

The Practice of Water Volleyball as a Leisure and Fine Recreational Water Sport

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Abstract:

It is well known that water has a positive impact on humans. Benefits are numerous. Player changes the resistance of the natural environment, and change is welcomed. The mitigation of gravity by flotation places less stress on the joints when stretching, and can allow a greater range of motion. Water volleyball is fine-tuned competitive middle-court oriented water game. It has emerged from recreational pool activities, sports, aquatic clubs, water parks, through the practice of unification of the beach and water tournaments.

Keywords:

Water Volleyball, Pool Volleyball, Aquatic Therapy, Fitness, Sport Science, Acqua Pallavolo, Sport Recreation

1. Introduction

Water volleyball is fine-tuned competitive middle-court oriented water game. It has emerged from recreational pool activities, sports, aquatic clubs, water parks, through the practice of unification of the beach and water tournaments. Disney water park had already in nineties pool volleyball entertainment.[1][2] DLRG- Ortsgruppe Havixbeck, has organized first water volley tournament in 1985, creating by so water volleyball club. US has on its own developed powerful swimming pool play, creating volley standards. Water Volleyball is played throughout US universities, such as: San Diego University, California, Iowa State University, Iowa, University of South Florida, St. Petersburg, Lenoir-Rhyne University, N. C., Lindsey Wilson College, and Columbia. Also bring to attention: Water Volleyball Tournament – St Marys Recreation, Coed Water Volleyball Tournament. Palm Desert Senior Games & International Sports Festival, Water Volleyball Tournament for Marian House Tickets, Water Volleyball Tournament, Poolside Palooza, Rivers Edge Camping Resort and Tubing, WI, UREC Play Day Water Volleyball Tournament. Practice of outdoor tournaments is as well present in Italy, with most prominent: I Tornei Di Acqua, Benvenuto, La Uisp, Torneo di calcio e volley in acqua, Festa Lungofiume, Imola, Torneo di calcio de volley sull'acqua, Polinago, Modena, Torneo volante di pallavolo in acqua, San Luigi e Sant'Agnese – Cernusco Lombardone, Torenno di pallavolo in

acqua, USSG Sartirana, Merate, Torneo di aquavolley, Campoli Appenino, Lazio, Volley team Brianza, Torneo di splash volley, Tabiago, Nibionno, Torneo di Acqua Volley, Veneto, Italia, Acqua Volley Games, Bagnara di Romagna, Torneo di pallavolo in acqua nel parco dell'Isonzo, Turriaco. Voleibol acuático is present as national tournament in Brazil, Liga Nacional de Biribol. Interesting intramurals in Germany: Wasservolleyballturnier Bad Karlshafen, Wasservolleyballturnier der JC Müllrose, Wasservolleyballturnier de DLRG, Schaumburg. [3][4]

Tournaments are played mainly in June and July, with exception of Germany, where such tournaments are played in November. However, there are already two interesting association of water volleyball. The first US association of water volleyball, Association of Water Volleyball Professionals (ASWVP) group of water volleyballers headquartered in Austin, Texas. Texas, particularly Austin, has widespread practice of water volleyball. Water Volley Italia, organized lots of tournaments, respectively Turneo Santa Marinella 2008-2011, Turneo di volleyball, Foro Italico.

2. Materials and Methods

The Probe is made on wide base of intercollegiate clubs, campuses, water parks and hotel resorts: Sun City Arizona water volleyball club, River Bluffs Living water volleyball club, 300 Club Swim and Tennis club, St. Louis Senior Olympics Water Volleyball, Sun City Oro Valley water volleyball, City of Mesquite Mesquite Parks and Recreation Water volleyball, Titonka water volleyball tournament, Villa Palmar Cancun voleibol acuatico, Ladyboy water volleyball Pattaya Thailand, Disney Aqua Parks, Sandpipers Nude Olympic Water Volleyball, Lamar University Intramural sports, UTSA Campus Intramural Sports.

The basic rules are provided from Association of Water Volleyball Professionals (AWVP), Water Volleyball.com, USAV and FIVB. The Probe uses comparison method with the selection of specific thematic factors in the field of leisure sport and age recreation.

