in warehouse for wealth and prosperity. Except Rabindranath Tagore, none could reach into the vivid subjects of life in short stories like Tarashankar Bandyopadhyaya. His easy going nature with the Santhals, the Vaishnavists, the followers of the Tantras, the Bauls, the jugglers, the gypsies and other mysterious persons helped him to portrait the unknown avoided world of the common people. In writing the epic style novel, his place in Bengali literature is just after Gurudev Rabindranath Tagore who wrote 'Gora'. But he had limitations too. He often compared with Sarat Chandra Chattopadhyaya who wrote mainly on personal problems of men and women in family and social life. Tarashankar Bandyopadhyaya expanded his case are and that is why his writings became not such deep (rather shallow) as Sarat Chandra Chattopdhyaya).4

Inside Museum



Family Tree (labour room)

Picture of Tarashankar Bandopadhyaya's Personal Things (labour room).

The so-called 'Dhatri Devota' building was Tarashankar Bandyopadhyaya's cutcherry. As his predecessors were zamindars, this mentioned building was used for office work of the estates. His own home was situated just nearby in the opposite direction. When he went to Kolkata and became a renowned literary person, he became accustomed to stay in the cutchery house in his native place instead of his own home. He named this house the present name in the 1960's decade. Though local people knew it as his cutcherry. Before celebrating the birth

centenary in 1997, his family donated that particular house to the local Panchayet Samity in 1996. His family started to live in Kolkata near Tala tankad Tarashankar Sarani from 1950's decade. His elder son passed away in early stage. But his younger son Sarit Bandyopadhyaya often came to 'Dhatri Devata' to spent his time. So, they put a condition to the Panchayat Samiti that its purpose was to collect the memories of the poet as well as to study on him and besides to prepare a quest house where the ancestors would be allowed to stay in future. For this purpose, 'Tarashankar Shatoborsho Committee' formed. This committee proposed to work at Tara Ma Danga. The writer's family positively thought the proposal and donated land (two bighas) for this purpose in a big sphere. Monies were coming from many

Dhatri Devata

schemes like MPLAD scheme. For example, Somnath Chattopadhyaya, a former MP contributed in this issue. A storied building storied took it shape. The ground floor stored building was kept for museum purpose. There was an auditorium hall in the first floor. But Palash Bandyopadhyaya accused in court that this building had engaged more in political work than its cultural purpose. This legal issue is still under the consideration of court. Mahadev Dutta (a big merchant of Labhpur) and Suprabhat Batabyal (CPIM leader) were jointly secretary of 'Tarashankar Shatabarshiki Committee'. It has evidence that this building at Tara Ma Danga was used for CPIM party's zonal meeting. Only the birthday of the writer was celebrated in this house. The print media like Anandabazar Patrika, Sangbad Pratidin and Ajkal often published the stagnant condition of the project. 5

After a major political change in 2011 a meeting was held in DM office. Ujjwal Mukhopadhyaya, an active devotee of 'Birbhum Sangskriti Bahini', attended in the mentioned meeting. The present government positively thought about the preservation of writer's memory. This positive meeting led to another meeting in B.D.O. Office. A governmental aids of Rs. 11/-

lacs were granted from ministry of Travel and Tourism Department for preserving 'Dhatri Devata'. But this grant was transferred to 'Tara Ma Danga'. A protest was held for the transfer of money in the mentioned meeting in B.D.O. at Labhpur. 6

Besides, there was another legal complexity. The writer's ancestors donated the heritage place to the Panchayat Samiti. But this type of donation would get legal problem in getting governmental aids as it needed to pass a bill in state assembly. The low capacity of Panchayat Samiti was not enough in providing regular staff for looking after the maintenance and security, providing electrical cost. After Panchayat Election in 2013, contemporary ADM of Birbhum District Shri Bidhan Roy actively acted as a middle man between Birbhum District Administration and the complexity regarding 'Dhatri Devata'. Shri Bikash Roy Chaudhury, the Chairman of Birbhum Zilla Parishad also played a major role. The district administrative body under contemporary DM collected Rs. 1,00,000/- Many people had many demands. For example, one of the demands was for bathroom. Ujjwal Mukhopadhyaya proposed for preserving the rate pictures of the author as well as his used materials in a chronological order to make a 'bio-pic' of the live author and to electrify those for focusing the visible materials to the visitors. The budget was fixed for Rs. 25,000/-. But after the conflict between the author's ancestors and the 'Tarashankar Shotobarshiki Committee', What they had promised to donate the authors used materials, rare photos etc. to the 'Dhatri Devota', they donated maximum things to 'Bangla Academy', 'Bongioyo Sahityo Porishad' and Rabindra Bharati University. Even the 'Gyan Peeth' prize was at Labhpur. But after the celebration of birth centenary of the author, it was took away in Kolkata by the author's relatives. 7

Seeing the lights of hope, Ujjwal Mukhopadhyaya became a middle man to persuade and to fill the gap between the author's ancestors and the native people. For his continuous effort, they again agreed to donate the rare biographical pictures to the 'Dhatri Devata'. They also convinced to the District Administrative body for a guest house and their right to stay there whenever they would visit their native place Shri Bidhan Roy and Shri Bikash Roy Chowdhury proposed for a two storied building on 9000 square feet for guest house and estimated Rs. 19 lacs for this. 'Birbhum Sanskriti Bahini' convinced that they could complete the project within Rs. 10 lacs. Kesto Pal, Basudev Bandyopadhyay and Joy Bandyopadhyaya donated a land adjacent to the 'Dhatri Devata' for guest house. A two storied building had built on 2100 square feet (approximate) area. It consisted of verandas and a stair case upto second floor. A latrine-cum-bathroom had also built aside the building. At this development, the author's ancestors promised to provide the author's Punjabi, a proof copy of 'Gono Devata' a desk etc. 8

Ujjwal Mukherji, An Active Member of Birbhum Sangskriti Bahini.

