REVIEW OF RELATED LITRETURE

Reeser et al. (2006) Although sports medicine has, through research as well as trial and error, made tremendous advances in the treatment and rehabilitation of serious injuries, its ultimate goal should be to prevent injuries so that athletes can remain competitive in the arena rather than inactive in the training room. Although volleyball is a relatively safe sport, participants are at risk of a characteristic pattern of acute and overuse injuries that can have both short and long term sequel to both the individual athlete and his/her team. Despite a growing understanding of the unique, sport specific risk factors for volleyball related injuries, the existing literature on the prevention of volleyball injuries is relatively sparse. More research is needed to identify effective interventions that will help to reduce not only the risk of primary injury among both male and female volleyball athletes, but also secondary injury, so that their ability to participate in and enjoy the sports is not compromised.

Mark et al. (2004) the purpose of this study was to quantify the number of jumps performed by female volleyball players in competitive matches and to determine the relative frequency of different jump-landing techniques. Videotape recordings of two matches among four volleyball teams were analyzed for this study. Each activity was categorized by jump type (offensive spike or defensive block) and phase (jump or landing). Phase was subcategorized by foot use patterns (right, left, or both). Each of the players averaged nearly 22 jump-landings per game. Foot use patterns occurred in unequal amounts (p < 0.001) with over 50% of defensive landings occurring on one foot. Coaches, physical educators, and recreation providers may utilize the findings of this inquiry to help prevent injuries in volleyball.

Augustsson et al. (2006) the purpose of this study was to examine the prevalence of injury and the extent of preventive actions in elite Swedish volleyball players. Injuries to players in the elite male and female Swedish division, during the 2002–2003 seasons, were registered by using a questionnaire. Of the 158 volleyball players (70% response rate), a total of 82 players (52%) reported 121 injuries, during a total exposure time of 24 632 h, representing an overall incidence of 0.77 injuries per player. The majority of the injuries were located in the ankle (23%), followed by the knee (18%) and the back (15%). Most injuries (62%) were classified as being of minor severity. Most injuries occurred
during training (47%), and 41% of the injuries had a gradual onset. Fifty four percent of the injuries that could be related to a specific court situation occurred during blocking, and 30% during spiking. Most players (96%) participated in injury prevention training of some kind, generally performed without supervision (58%). Although most players took part in some kind of preventive action, one out of two players incurred an injury during the season, which indicates that the risk of suffering an injury in elite volleyball is relatively high.

Verma et al. (2011). Sketched out a pilot study for the injury prevalence among university level male and female volleyball players. A Questionnaires prepared by Cromwell, F.J.walsh Gromely (2000) for Elite Gaelic Football Players was utilized after the modification required for the nature of the study, total no of population was 1000 in which 80 (n=40+40) male, female subjects were taken. Players who had participating in inter collegiate tournament which was held at C.S.M.S Jalgaon 2009, were considered for the present study. Their age ranged from 17 to 24 years. Mean, Standard Deviation and Percentages were utilized to identify the location, nature, injury sustained season, causes of injuries, etc to volleyball players. Concluded the Most Of the injuries of male and female players are sustained in upper limb; Shoulder injuries are the most occurring injuries among the players. Lower limb injuries of male were occurred to Knee and female players to Ankle. Regarding the result injuries discontinued.

University level Swimmers were randomly selected as subject for the study. Their age ranged from 16 to 25 years. Swimmers from deferent Universities of Maharashtra were only considered for collection of data. A Questionnaires prepared by Cromwell, F.J.walsh Groomely (2000) for Elite Gaelic Football Players was utilized after the modification of Questionnaires and the test- retest reliability was found out 0.84 by the researcher. To analyze the data, mean standard deviation ,t-ratios and percentage were used to comprised and study with respect to identify the nature, location, causes of injuries in relation to strokes and techniques. Mean age wa20.86 Years +/- 1.47, Mean weight was 59.79 Kg. +/- 6.83, Mean height was 168.12 cm. +/- 10.50. There training per week mean was 3.21 +/- 1.21; training duration mean was 1.42 +/- 0.50.regarding male Swimmers. Similarly, mean age was 20.96Years +/- 1.42, Mean weight was 53.68Kg. +/- 6.46, Mean
height was 164.53cm +/- 5.73. There training per week mean was 3.17 times (per week) +/- 1.16 and duration mean was 1.55 +/- 0.48 hours, regarding female Swimmers. Concluded that, the male swimmers have got more injury then the female swimmers, significant deference was found in respect to swimmers training period and s20.86 Years +/- 1.47, Mean weight was 59.79 Kg. +/- 6.83, Ultrasound guided. Returned to desired but not preinjury level and at long term up. There was no resorted adverse event. Ultrasound guided 15% dextrose phototherapy injection has a significant medium-term effect on pain in MTSS. There is a suggestion that this benefit may be maintained long-term more robust trials are required to validate these findings.

