Publisher
www.theuniversityacademics.com

E-ISSN:2319-3050

International Journal of Research Pedagogy and Technology in Education and Movement Sciences

2025 Volume 14 Number 02 APR-JUN

Research Article

Sports Injury

Common Acute Injuries & Their Management Among Inter-University Female Volleyball Players Throughout Bangladesh

Bowm M[1†], Siddiqui MSS[2*†]

DOI:https://doi.org/10.55968/ijems.v14i02.505

[1†] Milton Bowm, Iccr Scholar Bangladesh Phd in Sports Science, Punjabi University, Patiala, Punjab, India.

[2*†] Muhammad Sakib Sad Siddiqui, Iccr Scholar Bangladesh Masters in Physical Education, Department of Physical Education, Punjabi University, Patiala, Punjab, India.

This study looks at the injury rate, causes, and coping mechanisms of female intercollegiate volleyball players. The subjects were thirty female gamers. Among athletes from several institutions, a cross-sectional survey was carried out to gather information on injury kinds, frequency, causes, and treatment. According to the results, the most frequent acute injuries include ankle sprains, finger dislocations or fractures, shoulder injuries, hand injuries, and knee ligament injuries. Strength training, flexibility exercises, appropriate footwear, and proper landing technique are all factors that increase the risk of injury. The results show that because of inadequate training, inadequate medical care, and poor skill levels, athletes cannot afford the right kind of training to perform at a high level.

Keywords: Sports Injuries, Vollyball, Bangladesh University, Acute Rehab

Corresponding Author

Muhammad Sakib Sad Siddiqui, Iccr Scholar Bangladesh Masters in Physical Education, Department of Physical Education, Punjabi University, Patiala, Punjab, India.

Email: sakibsiddiqui302@gmail.com

How to Cite this Article

Bowm M, Siddiqui MSS. Common Acute Injuries & Their Management Among Inter-University Female Volleyball Players Throughout Bangladesh. ijems. 2025;14(02):15-21.

Available From

https://ijems.net/index.php/ijem/article/view/505

To Browse

Manuscript Received	Review Round 1	Review Round 2	Review Round 3	Accepted
2025-02-04	2025-02-06	2025-02-19	2025-03-12	2025-04-15

Conflict of Interest	Funding	Ethical Approval	Plagiarism X-checker	Note
Authors state no conflict of interest.	Non Funded.	The conducted research is not related to either human or animals use.	14	All authors have accepted responsibility for the entire content of this manuscript and approved its submission.

Abstract

This study looks at the injury rate, causes, and coping mechanisms of female intercollegiate volleyball players. The subjects were thirty female gamers. Among athletes from several institutions, a cross-sectional survey was carried out to gather information on injury kinds, frequency, causes, and treatment. According to the results, the most frequent acute injuries include ankle sprains, finger dislocations or fractures, shoulder injuries, hand injuries, and knee ligament injuries. Strength training, flexibility exercises, appropriate footwear, and proper landing technique are all factors that increase the risk of injury. The results show that because of inadequate training, inadequate medical care, and poor skill levels, athletes cannot afford the right kind of training to perform at a high level.

Introduction :

Volleyball is one of the most beloved games and has become more and more popular worldwide. Volleyball is practiced by almost 800 million people of various ages and qualities. Sports-related injuries are among the most prevalent in modern Western countries, and volleyball ranks #1 among ball-related sports that cause injuries, followed by basketball and soccer. According to Verhagen et al. (2004), volleyball injuries are rather common. An increased rate of injury is thought to result from increasing training frequency, intensity, and length (Ferretti et al., 1990; Parkkari et al., 2001). Players in this sport move swiftly from side to side in reaction to external stimuli and repeatedly use their entire body to hit the ball hard. As a result, it is essential to recognize the possibility of harm. Specific injury prevention techniques are required to control this risk, and they should be a crucial part of volleyball players' training regimens. The game includes running, shuffle stepping, blocking, jumping, landing techniques, and evading. As a result, there were some serious injuries sustained during the game. The sport-specific activity most commonly associated with injuries is blocking. Due to its frequent powerful arm motions and hops, volleyball is a strenuous sport that can lead to knee and shoulder problems. Volleyball is an intense sport that can cause knee and shoulder problems because of its frequent, powerful arm motions and leaps. Untargeted injury prevention techniques, however, have the potential to waste training time and resources, lowering The intervention's effectiveness. The athletes who are most vulnerable need to be the focus of an efficient injury prevention strategy. Based on the interaction of modifiable and non-modifiable risk variables for major injuries among volleyball athletes, this article aims to help these athletes be categorized into low-, medium-, or high-risk groups.