'Birbhum Sangskriti Bahini' gets full responsibility to put under care the 'Dhatri Devata' from 2015. Primarily they burnished the katum-kutums (wooden sculptures) prepared by the writer. They made the adjacent houses of the 'Dhatri Devata' into rent houses for the poor students. At present, they are giving Rs. 1300/- per month as rent. There are five students in the rent houses. Only two rooms are allotted for them. Three pupils age staying in the big room and each of them are giving Rs. 200/- per month. Two pupils are staying in the small room and each of them is giving Rs. 350/- per month. That is how 'Birbhum Sangskriti Bahini' has solved the problem regarding night guard. A committee has framed and its name is 'Dhatri Devata Unnayan Committee'. This committee has a separate account. Where the rent amount goes as savings. A regular staff is engaged from 11 a.m. to 5 p.m. for cleaning the museum, to burn incense sticks and for prostration to the author's photo daily. He has also duty to the visitors. It is worth to mention that three ancestors of the author (Amal Shankar Bandyopadhyaya, Soumya Shankar Bandyopadhyaya and Basudev Bandyopadhyaya) are members of 'Dhatri Devata Unnayan Committee'. It is a good news for the 'Dhatri Devata' that an inauguration ceremony will be held to start the guest house on 24th July, 2016 (the author's birth anniversary). 9

Tapan Sinha, the famous film director, once said, " He knew every trees of here". He even made a film based on the author's novel 'Hansuli Banker Upokatha'. The writer's literary creations, like 'Hansuli Banker Upokatha', 'Ganadevata', 'Dhatri Devata', 'Kalindi', 'Naginikonyar Kahini', 'Panchogram', 'Arogya Bohni', 'Arogya Niketan', 'Tomosha', 'Dainik', 'Raikamal', 'Jogbhrosto', 'Rosokoli', 'Radha', 'Champdanagar Bou', 'Na' etc. overcame it's local nature and enlisted among the world literature. In his last life he tried to write something devoid of Birbhum but those were his weak creation of course. 10 By establishing this museum, the local people put a step forward to aware the society to pay honour to their history and culture. The foreign scholars often blamed that the ancient Indians had not such sense of history. Though

their blame is not wholly true. But if we focus on Labhpur, there is a 'Vandemataram Theatre Club' which is now converted into a factory and none is eager to Restoration of the heritage. 'Birbhum Sangskriti Bahini' is now thinking of putting a placard nearby the factory. Basudev Mukhopadhyaya spontaneously shows the visitors the labour room where the author saw the first light of the earth. A family tree and fragments of his poem has written on the wall. Some documents like his matriculation certificate etc. are also put to display. It is true that rural tourism is the future of India. Labhpur has enough potentialities to twinkle in the tourism map of India. The Fullora Shakti Peetha and an annual fair, regarding this, Hansuli Bank (a curve of Kue river looks like a crescent-necklace), Tara Ma Danga (a field adjacent to the temple of the Goddess Tara to whom the author's parents prayed for the birth of the author) are the main attractions to the visitors. The new broad gage railway connection optimizes the tourism. The birth of this museum and its bright future no doubt put a new father in the cultural and economical spehere of Labhpur as well as of Birbhum (W.B., India).

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AN ASSESSMENT OF SELF ESTEEM BETWEEN VOLLEYBALL AND BASKETBALL MALE PLAYERS

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Abstract

The Purpose of the study was to assessment the state self esteem level between volley ball and basketball male players. One hundred (100) male volleyball & basketball players were selected randomly from uttar pradesh state as the subjects of the study. Their age ranged from 18 to 25 years. Self esteem was assessed by the total scores in state self-esteem questionnaire constructed and standardized by Heatherton, T.F. & Polivy .The data was analyzed by applying't' test in order to determine the psychological differential between volleyball and basketball players. The level of significance was set at 0.05. The obtained't' (98) = 0.804 was found to be insignificant at 0.05 level, since this value was found lower than the tabulated value 1.98 at 98 df. It is clear that the means are not significant different. The level of State Self esteem between the basketball players and volleyball players were almost the same.

Key words: State self esteem, Basketball and Volleyball

Introduction

Psychology is both an applied and academic field that studies the human mind and behavior. Research in psychology seeks to understand and explain thought, emotion and behavior. Applications of psychology include mental health treatment, performance enhancement, self-help, ergonomics and many other areas affecting health and daily life. Today, psychologists prefer to use more objective scientific methods to understand, explain, and predict human behavior. Psychological studies are highly structured, beginning with a hypothesis that is then empirically tested. Psychology has two major areas of focus: academic psychology and applied psychology. Academic psychology focuses on the study of different sub-topics within psychology including personality psychology, social psychology and developmental psychology. In psychology, the term self-esteem is utilized to describe a person's overall sense of self-worth or personal value. Self-esteem can involve a variety of credence about the self, such as the appraisal of one's own appearance, credence, emotions and demeanor.

Winning or losing should affect their sense of self-esteem. There is some similarity between the will to self-esteem and need Achievement (Atkinson, 1960) and, to a lesser extent, internal locus of control (Rotter, 1966). Self-esteem is also related to competence (White, 1959) and some aspects of aggression.

Objective of the Study

The objective of the study was to assessment the state self-esteem level between volley ball & basketball male players.

Selection of Subjects

For purpose of the study, 100 male volleyball & basketball players were selected randomly from Uttar Pradesh state as the subjects of the study. Their age ranged from 18 to 25 years.

Selection of Variable

Keeping the feasibility criterion in mind, the following variable was selected for the present study.

Variable	Criterion Measures
Self-esteem	The total scores in State self-esteem questionnaire constructed and standardized by Heatherton, T.F. & Polivy.

Statistical Technique

The data was analyzed by applying Descriptive Statistics and‘t’ test in order to determine the psychological differential between volleyball and basketball players. The level of significance was set at 0.05

Results of the Study

Table-1

Descriptive Statistics of State Self-Esteem of Basketball and Volleyball Players of Uttar Pradesh

Descriptive Statistics	Different games	
	Basketball	Volleyball
Mean	8.24	7.96
Std. Error of Mean	0.195	0.289
Std. Deviation	1.379	2.040
Variance	1.900	4.162
Skewness	0.278	-0.049
Std. Error of Skewness	0.337	0.337
Kurtosis	-0.160	-0.387
Std. Error of Kurtosis	0.662	0.662
Range	6	9
Minimum	5	3
Maximum	11	12

Table –I provides some descriptive statistics of self-esteem the number of cases, mean, standard error of the mean, standard deviation and sample variance along with the range showing minimum and maximum score for the different team games separately. The kurtosis and skewness score presented along with the standard error of kurtosis and standard error of skewness itself indicates the scientific authenticity of the data gathered.

Table-2

Student's 't' Ratio of Self-Esteem of Basketball and Volleyball Players of Uttar Pradesh

Variable	MD	SE	df	't'
Self-Esteem	0.280	0.348	98	0.804

*Significant at 98 df at 0.05 level of significance = 1.98

Above table 2 indicate that there is no significant difference among basketball and volleyball players of Uttar Pradesh on the basis of Self-esteem as calculated 't' value i.e., 0.804 is much lesser than required tabulated t value i.e., 1.98. Graphical representation of above is made in figure no. 1.