2.1. Data (Water Volleyball rules)

Just to example Lamar University Intramural Sportspool Water Volleyball rules.

- Pool rules must be obeyed at all times.
- The Aquatic staff/lifeguards must be obeyed at all times.
- Showers are required prior to entering the pool.
- Spectators / extra players must remain in the stands.
- Appropriate Swim Wear: All participates must wear a swimming suit. No basketball shorts allowed. If you feel uncomfortable in a swimming suit then you can wear a t-shirt and shorts over it. If you are unsure about your swim attire ask the lifeguard on duty.

PLAYERS:

- Players may play for only one men's or women's team and one co-rec team in the same league.

- Men and women's teams consist of 4 players. A minimum of 3 players is needed to state the game.

- Co-Rec teams consist of 4 players, 2 men and 2 women. A minimum of three is required to start

- The game. Acceptable combinations of males and females include: 2M & 1 W or 1M & 2 W.

- There may be unlimited substitutions during a team's serve. Subs may enter the game only on a dead ball, timeout upon permission of an official.

- Maximum number of players per roster is 8.

- If there are not enough teams to form a certain league, LU Intramurals reserves the right to mix leagues.

- All -University games will be played by the winning All-Sport Team VS the winning Independent team.

GAME TIME/DEFAULTS/FORFEITS:

- Defaults: A team may default by calling Intramurals at 409-880-7862 24 hours in advance of their game. For Sunday games by 4pm on Friday. Teams are allowed one default per season. A

- Default is used when a team is unable to make their game. A default is a loss but will not interfere

- With their chances of making playoffs.

- Forfeits: A team not ready to play at game time shall be penalized in the following manner.

- Loses game by forfeit

- 1 sportsmanship grade

- Captain must pay a \$20 forfeit fee.

- A forfeit is the first factor when deciding ties within pools for playoffs.

LEAGUE FORMAT:

- Tournament: Either single or double elimination tournament.

EQUIPMENT:

- The Intramural staff will furnish game balls. However, both teams may agree to use another ball

- As long as it is regulation.

- All participants must wear the proper swim wear attire allowed by the Recreational Sports Pool rules.

- Goggles, Snorkeling/SCUBA or other large masks are not permitted.

- Flippers, webbed gloves, or other devices used to gain an advantage are NOT permitted.



Figure 1. Water Volleyball Pool 4x4 play. Cancun, Mexico. WVJ

THE GAME:

- Co-Rec: The serving order must rotate male/female.

- A coin flip will determine who serves first. Co-Rec: Teams playing with 2M & 1W will lose one point (but not the serve) when males serve back to back.

- The server must stand near enough to be able to touch the back boundary anywhere across the court.

- The ball must be contacted with one hand on the serve – either underhand, sidearm or overhead.

- The ball may not be thrown or hit with two hands.

- Let serves are legal.

- The serve may not be attacked.

- Co-Rec: A female has to be involved in 1 of the 3 hits before the ball is returned over the net; exceptions if it is accidental.

- There are no restrictions on alignment or the placement of players.

- Teams may sub any number of players on THEIR OWN SERVE.

- Teams have 3 hits to play the ball over the net.

- The back boundary, net poles, pool sides and deck are out of bounds.

- Players may not jump off of the steps on the side of the pool.

- Players may not contact the net with any part of their body or clothing.

- Teams will call their own points. The Intramural Sport Staff will determine if points will be awarded on a disputed call or if the point will be replayed.

- Teams will play best 2 of 3 games to 21 points (rally scoring), win by 2, cap at 25 points.

- The Intramural Staff on duty will have final authority on all rules and disputed calls.

On other example of St. Louis Senior Olympics Water Volleyball Rules:

Players 9 players, minimum 4 women on court at all times, court size 40' x 20' 10" pool depth 4 feet, net height 4 feet from deck, ball size 24" inflatable beach ball water temp 85-86 degrees

Boundaries

1. A ball that hits the net is considered in play. (Including the serve)
2. A ball that hits the back line is out.
3. A ball that hits the side, deck is considered out.
4. A ball that hits the ceiling is out.
5. A ball that hits the net pole is out.
6. Players can not touch or cross over/ under the net at any time.