Methodology :

Finding out the injury and management rates of female intercollegiate volleyball players competing in different tournaments in Bangladesh was the goal of this study. Injuries incurred by collegiate volleyball players during competitions in 2024 and 2025 were documented. Thirty intercollegiate female volleyball players, ages 18 to 24, from several Bangladeshi universities made up the sample population. All of the teams were invited to participate, and each team coach received verbal information. The team coach presented the survey to the teams at the conclusion of the season and gathered the data after the fact. Each participant received written information, and their informed consent was acquired. The inclusion criteria required that all regular squad lineups, including substitutes, feature female university players. There were 15 questions total, split into two sections. The first section contained information about the players' gender, age, height, weight, and team affiliations. In addition, each athlete was asked to state how many years he had been practicing for volleyball, how many hours he trained each week, and his training regimen. The participants were requested to disclose all past injuries in six similar injury profile subsections in part two. Whether the injury happened during practice or competition, the skill used, the player's position on the court, and the anatomical location of the injury were among the information gathered. Inquiries about whether the player was able to finish the specific training session or competition and whether the injury caused any absences from training or competition were also noted. An online survey on sports injuries was used to get the data. We disseminated a questionnaire, printed materials, and social media posts in December 2024. Each team's coach or a volunteer was in charge of distributing the surveys, collecting them later, and making sure they were sent back online. We gathered information from every player, even those who left due to injuries.

Results :

Over the course of a year, thirty-one volleyball players (representing 100% response rate) reported eighty-four injuries, or 66.66% of the total. Ankle and finger injuries occur more frequently than any other anatomical region. Injuries to muscles and tendons were the most common. The average age of the volleyball players was 23.35, their weight was 66.21 kg, and their height was 176.76 cm. A typical training session for the team lasted 1.25 hours.

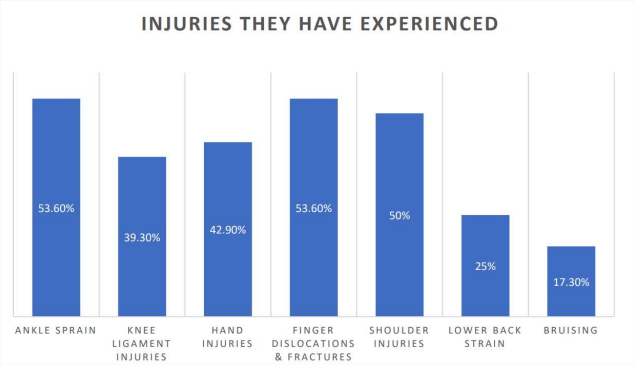

Table 1: Percentage of volleyball injuries Players have experience with respect to body parts.

This survey resulted in the maximum incidence of injuries reported relating to the body region: ankle sprain (53.60%), knee ligament injuries (39.30%), hand injuries (42.90%), finger dislocations (53.60%), shoulder injuries (50%), lower back strain (25%), and bruising (17.30%). Ankle sprains, finger dislocations, and shoulder injuries were the most frequently occurring injuries during the game

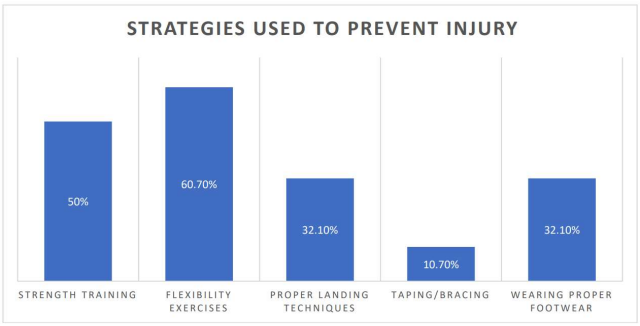

Table 2: Percentage of Strategies used by female volleyball Players to prevent injury

This study reveals that injuries can be prevented by strength training (50%), flexibility exercise (60.70%), proper landing techniques (32.10%), bracing/taping (10.70%), and wearing proper footwear (32.10%).

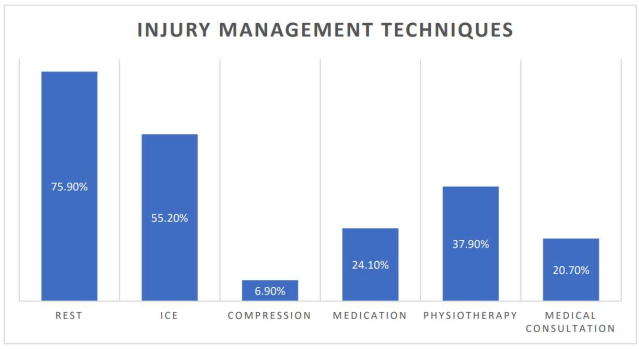

Table 3: Percentage of injury management techniques followed by female volleyball players

This study provides that female volleyball players can reduce injury through proper rest (75.90%), ice (55.20%), compression (6.90%), medication (24.10%), physiotherapy (37.90%),

Medical consultation (20.70%).