Figure No 1

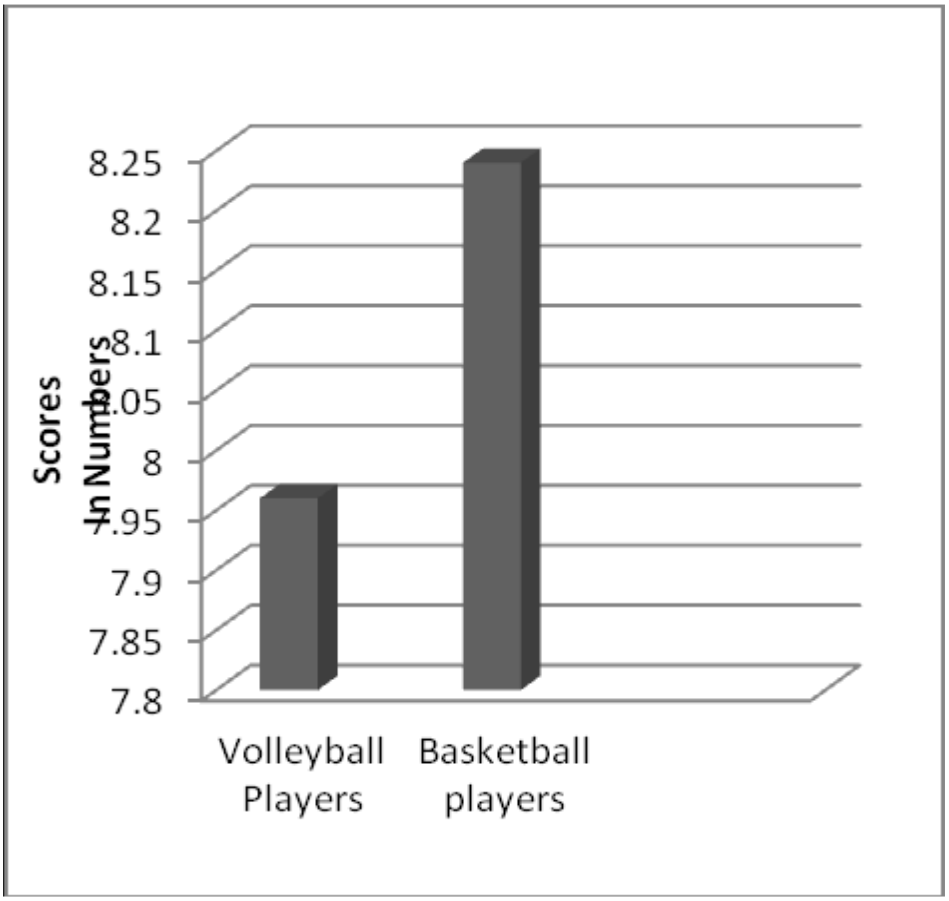

Fig. no. 1: Mean values of Self-Esteem of Basketball and Volleyball Players of Uttar Pradesh.

Discussion of Findings

The statistical analysis of the data clearly indicates that insignificant difference was found in basketball and volleyball players of Uttar Pradesh in relation to state self-esteem. The findings may be attributed to the fact that state self-esteem refers to a person‟s efforts to master a task, achieve excellence, overcome obstacles, not perform better than others and pride in exercising talent (Weinberg and Gould) Basu and Banerjee (2003), Krishnan and Nageswaran (1999), Hayashi (1996), Hayashi and Weiss (1994), Bujurke et al. (1993), Weaver (1990), Jane. The level of state self-esteem between the basketball players and volleyball players were almost the same.

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"Nuclear Deterrence"

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Introduction:

The dropping of two Nuclear bombs nick named "Little Boy" and "Fat Man" on Hiroshima and Nagasaki on 6th and 9th August, 1945 respectively brought to humanity a shock and rather than of degree. Deterrence theory gained increase prominence as a military strategy during the Cold War with regard to the use of nuclear weapons. It took on a unique connotation during this time as an inferior nuclear force, by virtue of its extreme destructive power, could deter a more powerful adversary, provided that this force could be protected against destruction by a surprise attack. Deterrence is a strategy intended to dissuade an adversary from taking an action not yet started, or to prevent them from doing something that another state desires. A credible nuclear deterrence, Bernard Brodie wrote in 1959, must be always at the ready, yet never used.[1]

In Thomas Schelling's (1966) classic work on deterrence, the concept that military strategy can no longer be defined as the science of military victory is presented . Instead, it is argued that military strategy was now equally, if not more, the art of coercion, of intimidation and deterrence. Schelling says the capacity to harm another state is now used as a motivating factor for other states to avoid it an influence another state's behavior. To be coercion or deter another state, violence must be anticipated and avoidable by accommodation. It can therefore be summarized that the use of the power to hurt as bargaining power is the foundation of deterrence theory, and is most successful when it is held in reserve.

In an January 2007 article in the Wall Street Journal, veteran cold-war policy makers Henry Kissinger, Bill Perry, George Shultz, and Sam Nunn reversed their previous position and asserted that far from making the world safer, nuclear weapons had become a source of extreme risk. "Senior European statesman and women" called for further action in 2010 in addressing problems of nuclear weapons proliferation. They said : Nuclear deterrence is a far less persuasive strategic response to a world of potential regional nuclear arms races and nuclear terrorism than it was to the cold war".[2]

The use of military threats as a means to deter international crises and war has been a central topic of international security research for decades. Research has predominantly focused on the theory of rational deterrence to analyze the conditions under which conventional deterrence is likely to succeed of fail. Alternative theories however have challenged the rational deterrence theory and have focused on organizational theory and cognitive psychology.

The concept of deterrence can be defined as the use of threats by one party to convince another party to refrain from initiating some course of action. A threat serves as a deterrent to the extent that it convinces its target not to carry out the intended action because of the costs and losses that target would incur. In international security, a policy of deterrence generally refers to threats of military retaliation directed by the leaders of one state to the leaders of another in an attempt to prevent the other state from resorting to the threat of use of military force in pursuit of its foreign policy goals. Halkabi says : deterrence is the exploitation of a threat without implementing it." As outlined by Huth, a policy of deterrence can fit into two broad categories being (i) preventing an armed attack against a state's own territory (known as direct deterrence); or (ii) preventing an armed attack against another state (known as extended deterrence). Situation of direct deterrence often occur when there is a territorial dispute between neighbouring states in which major powers like the United States do not directly intervene. On the other hand, situations of extended deterrence often occur when a great power becomes involved. It is the latter that has generated the majority of interest in academic literature. Building on these

two broad categories, Huth goes on the outline that deterrence policies may be implemented in response to a pressing short-term threat (known as immediate deterrence) or as strategy to prevent a military conflict or short term threat from arising (known as general deference).