Time Limit Event staff may adjust the game times to ensure participation of all teams.

Serving

1. Server may move up to a line within 10 feet from the net.
2. A serve is defined as any strike made with the hand.

3. Throws/pushes are not allowed.
4. Served ball must make it over the net UN assisted.

Returning

Any player may employ multiple and consecutive hits to return a volley.

No catching, lifting, holding or throwing allowed. (Referees discretion)

Roster

If a team does not have 9 players within their age division, they may use 2 younger players from the age division below them. (Players can play down but not up) Players cannot double roster in the same age division.

In case of injury

If a player needs to leave the game, they may not re-enter that game. A substitute may take their position.

Time Out

One 60 second time out per team per game is allowed.

Scoring Rally score to 15 or 21 points. Need to win by 2 points.

Rotation Rotate in clockwise backward “Z”. Server goes to front “L” position. Substitutes may enter when server exits.

Tie Breaker In case of a tie in total wins (Round Robin) a head to head playoff game will occur.



Figure 2. Pool Volleyball equipment and facilities

3. Results and Discussion

It is well known that water has a positive impact on humans. Benefits are numerous. Player changes the resistance of the natural environment, and change is welcomed.

The mitigation of gravity by flotation places less stress on the joints when stretching, and can allow a greater range of motion. [5][6]

Muscles are adapted to land motion, and players must move amphibious, maintain land stability, and yet move swiftly.

Playing in water brings some positive effects: good mood, vigilance, insight, swift, coordination, focus, and collegiality. It develops ability for initiative, and yet cherishes team spirit. Player should have ability for fast thinking, reflex, determination and creativity. All this is provided or developed in water volleyball technique. [1]

Volleyball enhances sense of fellowship, develop respect and openness. [7][8]

Team aspect of the game is especially emphasized. Game involves a number of analytical and technical skills, speed reasoning, perceptual ability, coordinated senses, movement discipline. Operational activities through analytical understanding of the situation, exploiting opportunities, creating excellence and superiority, sport performance. [9][10]

3.1. Leisure sport and health

There is a great deal of agreement, both from a preventive and a rehabilitative standpoint, that regular participation in physical activity and exercise results in positive health-related outcomes. [11]

The value of leisure and recreation for the promotion of healthy lifestyles for all, also provides practitioners with a strategy for reframing the benefits of leisure and recreation to sustain the status of the profession as an essential public service. People of all ages and abilities can experience these elements of well-being from involvement in personally meaningful and enjoyable physical activity, recreation, leisure and sport.

These varied recreational opportunities make physical activity interesting, enjoyable, and encourage life-long fitness habits. [12]

Recreations activities help develop decision-making skills, cooperative behaviors, positive relationships and empowerment. [13][14]

3.2. Senior fitness programs

It's clear that aqua aerobics or water-based activities provide significant benefits for older adults, including increasing metabolism. In addition to increasing metabolism, physical activity in general improves cardiovascular health, increases strength, slows down age-related loss of muscle mass, and the decrease of reaction time that comes with getting older. Regular exercise can minimize the physiological effects of an otherwise sedentary lifestyle and increase active life expectancy by limiting the development and progression of diseases and disabling conditions.[11]

Playing water volleyball in warm water is great. Physiological effects derived from exercise in heated water have been increased circulation to muscles, increased joint viscoelasticity and flexibility, and decreased joint pain. The physical properties of water (relative density, buoyancy, hydrostatic pressure, fluid resistance, movement through water, and moment of force) have been utilized in aquatic therapy to decrease gravitational forces placed on weakened limbs and increase body movements, muscle strength, and aerobic capacity.[15][16]

3.3. Comparison analysis

Water volleyball-Indoor volleyball-Beach volleyball-Biribol-Water polo

3.3.1. Differences between beach and indoor volleyball

- Playing surface – sand rather than hard court
- The dimensions of the court are 52’/16 by 26’/8, compared to 59’/18 by 29’/9 in the indoor game.
- The beach court has no "attack line", unlike the indoor court, which has such a line 3 meters from the net, same net height
- Team size – six, with no substitutions allowed
- Scoring system – best of 3 sets played to 21 (15 for a deciding set) rather than best of 5 to 25
- Overhand touches and tips – open-hand dinks are illegal
- A block at the net counts as one of the three allowed touches in the beach game, but not in the indoor game
- Open-hand setting standards are different in the beach game –double hitting is called tighter but lifts are slightly more lenient
- Coaching during matches is not allowed
- There are no rotation errors on the beach – players may switch sides at will
- It is legal to cross under the net in beach volleyball as long as it does not interfere with opponents' play
- Teams switch ends of the court every seven points, rather than between sets
- There is no Libero in beach like there is indoors.