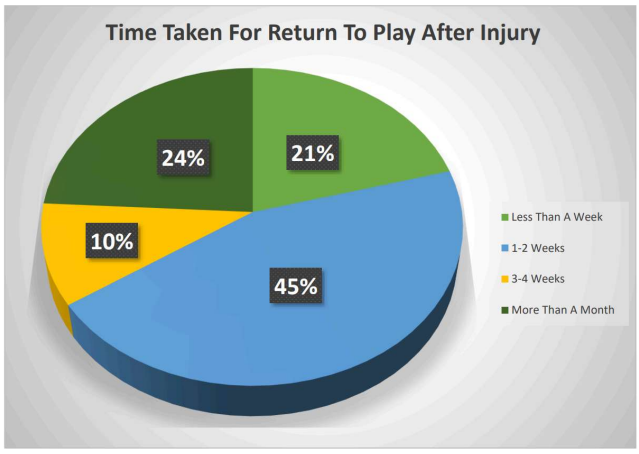

Table 4: Percentage of time taken for return to play after injury by female volleyball players

This research provides that time is associated with overcoming injury. Most of the female volleyball players came back to the ground after less than a week (21%), within 1-2 weeks (45%), 3-4 weeks (10%), and more than a month (24%).

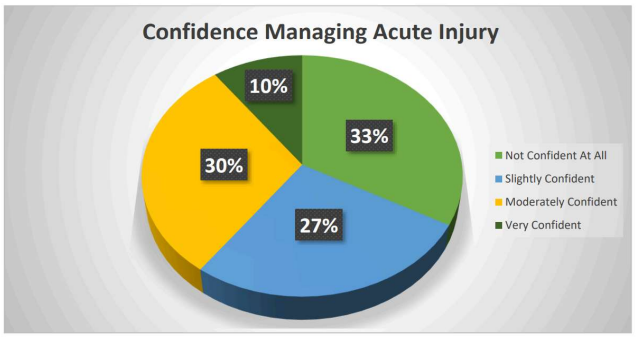

Table 5: Percentage of female volleyball Players confidence level in managing acute injury

The study aims to determine the percentage of female volleyball players who are confident in managing acute injuries. This pie chart shows that the ability of mental power is very confident (10%), moderately confident (30%), slightly confident (27%), and not confident at all (33%).

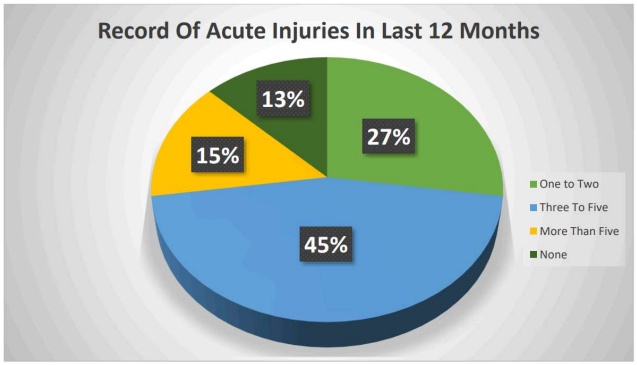

Table 6: Percentage of acute injuries among female volleyball players over last 12 months.

This study presents the injuries sustained by volleyball players. In the past 12 months, the incidence of injuries recorded is as follows: more than 5 times (4%), 1-2 times (50%), 3-5 times (16%), and none (30%).

The study's findings provide a valuable fresh viewpoint on the severity, incidence, and locations of injuries among varsity-level female volleyball players. The study's findings provide valuable insights into the temperament, frequency, and locations of injuries among female varsity volleyball players. The current study indicates that the primary cause of impairment and subpar performance among university-level competitive volleyball players is likely the prevalence of injuries, especially to the shoulder, ankle, and fingers.

Findings & Discussion :

Volleyball requires a lot of repetitive motions, sophisticated strategies, and excellent motor skills to spike, block, serve, receive, pass, and toss. A number of potential injuries are covered by the dynamic interaction. The knee joint was the most frequently injured site in this investigation, accounting for 43 out of 166 cases (25.9%) (Yang Et al. 2016). The purpose of this study was to describe the current state of KM treatment for sports injuries. A questionnaire was used to gather feedback from different female volleyball players in Bangladesh. The survey was designed similarly to those used in earlier studies on sports injuries (Julian, Hoskins, and Vitiello 2010) and (Augustsson et al. 2006).