A successful deterrence policy must be considered in not only military terms, but also in political terms. In military terms, deterrence success refers to preventing state leaders from issuing military threats and actions that escalate peacetime diplomatic and military cooperation into a crisis or militarized conformation which threatens armed conflict and possibly war. The preventing of crises of wars however is not the only aim of deterrence. In addition, defending states must be able to resist the political and military demands of a potential attacking nation. If armed conflict is avoided at the price of diplomatic concessions to the maximum demands of the potential attacking nation under the threat of war, then it cannot be claimed that deterrence has succeeded.

Furthermore, as Jentleson et al. argue, two key sets of factors for successful deterrence are important being (i) a defending state strategy that firstly balances credible coercion and deft diplomacy consistent with the three criteria of proportionality, reciprocity, and coercive credibility, and secondly minimizes international and domestic constraints; and (ii) the extent of an attacking state's vulnerability as shaped by its domestic political and economic conditions. In broad terms, a state wishing to implement a strategy of deterrence is most likely to succeed if the costs of non-compliance it can impose on, and the benefits of compliance it can offer to, another state are greater than the benefits of noncompliance and the costs of compliance.

Deterrence theory holds that nuclear weapons are intended to deter other states from attacking with their nuclear weapons, through the promise of retaliation and possibly mutually assured destruction (MAD). Nuclear deterrence can also be applied to an attack by conventional forces; for example,

the doctrine of massive retaliation threatened to launch US nuclear weapons in response to Soviet attacks.[3]

A successful nuclear deterrence requires that a country preserve its ability to retaliate, either by responding before its own weapons are destroyed or by ensuring a second strike capability. A nuclear deterrent is sometimes composed of a nuclear triad, as in the case of the nuclear weapons owned by the United States, Russia and the people's Republic of China. Other countries, such as the United Kingdom and France, have only sea-and air-based nuclear weapons.

Requirements of Deterrence:

Proportionality:

Jentleson et al. provide further detail in relation to these factors. Firstly, proportionality refers to the relationship between the defending state's scope and nature of the objectives being pursued, and the instruments available for use to pursue this. The more the defending state demands of another state, the higher that state's costs of compliance and the greater need for the defending state's strategy to increase the costs of noncompliance and the benefits of compliance. This is a challenge, as deterrence is, by definition, a strategy of limited means. George (1991) goes on to explain that deterrence may, but is not required to, go beyond threats to the actual use of military force; but if force is actually used, it must be limited and fall short of full-scale use of war otherwise it fails. The main source of disproportionality is an objective that goes beyond policy change to regime change.[4] This has been seen in the cases of Librya, Iraq, and North Korea where defending states have sought to change the leadership of a state in addition to policy changes relating primarily to their nuclear weapons programs.

Reciprocity :

Secondly, Jentleson et al. outline that reciprocity involves an explicit understanding of linkage between the defending state's carrots and the attacking state's concessions. The balance lies neither in offering too little too late or for too much in return, not offering too much too soon or for too little return.

Coercive Credibility:

Finally, coercive credibility requires that, in addition to calculations about costs and benefits of corporation, the defending state convincingly conveys to the attacking state that non-cooperation has consequences. Threats, uses of force, and other coercive instruments such as economic sanctions must be sufficiently credible to raise that attacking state's perceived costs of noncompliance.[5] A defending state having a superior military capability or economic strength in itself is not enough to ensure credibility. Indeed, all three elements of a balanced deterrence strategy are more likely to be achieved of other major international actors like the United Nations or NATO are supportive and if opposition within the defending state's domestic politics is limited.[6]

The other important consideration outlined by Jentleson et al. that must taken into consecration is the domestic and economic conditions within the attacking state affecting its vulnerability to deterrence policies, and the attacking state's ability to compensate unfavorable power balances. The first factor is whether internal political support and regime security are better served by defiance, or if there are domestic political gains to be made from improving relations with the defending state. The second factor is an economic calculation of the costs that military force, sanctions, and other coercive instruments can impose, and the benefits that trade and other economic incentives may carry. This is part is a function of the strength and flexibility of the attacking state's domestic economy and its capacity to absorb or counter the costs being imposed.[7] The third factor is the role of elites and other key domestic political figures within the attacking state. To the extent these actors' interests are threatened with the defending state's demands, they act to prevent or block the defending state's demands.

Rational Deterrence Theory:

The predominate approach to theorizing about deterrence has entailed the use of rational choice and game-theoretic models of decision making. Deterrence theorists have consistently argued that deterrence success is more likely if a

defending state's deterrent threat is credible to an attacking state.[8] Huth Outlines that a threat is considerable credible if the defending state possesses both the military capabilities to inflict substantial costs on an attacking state in an armed conflict, and if the attacking state believes that the defending state is resolved to use its available military forces. Huth goes on to explain the four key factors for consideration under rational deterrence theory being (i) the military balance; (ii) signaling and bargaining power; (iii) reputations for resolve; and (iv) interests at stake.

The Military Balance:

Deterrence is often directed against state leaders who have specific territorial goals that they seek to attain either by seizing disputed territory in a limited military attack or by occupying disputed territory after the decisive defeat of the adversary's armed forces. In either case, the strategic orientation of potential attacking states is generally short term and driven by concerns about military cost and effectiveness.[9] For successful deterrence, defending states need the military capacity to respond quickly and in strength to a range of contingencies. Where deterrence often fails is when either a defending state or an attacking state under or overestimate the other's ability to undertake a particular course of action.

Signaling and Bargaining Power:

The central problem for a state that seeks to communicate a credible deterrent threat through diplomatic r military actions is that all defending states have an incentive to act as if they are determined to resist an attack, in the hope that the attacking state will back away from military conflict with a seemingly resolved adversary. If all defending states have such incentives, then potential attacking states may discount statements made by defending states along with any movement of military forces as merely bluffs. In this regards, rational deterrence theorists have argued that costly signals are required to communicate the credibility if a defending state's resolve.[10] Costly signals are those actions and statements that clearly increase the risk of a military conflict and also increase the

costs of backing down from a deterrent threat. States that are bluffing are unwilling to cross a certain threshold of threat and military action for fear of committing themselves to an armed conflict.

Reputation for Resolve:

There are three different arguments that have been developed in relation to the role of reputation in influencing deterrence outcomes. The first arguments focuses on a defending state's past behavior in international disputes and crises, which creates strong beliefs in a potential attacking state about the defending state's expected behaviour in future conflicts. The credibilities of a defending state's policies are arguably linked over time, and reputations for resolve have a powerful causal impact on an attacking state's decision whether to challenge either general or immediate deterrence. The second approach argues that reputations have a limited impact of deterrence is heavily determined by the specific configuration of military capabilities, interests at stake, an political constraints faced by a defending state in a given situation of attempt deterrence. The argument of this school of thought is that potential attacking states are not likely to draw strong inferences about a defending states resolve from prior conflicts because potential attacking states do not believe that a defending state's past behavior is a reliable predictor of future behavior, The third approach is a middle ground between the first two approaches.