Rachel et al. (2010) Epidemiology of injury requiring surgery among high school athletes in the united state, 2005 to 2010. Center for injury research and policy, The research institute at natinwed children’s hospital and division of epidemiology, The ohih state university, college of public health Columbus, Ohio 43205. USA The proportion of high school sports related injuries requiring surgery. Which pose burdens, has significantly increased during the last decade? The objective was to investigate the epidemiology of high school athletic injuries requiring surgery. high school sports related injury data were collected for nine sports from 2005 to 2010 from 100 nationally representation us high school. Athletes sustained 1,380 injuries requiring surgery for a rate of 1.45 injuries per 10,000 athlete exposures. Boy’s football had the rate (2.52) follow by boy’s wrestling (1.64).

Vital.et.al(2011). gender comparable sports girl’s sports has a on for the Orthopedic trauma injuries in paralympic athletes.In the last few years, the development of national and internati- onal games for the physically challenged has encouraged greater participation of athletes with physical disabilities. This resulted in an increase in intensity and frequency of the training routines and competitions and higher levels of trauma-orthopedic lesions. The aim of this descriptive-comparative study is to analyze statistically the incidence of trauma-orthopedic lesions of 82 physically challenged athletes selected in a non intentional and no probalistic way. These athletes belong to various sports categories, as follows: swimming = 37, table tennis = 19, athletics = 19, power lifting = 7. Sixty are males, 24, females, they range in age from 15 to 51 and they all took part in the 2002 World Championship. Applying the medical records of the Brazilian Paraolimpic Committee medical department filled in at those events (the
technique of observing the athlete clinical-sports files and medical examinations), the re- result showed a recurrence of lesions in athletes in the following sports: athletics (MMII = 64.9%, backbone 19.3% and MMSS = 15.8%; power lifting (backbone = 54.5%, MMSS = 36.4% and MMII = 9.1%); swimming (MMSS = 44.4%, backbone = 38.9% and MMII = 16.7%) and table tennis (MMSS = 56%, Backbone =36% and MMII = 8%). Such results lead to the conclusion that the performing of sports of the physically challenged athletes, and also the intensity of the training routing to try to beat their previous marks and to reinforce the preventive measures to the athletes.

Thacker et al. (2004) the impact of stretching on sports injury risk. Purpose: we conducted a systematic review to assess the evidence for the effectiveness of stretching as a tool to prevent injuries in sports and to make recommendation for research and prevention. without language limitation we searched electronic data Basie, including MEDLINE(1966-2002).Biomedical collection (1993-1999).The Cochrane library and sports discus and than identified citation from paper retrieved and contacted experts in the fild. mete analysis was limited to randomized trial or cohort studies were excluded that lacked controls in when.

Assear (2012) Effective of sports injuries program on learning outcomes (knowledge and skill) for student in faculty of physical education for girls in Alexandria. This research aims at preparing a knowledge test and a manual of sports injuries to students in the Faculty of Physical Education for Girls in Alexandria and proposing a program to identify sports injuries with the use of specialist evidence, besides to determining its effectiveness on the learning outcomes for students in the second year through determining the effectiveness of the proposed curriculum on targets of the skills (applied side).The researcher used the experimental method because of its relevance to the nature of the study design using the same group. The research sample of 130 students was selected from students of the second year (178 students) in Faculty of Physical Education for Girls in Alexandria for the second semester of the academic year 2010-2011. The researcher concluded that the proposed sports injuries program using the media has proved its effectiveness with a high degree of learning outcomes (knowledge and skills). The researcher recommended applying the proposed program to learn sports injury because of its high effectiveness and positive impact on learning outcomes; organizing the curriculum in an integrated manner to aspects of learning (cognitive skills); doing further researches using technology to achieve the highest possible level for the prevention of

To review 16 years of NCAA injury surveillance data for women's volleyball and to identify potential areas for injury prevention initiatives. Participation in NCAA women's volleyball has increased greatly over the past 16 years. As with all sports, women participating in volleyball assume an inherent risk of injury each time they practice or participate in a game. In order for clinicians to better understand the risks associated with volleyball, it is critical to gather data that illustrates injury rates and patterns among volleyball athletes. Furthermore, with knowledge of injury mechanisms and risk factors comes the ability to initiate prevention strategies to minimize future injury. Over the past 16 years, the rate of injury in a game situation was slightly higher than in practice (4.58 versus 4.10 game injuries per 1000 athlete-exposures, rate ratio = 1.1, 95% confidence interval = -1.0, 1.2, P < .01). A total of 2216 injuries from more than 50 000 games and 4725 injuries from more than 90 000 practices were reported. The lower extremity accounted for more than 55% of all game and practice injuries, with ankle ligament sprains representing 44.1% of game injuries and 29.4% of practice injuries. Approximately 20% of all game injuries involved the upper extremity. The majority of injuries during a game situation occurred while athletes were in one of the front 3 positions. A player landing on another player and contact with the floor each accounted for 21% of game injuries. Recommendations: Ankle injuries appear to be the most common injuries in women's volleyball. Future preventive efforts should focus on preventing first-time ankle sprains and acute traumatic knee injuries, as well as reducing the risk of ankle sprain recurrence.