Injuries they have experienced percentage rate are ankle sprain (53.60%), knee ligament injuries (39.30%), hand injuries (42.90%), finger dislocations & fractions (53.60%), shoulder injuries (50%), lower back strain (25%), and bruising (17.30%). These results agree with

Former studies that described common injuries site including ankle sprain, knee, finger and lower back.

This study reports the use of various strategies to prevent the rise in injuries. Strategies are strength training (50%), flexibility exercise (60.70%), proper landing techniques (32.10%), bracing (10.70%), and wearing proper footwear (32.10%) in this research.

However, the doctor's assistance can guide the treatment method. The way injury would be managed is rest (75.90%), ice (55.20%), compression (6.90%), medication (24.10%),

Physiotherapy (37.90%), medical consultation (20.70%)

Injury and treatment metrics could be important in developing an upgraded knowledge management strategy in sports medicine. This research indicates that recovery time is less than a week (21%), one to two weeks (45%), three to four weeks (10%), and more than a month (24%). The crucial part for acute injury is increasing the confidence level of players to overcome it as soon as possible. This case study defines the rate of not confident at all (33%), slightly confident (27%), moderately confident (30%), and very confident (10%). This research shows that their confidence level is low for overcoming injury. According to this case study, in the last 12 months, the highest number of acute injuries is three to five times (45%).

Finally, this research study defines the trend of acute injuries among female volleyball players and depends on first-aid treatment. Various factors can affect the occurrence of an injury. Intrinsic factors include age, gender, core instability, and

Muscle imbalances, while external aspects encompass the position played and service style (Reeser et al. 2010). In addition to health advantages, the rising popularity of sports will lead to an increase in sport-related injuries.

Conclusion :

Interest in volleyball has proliferated, establishing it as one of the most prominent events in the global sports arena. Although pleasurable, injuries may arise from repetitive jumping and from striking or blocking the ball. Injuries may be classified as either acute or repetitive. Injuries commonly affect the ankles, knees, and shoulders. Upon receiving an accurate diagnosis from a sports clinician, suitable treatment can begin, allowing the athlete to resume training and competition with minimal interruption.

References

Augustsson, S. r. , J. Augustsson, R. *Thomeé, and U. Svantesson. 2006. "Injuries and Preventive Actions in Elite Swedish Volleyball." Scandinavian Journal of Medicine & Science in Sports 16(6): 433–40. doi:10.1111/j.1600-0838.2005.00517.x [Crossref][Google Scholar]*

Barber Foss KD, Myer GD, Hewett TE. Epidemiology of basketball, soccer, and volleyball injuries in middle-school female athletes. Phys Sportsmed. 2014;42:146–53. *[Crossref][Google Scholar]*

Barnes JL, Schilling BK, Falvo MJ, Weiss LW, Creasy AK, Fry AC. Relationship of jumping and agility performance in female volleyball athletes. J Strength Cond Res. 2007;21:1192–6. *[Crossref] [Google Scholar]*

Bere T, Kruczynski J, Veintimilla N, Hamu Y, Bahr R. Injury risk is low among world-class volleyball players: 4-year data from the FIVB Injury Surveillance System. Br J Sports Med. 2015;49:1132–7. *[Crossref][Google Scholar]*

Briner, William W. , and Lawrence Kacmar. 1997. "Common Injuries in Volleyball. " *Sports Medicine 24(1): 65–71. doi:10.2165/00007256-199724010-00006 [Crossref][Google Scholar]*

Difiori JP, Benjamin HJ, Brenner JS, Gregory A, Jayanthi N, Landry GL, et al. Overuse injuries and burnout in youth sports: a position statement from the American Medical Society for Sports Medicine. Br J Sports Med. 2014;48:287–8. *[Crossref][Google Scholar]*

Eerkes, Kevin. 2012. "Volleyball Injuries. " Current Sports Medicine Reports 11(5): 251. *doi:10.1249/JSR.0b013e3182699037 [Crossref] [Google Scholar]*

Emery CA, Roy TO, Whittaker JL, Nettel-Aguirre A, Van Mechelen W. Neuromuscular training injury prevention strategies in youth sport: a systematic review and meta-analysis. Br J Sports Med. 2015;49:865–70. *[Crossref][Google Scholar]*