It argues that potential attacking states are likely to draw reputational inferences about resolve from the past behavior of defending states only under certain conditions. The insight is the expectation that decision makers will use only certain types of information when drawing inferences about reputations, and an attacking state updates and revises its beliefs when the unanticipated behaviour of a defending state cannot be explained by case-specific variables. An example both shows that the problem extends to the perception of the third parties as well as main adversaries and underlies the way in which attempts at deterrence can not only fail but backfire if the assumptions about the others perceptions are incorrect.

Interests at Stake:

Although costly signaling and bargaining power are more well established arguments in rational deterrence theory, the interests of defending states are not as well known, and attacking states may look beyond the short term bargaining tactics of a defending state and seek to determine what interests are at stake for the defending state that would justify the risks of a military conflict. The argument here is that defending states that have greater interests at stake in a dispute are more resolved to use force and be more willing to endure military losses to secure those interests. Even less well established arguments are the specific interests that are more salient to state leaders such as military interests versus economic interests.

Furthermore, Huth argues that both supporters and critics of rational deterrence theory agree that an unfavourable assessment of the domestic and international status quo by state leaders can undermine or severely test the success of deterrence. In a rational choice approach. If the expected utility of not using force is reduced by a declining status quo position. Then deterrence failure is more likely since for alternative option of using force becomes relatively more attractive.[12]

The theory of Nuclear Deterrence:

Much of the academic literature on deterrence originated in the West during the years of intense cold war. This literature on deterrence, in fact, has been concerned with the best way of preventing either a Soviet nuclear attack on United States itself, or conventional and nuclear attack on American's allies. The problems involved in these two tasks were in some ways rather different. For example, did not involve serious problems of credibility. It was almost axiomatic that U.S. would retaliate for an attack upon its own territory so long as it retained the wherewithal to do so. In the second case, however, the deterrent threat had to be projected and made credible. This led to an important distinction between

active or extended deterrence on the one hand, and passive deterrence of a direct offensive assault upon one's own nation; the former as deterrence of military aggression against allies and other powers.[13]

1- Passive Deterrence: Throughout the 1950s it was assumed by many people that an attack upon the United States by the Soviet Union could be deterred merely by the possession of large stockpiles of nuclear weapons and delivery vehicles. Albert Wohlsetter of the Rand Corporation spent much of the decade trying to demonstrate to both civilian and military officials that the capability requirements of deterrence were much more stringent than this. His thesis was presented in a series of articles, briefings and reports ranging from the famous study of SAC's overseas bases policy in 1954 to the even more well 'The Delicate Balance of Terror' published in the January 1959 issues of Foreign Affairs.[14] Claiming that deterrence was far from automatic, Wholstetter's arguments rested on two fundamental assumptions : that deterrence capabilities were both relative and dynamic.

Wholstetter's first assumption was that the level capabilities relative to those of opponent was more significant than the absolute level. This was not a matter of numerical equality however. He recognized that a deterrence force could also be a tempting target. Thus it was the residual capability of that force, that part of it which could survive a surprise nuclear attack and strike back at the attacker, which was really crucial. In other word, if the deterrent was to deter rather than merely provoke or invite a first strike by Soviet Union it had to have the capacity to ride out such an attack and inflict unacceptable retaliatory damage. As the consequences of such debate as well as the developments of Hydrogen Bomb by USA in 1954, the U.S. Secretary of State John Foster Dulles came forward with his doctrine of Massive Retaliation in the same year. According to this doctrine, America reserved the option of retaliating instantly, "by means, at times, and at places of her choosing." Later, attempts were made by US secretary of defence McNamara to quantify the amount of damage thought necessary to perpetuate deterrence. These calculations were enshrined in the notion of a 'Assured Destruction' capability which, in McNamara's

formulation, was the capacity to destroy one-fifth to one-quarter of Soviet population and one-half of its industrial capacity even after absorbing a first strike against American strategic forces.[15]

The Soviet Union's first thermonuclear test in 1955 followed by the launching of the Sputnic-I in 1957 ended the US monopoly of nuclear weapons. These two advances of Soviet technology particularly the latter had a great psychological impact in the US. Washington recognised only very slowly that an 'assured destruction' capability did not provide the feasible basis for nuclear deterrence, and that the Soviet posture rested on an entirely different rationale. Indeed, the Soviet Union emphasized nuclear war-fighter o a far greater extent than did her rival. At the heart of Soviet strategy was the belief that the best of way deterring a nuclear attack upon USSR was by being supremely prepared to fight, survive and possibly even win a nuclear war. Thus towards the late 1950s the doctrines of massive retaliation and assured destruction lost much of their credibility in the face of Soviet Union's nuclear war-fighting capability. President Kennedy modified the massive retaliation strategy to the extent that it could allow for the application of the "Graduated Deterrence" and leading to its military translation to General Maxwell Taylor's strategy of "Flexible Response" – thus modifying the previous concept of automatic escalation". The doctrine of flexible response will be discussed in the following section of the article.

Throughout the cold war of the 1950s and early 1960s the US presented continuous superiority in number and technical quality of nuclear weapons. During the same period the Soviet Union well aware of the US strategic superiority was generally preoccupied with catching up with the US. In the late 1960s the USSR gained the essential equivalence with the US in the strategic nuclear capabilities. Assured destruction thus became "Mutual Assured Destruction" (MAD) : A situation in which either side could destroy the other in a second strike by attacking the cities and industrial centers as well as a large part of its military establishment. Thus the doctrine of MAD is based on two assumptions : (i) Sufficient forces survive the first strike by the enemy that one can destroy the attacker's society in counter (2nd) strike and (ii) each side believes

that the other will respond with second strike. Both the superpowers drew the same conclusion from their common fate of being, in Robert Oppernheimer's words; "two scorpions in the same bottle." In short both the every reason to avoid stinging each other. Churchill called this "balance of terror" and said that survival would be twin brother of annihilation.[16]

By early 1970s Soviet Union had attained stable nuclear parity vis-à-vis United States and this resulted in nuclear statement between two super powers. At this juncture US Secretary of Defence, James Schlesinger came forward with another doctrine of nuclear strategy in 1974. The Schlesinger doctrine lays considerable emphasis on the operation of intra-war deterrence, resting upon the assumption that a stable nuclear deterrent makes fairly intense, but limited, hostilities possible. It also suggests that stability at the highest level of deterrence could encourage instability at the lower levels. This is no novel concerns, however, and strategic analysts have long been afraid that nuclear statement would enable the Russia to attack American's allies with relative impunity, a fear that goes far to explain why no much attention has been devoted to the requirements of active or extended deterrence.