The major similarity in the courts used in the two forms of volleyball is the net. In both versions, the height of the net is 7 ft 11 5/8 in/2.43 meters for men and 7 ft 4 1/8 in/2.24 meters for women.

3.3.2. Differences between beach and water volleyball

Differences are expressed in scoring system, rule of rotation and the switch.

- Playing surface – water rather than sand
- The dimensions of the court are 52’/16 by 26/8
- The beach court has no "attack line"
- Team size six, substitutions are allowed
- Scoring system - best of 3 sets played to 25
- Overhand touches and tips – open-hand dinks are illegal
- A block at the net counts as one of the three allowed touches
- Double hitting allowed
- Coaching during matches is not allowed
- Rotation rule, like in basic volleyball

- Cross under net is illegal
- teams switch ends of the court between sets
- There is no Libero in water

In triple comparison water volleyball shows more rules similarity to beach volleyball than to the in-door.[14] Some mayor rules like switch, court size, net-touching, attack-line are inherent to beach volleyball, other elements like scoring, rotation, player's bench, substitution are more similar to in-door.

3.3.3. Differences between biribol and water volleyball

Differences are expressed in scoring system, rule of rotation and the switch.[17]

- The dimensions of the court are 52⁷/8 by 26/4
- The biribol court has "strike line"
- Scoring system - best of 3/5 sets played to 21
- If a 21-points set is drawn at 20x20, the match is extended to 22 points
- Overhand touches and tips – open-hand dinks are allowed
- Double hitting allowed
- The ball can be touched with any part of the player's body or hands

3.3.4. Differences between water polo and water volleyball

- Playing surface – water rather than sand
- Playing surface – water rather than sand
- The dimensions of the court are 52⁷/16 by 26/8
- The beach court has no "attack line"
- Team size six, substitutions are allowed
- Scoring system - best of 3 sets played to 25
- Overhand touches and tips – open-hand dinks are illegal
- A block at the net counts as one of the three allowed touches
- Double hitting allowed
- Coaching during matches is not allowed
- Rotation rule, like in basic volleyball
- Cross under net is illegal
- teams switch ends of the court between sets
- There is no Libero in water

Some basic technical rules are derived from water polo, such as players' bench, side-switch, water judging, and substitution. For example bench or authority of referee is formed out from category of bench and referee in polo, the same accordance is with intramural.[12] Lay-out, water competition, court audience, sport culture, is totally identical and finds its meaning in the merits of water polo.

Therefore, water volleyball takes most of terminology of basic volleyball, with elements of equipment common to water polo or competitive swimming. Knowing that it encompasses two qualities, water and earth, with active interaction between these two fluids.

Regardless of the terminology and rules, volleyball is more water sport, as it happens in the aquatic environment, and with water adaptive equipment. Swimmers are not those who specifically play, but bathers, nevertheless water players are those valued the most. Issue of movement refers to lightly swimming, gliding, water walking. In times of rapid, swimming is more efficient way of reaching the ball.

3.4. American and italian volleyball

3.4.1. Acqua pollavolo

Court dimensions. The Water Volleyball is a sport played on a water surface depth 16'' min and max 20'' from the two teams, separated by a network, each consisting of five athletes of the same sex. The playing field is a rectangle of 46' x 23' / 14 x 7 m, surrounded by a clear area at least 3 m wide on each side. The height space free from any obstacle must be at least 7 m height from soil.