Voralek et al. (2009) Movement analysis related to functional characteristics of upper extremities in female junior volleyball players. He aim of our research report was to demonstrate within a group of female volleyball players how the technique of the overhead pass depends on the functional state of the upper extremities of players. It was a matter of a case study of a descriptive character. The description has been carried out by means of a manual examination of upper extremities and kinematic analysis – 3D. The tested group consisted of 10 female players, all of them members of a youth (under 16) team of the club Olympic Parham. The results of manual examination proved that some functional derangements of joints of upper extremities
with female volleyball players were relatively often. It was supposed and the thesis, that the derangements would affect the kinematic of the movement specific to the overhead passing the ball, has been verified. The results of the research did not confirm this hypothesis.

Hatami et al. (2012) the Survey of Prevalence of Sport Injuries in Student Athletes of Islamic Azad University. The aim of this study was to investigate the incidence and prevalence of sports injuries causes in elite athlete's region 11 of Islamic Azad university students. For this purpose, data collection questionnaires were distributed among all students participating in the regional championship of region 11. In this study, 250 student athletes completed questionnaires in interviews and collected data collaboration and were selected as statistical samples. Method of data collection was using questionnaires, interviews and direct observation and collected data were analyzed using descriptive statistics. The results showed that total 250 subjects suffered some form injuries (73.65 percent), among those injuries that has occurred in the various activities (training and competitions), the highest injuries (76 percent) related to muscle damage and the lowest rate (3 percent) related to bone damage. Also 46.3 percent of injuries related to upper organs and 42.3 percent injuries related to lower limbs and 11.4 percent related to the trunk and spine. Among sport majors, the highest injuries related to karate (34 percent) and the lowest related to table tennis (1.6 percent). The results showed that the highest percent of injuries in this research occurred compared to the same other studies. The main causes of injuries in this study may be consisted of; opponent's contacts, lack of attention to safety tips - not good fitness and lack of proper facilities. Therefore, these findings proved that students must consider causes of injuries more than ever.

Abraham et al. (2010) Analysis of anthropometry, body composition and performance variables of young Indian athletes in southern region. The purpose of this study was to analyze the anthropometry and body composition associated with performance of university level male track and field athletes of South India. This study was conducted on 93 track and field athletes from South India, comprised of 22 sprinters (100 & 200 mts), mean age 19.5 years, height 172.1 cm and weight 68.2 kg, 20 middle distance runners (800 & 1500 mts), mean age 19 yrs, height 166.8 cm and weight 62.5 kg, 16 long distance runners (5000 & 10000 mts), mean age 18.7 years, height 167.2 cm and weight 62.1 kg, 20 throwers, (shot, discus & hammer throw), mean age 19 years, height 170.8 cm and weight 72.6 kg and jumpers (High, long & triple jump), mean
age 18.3 years, height 169.9 cm and weight 64.1 kg. Besides height and weight, six skin folds (triceps, chest, subscapular, abdomen, suprailiac & calf), two bicondylar breadths (humerus & femur) and two girths (biceps & calf) were measured. Somatotype evaluations were made according to Carter and Heath (1990) method. BMI was calculated as body mass divided by square of height (kg/m2). The somatocart indicated that sprinters and middle distance runners are ectomorphic mesomorphs, long distance runners are mesomorph ectomorphs while throwers are endomorphic mesomorphs. The jumpers fell into the somatotype category of balanced mesomorphs. Among all groups body fat percent is lowest in sprinters (6.23±0.83%) and highest in throwers (7.38±0.85%). This was reflected in their endomorphic components which is lowest in sprinters (2.53±0.45) and highest in throwers (3.39±0.65). Ectomorphic component is highly marked in long distance runners (3.56±0.65) while mesomophy was highest in sprinters (4.31±0.91). Throwers have significantly higher values of skin folds than other groups. Compared to their overseas counterparts, the athletes of both track and field events in the present study exhibited greater endomorphic values. The present data will serve as a reference standard for the anthropometry and body composition of south Indian track and field athletes.

Janssen et al. (2011). Interventions for preventing ankle ligament injuries (Protocol). This is the protocol for a review and there is no abstract. To assess the effects (benefits and harms) of interventions for preventing ankle ligament injuries and re-injuries. It is anticipated that the population will consist predominantly of individuals, from adolescence to middle age, who are participating in regular sports and other physical activities. Where possible, individuals undergoing rehabilitation for ankle sprains will be analyzed Separately. The specific objectives of this review are to assess differences in outcomes between:
1. Any intervention aimed at the prevention of ankle ligament injuries versus no intervention;
2. Different interventions aimed at the prevention of ankle ligament injuries.

Laycock et al.(2011).This paper describes how a rig was constructed to demonstrate to students on a sports injury module the forces involved in breaking bones. This enabled the students to meet a learning outcome related to the identification of the patho-physiological processes of acute damage in relation to specific sites and sports injury. The rig was built from angle iron, which was attached to a force plate and associated software, into which could be viced pig and turkey bones. Reflection on the demonstration raised a number of issues
including the limitations of virtual reality and do we want technicians or animators?