Active Deterrence: Attempting to deter aggression against one's allies is somewhat different from deterring attacks upon oneself. The major problems centre on the psychological dimension of deterrence rather than its physical aspects. There is often no doubt that the deterrer can inflict unacceptable costs on an aggressor, the question is whether or not he would do so.[17] The focus of attention must be the extent to which a deterrent threat made in order to protect a third party is believed and those factors which establish the belief in the mind of a potential aggressor.

It must be remembered however, that the credibility of an extended deterrent is not entirely independent of a state's capability vis-à-vis its opponent. If one superpower has a disarming first strike capability then it can extend its deterrent by nuclear means. Its commitment then it can be honoured without it having to incur inordinate costs. In the early 1950s for example, the United States

was able to extend its nuclear umbrella over Western Europe and credibly threaten to retaliate massively against the Soviet Union in the event of conventional aggression. The United States would have suffered little or no devastation in return. But with the growth of Soviet nuclear capabilities the superpower relationship was transformed from one of unilateral to mutual deterrence. It has already been suggested that with the attainment of invulnerable retaliatory forces by both the super powers, stability of passive deterrence was achieved. Beneficial as this may have been in the overall strategic context, it had significant implications for active nuclear deterrence. It eroded the credibility of American nuclear guarantee to its NATO allies. The French response to this predicament was to emphasise the value of their own nuclear force. Developed partly for the reason of prestige and diplomatic leverage, the French deterrent seemed to acquire a new significance with the erosion of American nuclear guarantee. The French nuclear theorist Pierre Gallois forwarded the thesis that the vulnerability of the American homeland had rendered the NATO alliance obsolete since the US could no longer be relied upon. "If resort to force no longer merely implies risking the loss of expeditionary army but hazards the very substance of national life, it is clear that such a risk can be taken for oneself-and not for others including even close allies." Even the American thinkers expressed the same views. Henry Kissinger said, "A nation cannot be counted on to commit suicide in defence of a foreign territory." The corollary of inability of a nuclear state to extend its deterrent umbrella was that any state with a substantial nuclear force of its own was automatically converted into an 'inviolable sanctuary.[18] Although British were never so brutally explicit as the French, the UK's nuclear capability was at times similarly regarded as good insurance in the event that America would more sacrifice New York for one or more of the European cities.

The American response to 'credibility gap' was rather different. Discouraging the development of European nuclear forces Washington replaced the strategy of 'massive retaliation' by one of 'flexible response'. The doctrine of flexible response, in practice, implied the application of effective conventional

forces and if necessary supported by tactical nuclear fire-works. It meant that the recourse to nuclear weapons was not automatic but also not unthinkable when conventional forces were on the point of being overwhelmed.

William Kaufmann, in a early but effective critique of massive retaliation, compared it to going on a sparrow hunt with a cannon. It was argued that the strategy was no deterrent to small-scale attacks and encouraged the adoption of 'salami tactics' by the Soviet Union-even in Western Europe, which was central to America's concerns.[19] The critics also suggested that the likelihood of US involvement in a European conflict would be considerably increased if the scale of United States response was tailored more closely to the Soviet initiative.

The doctrine of flexible response emphasized on proportionality i.e. on meeting the enemy at the same level as his initial attack occurred. A conventional attack would elicit a conventional response which, if it would minimize the potential gains for the enemy while simultaneously inflicting some cost upon him. Its supreme advantage, however, was that it made the potential costs for the deterre worth incurring, and spared him the difficult choice between 'humiliation and holocaust'.

The European preference and strategy which NATO formality adopted in 1967 under the rubric of 'flexible response' tended more towards a strategy of risk-manipulation . This promised to maintain the credibility of a strong response while also posing the prospect of high cost for aggression. It rested upon the assumption that it is not necessary to threaten very coolly and rationally, to initiate nuclear war. Where this means deliberately committing suicide, it would have little effect. But the cost and risks for an aggressor can still be made unacceptably high by demonstrating both an ability and a willingness to start events moving in such a way that nuclear war might be the eventual outcome . The adversary can be made to refrain from action not by coldly threatening total violence but by raising the possibility that events might get so out of control that level of violence would escalate disastrously. This requires

that the deterrer be prepared to either and pursue vigorously the 'competition in risk-talking'.

Thus it is important to demonstrate the depth of one's commitment: the strength and clarify of commitment are important variables in deterring of inviting challenges. The main function of the North Atlantic Treaty, signed in 1949, was that of indication very clearly the fundamental American commitment to Western Europe. George Kennan has argued that since this commitment to was already clearly apparent its enshrinement in a treaty was merely a manifestation of the 'legalistic – moralistic tradition' in American foreign policy.[20] The deterrent effect of the North Atlantic Treaty was considerably reinforced in the early 1950s with the development of a semi-integrated military organisation and the stationing of an increased number of American troops in Europe.[21] These forces are still regarded as visible token of American commitment and to some extent as a hostage to ensure American involvement in hostilities.

Conclusion: In its simplest version, deterrence theory eases the psychological burden of nuclear weapons by turning an apparent liability into a virtue-nations sharing a common fate, each averse to unleashing nuclear attacks because such attack would result in mutual annihilation. Mutual deterrence loomed large during the Cuban Missile Crisis of 1962 and Michael Mandelbaum likens that episode as well as the history of the nuclear age to two fencers on a tight rope, balancing precariously, "each fearing to thrust decisively because such a thrust would topple them both, attacker and victim, to mutual disaster."

After World War-II, nuclear deterrence has worked successfully for fifty years but would it be so successful in the next fifty years? And, can deterrence really be expected to work as successfully in a world of twelve or twenty nuclear powers as it did in a world of only five nuclear states? For a number of reasons, answer to these questions must be in negative.

In a world of many nuclear powers, therefore, the operation of deterrence would probably be far less satisfactory than it is at present. If the large nuclear

powers had attained a higher level of mutual trust than at present it would be virtually impossible for a smaller power to spark off a 'catalytic war' among them. But even the great powers might have to face the problem of an anonymous nuclear attack, not knowing against whom to retaliate. Thus picture is not a pleasant one, particularly when it is remembered that one break down of nuclear deterrence could spark off a disaster without precedent.