Engebretsen L, Soligard T, Steffen K, Alonso JM, Aubry M, Budgett R, et al. Sports injuries and illnesses during the London Summer Olympic Games 2012. Br J Sports Med. 2013;47:407–14. *[Crossref][Google Scholar]*

Farohki, Sahar, and Ali Fatahi. 2024. "Knee Injuries in Volleyball Players: A Review Report. " Journal of Sport Biomechanics 10(2): 122–42. *doi:10.61186/JSportBiomech.10.2.122 [Crossref] [Google Scholar]*

Gabbett TJ. The training—injury prevention paradox: should athletes be training smarter and harder? Br J Sports Med. 2016;50:273–80. . *[Crossref][Google Scholar]*

Jayanthi N, Pinkham C, Dugas L, Patrick B, LaBella C. Sports specialization in young athletes: evidence-based recommendations. Sports Health. 2013;5:251. *[Crossref][Google Scholar]*

Julian, Chris, Wayne Hoskins, and Andrew L. Vitiello. 2010. "Sports Chiropractic Management at the World Ice Hockey Championships. " *Chiropractic & Osteopathy 18(1): 32. doi:10.1186/1746-1340-18-32 [Crossref][Google Scholar]*

Karuc J, Mišigoj-Duraković M, Marković G, Hadžić V, Duncan MJ, Podnar H, et al. Movement quality in adolescence depends on the level and type of physical activity. Phys Ther Sport. 2020;46:194–203. *[Crossref][Google Scholar]*

Kilic O, Maas M, Verhagen E, Zwerver J, Gouttebarge V. Incidence, aetiology and prevention of musculoskeletal injuries in volleyball: a systematic review of the literature. Eur J Sport Sci. 2017;17:765–93. *[Crossref][Google Scholar]*

Naseer Ahmad Bhat and Dr. KV Balamurugan, "injuries among varsity men volleyball players" International Journal of Physical Education, Sports and Health 2017; 4(3): 68-71,. . 2017;17:765–93. *[Crossref][Google Scholar] [Crossref][Google Scholar]*

Reeser JC, Gregory A, Berg RL, Comstock RD. A Comparison of Women's Collegiate and Girls' High School Volleyball Injury Data Collected Prospectively Over a 4-Year Period. Sports Health. 2015;7:504–10. *[Crossref][Google Scholar]*

Reeser JC, Verhagen E, Briner WW, Askeland TI, Bahr R. Strategies for the prevention of volleyball related injuries. Br J Sports Med. 2006;40:594–9. *[Crossref][Google Scholar]*

Reeser, Jonathan C. , Andrew Gregory, Richard L. Berg, and R. Dawn Comstock. *2015. "A Comparison of Women's Collegiate and Girls' High School Volleyball Injury Data Collected Prospectively Over a 4-Year Period." Sports Health 7(6): 504–10. doi:10.1177/1941738115600143 [Crossref][Google Scholar]*

Reeser, Jonathan C. , Elizabeth A. Joy, Christina A. Porucznik, Richard L. *Berg, Ethan B. Colliver, and Stuart E. Willick. 2010. "Risk Factors for Volleyball-Related Shoulder Pain and Dysfunction." PM&R 2(1): 27–36. doi:10.1016/j.pmrj.2009.11.010 [Crossref] [Google Scholar]*

Sole, Christopher J. , Ashley A. Kavanaugh, and Michael H. Stone. *2017. "Injuries in Collegiate Women's Volleyball: A Four-Year Retrospective Analysis." Sports 5(2): 26. doi:10.3390/sports5020026 [Crossref][Google Scholar]*

Timoteo, Thiago Ferreira, Paula Barreiros Debien, Bernardo Miloski, Francisco Zacaron Werneck, Tim Gabbett, and Maurício Gattás Bara Filho. 2021. "Influence of Workload and Recovery on Injuries in Elite Male Volleyball Players. " The Journal of Strength & Conditioning Research 35(3): 791. *doi:10.1519/JSC.0000000000002754 [Crossref] [Google Scholar]*

Wasser JG, Tripp B, Bruner ML, Bailey DR, Leitz RS, Zaremski JL, et al. Volleyball-related injuries in adolescent female players: an initial report. Phys Sportsmed. 2021;49:323–30. *[Crossref][Google Scholar]*

Yang, Changsop, Eunyoung Lee, Eui-Hyoung Hwang, Ojin Kwon, and Jun-Hwan Lee. 2016. "Management of Sport Injuries with Korean Medicine: A Survey of Korean National Volleyball Team. " Evidence-Based Complementary and Alternative Medicine 2016(1): 8639492. *doi:10.1155/2016/8639492 [Crossref] [Google Scholar]*