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RELATIONSHIP BETWEEN STRESS AND EMOTIONAL INTELLIGENCE OF INDIVIDUAL SPORTS AND TEAM GAMES PLAYERS

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ABSTRACT
The Purpose of the study was to assess the relationship between stress and emotional intelligence of individual sports and team games players. A sample of 140 students was taken from schools of Chandigarh. To assess the stress level of the students, Student stress scale (SSS-AZ) by Dr.Zaki Akhtar (2011) and their emotional intelligence was assessed by Emotional Intelligence Inventory (EII- MM) developed by Dr. S.K. Mangal and Dr. Shubra Mangal (2012).The Age of the subjects was ranged between 14 to 16 years. The Mean, Standard deviation, Median, t-test and Correlation were employed to test the hypotheses and it was found that also team games players had moderately higher emotional than individual sport. Further there was found negative correlation between stress and Emotional intelligence which implies that if one of the variables increases, the other one decrease i.e. the higher the emotional intelligence, the lower is the stress. Thus Emotional intelligence leads to reduction in stress.
KEYWORDS:-Stress, Emotional Intelligence, Sportspersons, Non-Sportspersons

INTRODUCTION

In our lives stress has become an inevitable part, we are all running from home to work, school and college etc., but with lots of pressure on our minds. Stress is affecting almost every individual irrespective of his age, class and race etc. Stress is a general term applied to various mental and physiological pressures experienced by individuals throughout their lives. Stress up to a certain level that is within one's comfort zone can help a person perform under pressure, motivate him to do his best, even keep him safe when danger arrives but when stress becomes overwhelming, it can damage one's health, his relationships and thus affect his quality of life. **Howard and Medway (2004)** found in their study that adolescence is a stressful time for many youth and these stresses can potentially lead to serious disorders. Every person is affected by stress, but the level of stress depends upon one's ability to deal with it, how he /she deal with the problem. When a person goes for a job after the attainment of his degree, the only thing that matters is knowledge plus his ability to operate within the system. Emotional intelligence is the ability to identify, use, understand, and manage emotions in positive ways to relieve stress, communicate effectively, empathize with others, overcome challenges, and defuse conflict."**Mayer and Salovey (1997)** "Emotional intelligence is a right mixture of 'the head' and 'the heart'." Emotional intelligence consists of four attributes**:** Self-awareness, Self-management, Social awareness, Relationship management. **CIarrochi, Dean& Anderson(2002)** in their study "Emotional Intelligence moderates the relationship between stress and mental health" revealed that people who are skilful at regulating their own and other emotions were able to protect themselves from the adverse effects of stress. Emotional intelligence impacts many different aspects of our daily life, such as the way an individual behave and the way he/she interact with others. The Information to the brain comes through our senses, and when this information is overwhelmingly stressful or emotional, our ability to act gets limited to the flight, fight, or freeze response. If an individual is unable to manage his stress levels, it can lead to serious health problems. Therefore, to have access to the wide range of choices and the ability to make good decisions, we need to be able to bring our emotions into balance. An Individual can use this understanding of emotions to relate better to other people, form healthier relationships, achieve greater success at work, and lead a more fulfilling life. By understanding one's emotions and how to control them, an individual is better able to

express how he feels and understand how others are feeling. This allows him to communicate more effectively and forge stronger relationships, both at work and in his personal life.

REVIEW OF RELATED LITERATURE

Nideffer and Bond (1990) (76) found that the interpersonal style, 'control', was most predictive of individual openskilled sport types but least predictive of open-skilled team sports. Open-skilled individual sport of wrestling requires the athlete to control the impact of strong emotions from detrimentally affecting their performance (Mahoney, 1989; (77) Morgan, 1984 (78). Undoubtedly the one-on-one competition of wrestling would elicit strong emotions such as anger and frustration, however it could be presumed that the successful athlete inhibits such feelings from affecting their thoughts, actions and behaviors while competing (Mahoney, 1989) (79).

Palmer and Stough (2001) (80) suggested that the 'emotional recognition and expression' dimension assesses how well you perceive your own emotions and how effectively you express your feelings to others. Therefore within the sporting environment athletes who indicate high scores on this dimension will be conscious of their emotions while competing and be able to express these emotions suitably and accurately within the performance arena. According to Hanin's IZOF model (2000), to sustain mental and physical effort in achieving goals, facilitating-positive emotions helps the athlete to produce energy and organize functions. By accurately assessing one's own emotions and effectively communicating those feelings, it could be assumed that an athlete is suitably organizing their emotion content to benefit performance (Hanin, 2000) (81). Likewise by accurately displaying emotions during performance, an athlete presumably contributes to the development of a better team environment as teammates can more effectively respond to one another's display of feelings.

Druskat and Wolff (2001) (82) suggested that team spirit is an important component of team building within the workplace. In a study of team dynamics within the workplace, Druskat and Wolff (2001) (83) found that within the more effective teams, individuals are able to suitably express their feelings to one another and thus collaborate unreservedly. It would therefore seem that the advantages of accurately expressing one's emotions would appear to be greater for athletes competing within a team environment as team members competent in 'emotional recognition and expression' would be better able to articulate issues important towards building the team's capabilities. In the example of volleyball, it is assumed that perceiving your teammate's feelings, as well as communicating your own emotions, would be crucial to successful performance (Leslie-Toogood and Martin, 2003; (84) Mahoney,

Gabriel and Perkins, 1987 (85). As volleyball requires the reading of hand-signals to determine strategies of play a successful volleyballer may be particularly conscious of all their movements and expressions to their teammate (Mahoney, et al, 1987) (86), including being overtly aware of their emotional expression. After a successful point in volleyball competition, teammates often express positive displays of emotion to one another by patting each other on the back etc. (Leslie-Toogood and Martin, 2003) (87). In doing so, they consciously indicate feelings of elation and encouragement to one another. Equally, it could be hypothesized that successful volley ball players would be very aware of how they were communicating their feelings, so as not to allow their opponents to effectively respond to their weaknesses.

Palmer and Stough (2001) (70) suggested that the 'emotional management' factor assesses the extent to which an individual is able to foster and maintain beneficial positive moods and emotions so as to effectively manage stress within oneself and others. By effectively managing one's own emotions an individual is better able to remain task focused and avoid external and internal distractions. According to Nideffer (1990) (71), by shifting the focus of attention from a negative internal or external source to a more positive internal focus, an athlete is less likely to perform an error. This finding is supported by Hanin's IZOF model (2000) that states that facilitating-positive emotions help an athlete to produce energy aiding performance. Theoretically, high competency levels of 'emotional management' within a sporting environment will reflect an athlete's ability to foster positive moods within themselves and their teammates, as well as effectively manage competitive anxiety levels.

METHODOLOGY

Sample**:** A sample of 140 students of class X (age group between 14-16 years)was taken from four schools of Chandigarh(Govt. Model senior secondary school,Sec-20-D,Govt. Model senior secondary school,sec-46,PML S.D. public school, sec-32-C,M.R.Arya senior secondary school, sec-27,Chandigarh) ,Equal number of sports and non- sports persons were taken (70 each). Random sampling technique was used.

Tools: Student stress scale (SSS-AZ) by Dr.Zaki Akhtar (2011) was employed to assess the stress level .Emotional Intelligence was assessed by administering Emotional Intelligence Inventory (EII- MM) by Dr. S.K. Mangal and Dr. Shubra Mangal (2012)

Statistical Analysis: The Mean, Skewness Kurtosis were used to study the general nature of the sample, to find the significance of differences *individual sports and team games players*. t-values were calculated. The Coefficient of correlation was calculated to find the relationship between. The Level of significance wa *individual sports and team games players* set at 0.05.

ANALYSIS OF DATA

The Results with regard to the variables stress and emotional intelligence between sports and non-sports persons are presented in tables below. Graphs are also shown for the mean differences between sports and non-sports students.

Table1: Comparison between Mean differentials of stress among individual sports and team games players

Variable (Stress)	Mean	S.D.	Skewness	Kurtosis	t-value	Sign.
Team Games Players (N=70)	26.228	7.72	0.4773	0.2102	3.9033*	Significant at 0.05 level
Individual Sports (N=70)	36.057	9.439	-0.288	-0.864		

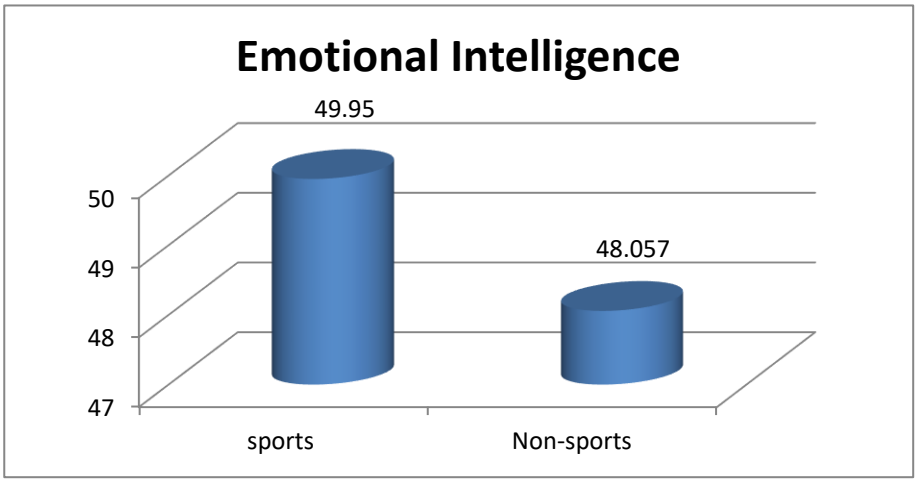
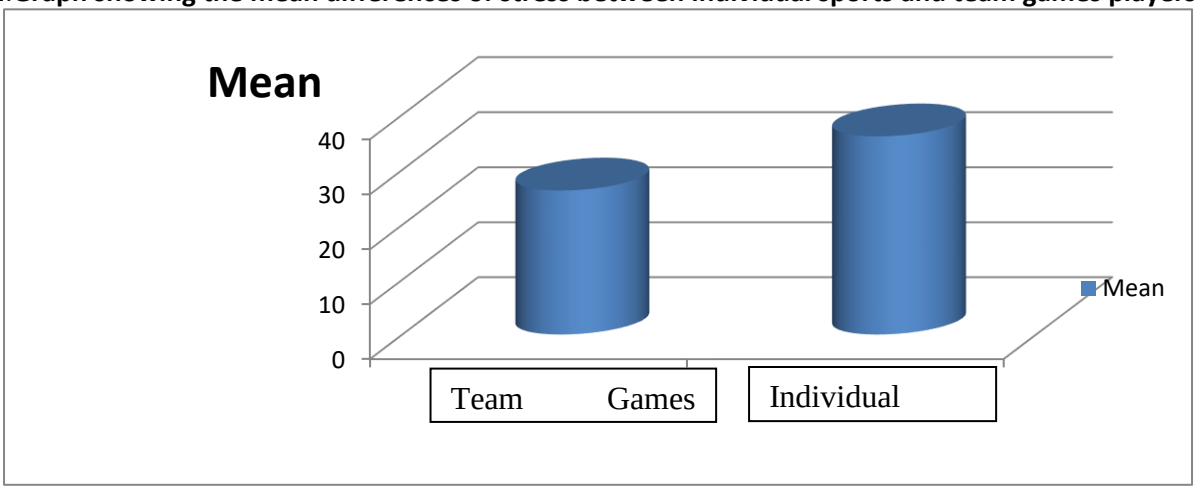


Figure1:Graph showing the mean differences of stress between individual sports and team games players



From the table 1. It is evident that the mean value for team games sports is 26.228 and individual sports are 36.057. Thus, the mean of stress of non-sports persons is higher as compare to sports persons. This shows stress on individual sports persons is higher than that of team games players. Further, t-value is found to be significant at 0.05 level which means that there is significant difference between individual sports and team games players

Table2: Comparison between Emotional Intelligence of individual sports and team games players.

Variable(Emotional intelligence)	Mean	S.D.	Skewness	Kurtosis	t-value	Sign.
Individual Sports(N=70)	49.95	16.29	-0.5428	-0.79	2.35145	Significant at 0.05 level
Team games Players(N=70)	48.057	18.92	0.2405	-1.005		

Figure:2 Graphical representation of means of Emotional Intelligence of individual sports and team games players

From the table2, it is evident that the value of emotional intelligence of individual Sports which is moderately higher than that of team games players. Thus individual sports are emotionally more intelligent than team games players. Also, t-value of 2.351 is significant at 0.05 level. Thus there is significant difference between emotional intelligence of individual sports and team games players.

Table 3: Correlation Coefficient of stress and Emotional Intelligence of individual sports and team games players

Variable	Correlation coefficient	Correlation coefficient
Stress	**- 0.9398**	**1**
Emotional Intelligence	**1**	**- 0.9398**

Table 3 shows that the correlation coefficient of stress and Emotional intelligence is negative which shows that the variables stress and emotional intelligence are negatively correlated, which implies that higher emotional intelligence leads to lower stress.

FINDINGS AND CONCLUSIONS

Thus it is found that there is significant difference between stress of individual sports and team games players. Team games players have less stress as compared to individual sports. Also individual sports persons have moderately higher emotional intelligence as compared to team games players. This implies that team games players can manage their stress level better than the individual sports persons and hence can manage well in their lives. Further the stress and emotional intelligence are negatively correlated that leads to the conclusion that if an individual has higher emotional intelligence, he will have less stress that is if an individual has self-awareness, better self- management, relationship management and social awareness he can easily manage his frustrations ,stress and depression further leading to a better life. Thus, sports activities should be made an important part of curriculum because sports are helpful way of reducing stress levels and increasing feelings of physical and mental well-being. Sports and regular exercise can help in reducing certain mental health disorders like depression and anxiety and improves the quality of living.

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