Scoring System of Water volley. The race is won by the team that wins two sets in the mode 2 of 3, three set in the mode 3 out of 5. In case of a tie 1-1 or 2-2, the deciding set (3rd or 5th) is played to 15 points with a minimum lead of two points. A set (except the deciding third or fifth set) is won by the team that first scores 25 points with a minimum lead of two points in the event of a tie 24:24, the game continues as long as two points separate the teams (26:24 - 27:25, etc.). [19]

3.4.2. American water volleyball

The playing area consists of a rectangular playing court measuring 59' x 29'6".

Matches may either consist of 2 out of 3 games. A team wins a match by winning two games. Games are played to 25 points with no cap (win by 2). The tie breaking game is played to 15 win by 2 with a cap of 17. [20][21]

Differences between American and Italian water volleyball

- Playing surface –water
- Different court size- 46x23 ft to 59x29 ft,
- 14x7 to 18x9m
- Water pool depth 16"/40 cm to 47"/1.2 m
- Inflated pool to in-ground pool
- Volleyball positioning
- Team size five, Coed 2x3 to six 3x3
- Scoring system 2 out 3, 3 out 5 to 2 out 3
- Coaching during matches is allowed
- Player bench as in water volleyball
- Substitutions are allowed

- Teams switch ends after half
- There is no Libero as in water volleyball

Italian water volleyball rules are made in accordance with FIVB beach volleyball rules, especially technical description and designs of court, arbitration and procedures.

Coed water volleyball compositions

- Co-ed triples: 3 players on the court per team, 2x1, 1x2
- Co-ed four-person: 4 players on the court per team, 2x2
- Co-ed five-person: 5 players on the court per team, 3x2
- Co-ed six-person: 6 players on the court per team, 3x3

In Co-Rec play, a team is composed of 3 men and 3 women. You can only have a maximum of three of each gender in the pool at a time. Four-person, triple composition, each team should start with (4) players, (2) Males & (2) Females.

A team must have a minimum of 3 players to start a game and each gender must be represented. Legal playing combinations are 2 & 2 or 2 & 1. 3 & 1 is NOT a legal playing combination.

Males and females alternate positions on the court. [22][23]

3.5. Compendium

3.5.1. Volleyball

A one-meter (40-inch) wide net. The top of the net is 7 ft 11 5/8 in/2.43 m above the center of the court for men's competition, and 7 ft 4 1/8 in/ 2.24 m for women's competition

The game continues, with the first team to score 25 points by a two-point margin is awarded the set. Matches are best-of-five sets and the fifth set, if necessary, is usually played to 15 points. (Scoring differs between leagues, tournaments, and levels; high schools sometimes play best-of-three to 25; in the NCAA games are played best-of-five to 25 as of the 2008 season.

Before 1999, points could be scored only when a team had the serve (side-out scoring) and all sets went up to only 15 points. The FIVB changed the rules in 1999 (with the changes being compulsory in 2000) to use the current scoring system (formerly known as rally point system), primarily to make the length of the match more predictable.

Other rule changes enacted in 2000 include allowing serves in which the ball touches the net, as long as it goes over the net into the opponents' court.

3.5.2. Beach volleyball

The height of the net shall be 7 ft 11 5/8 in/2.43 m for men and 7 ft 4 1/8 in/2.24m for women.

The net is 27' 3 1/8.50 m long and 3' 3 1/1 m (+/-1 1/3 cm) wide when it is hung taut, placed vertically over the axis of the center of the court.

The match is won by the team that wins two sets. In the case of a 1-1 tie, the deciding set (the 3rd) is played to 15 points with a minimum lead of 2 points. A set

(except the deciding 3rd set) is won by the team that first scores 21 points with a minimum lead of two points. In the case of a 20-20 tie, play is continued until a two-point lead is reached.

The ball shall be spherical, made of a flexible material (leather, synthetic leather or similar) which does not absorb humidity, i.e. more suitable to outdoor conditions since matches can be played when it is raining. The ball has a bladder inside made of rubber or a similar material. [24]

3.5.3. *Acqua pallavolo*

The Water Volleyball is a sport played on a water surface (depth 16''/40 cm min and max 20''/50 cm) from the two teams, separated by a network, each consisting of five athletes of the same sex.

The playing field is a rectangle of 46' x 23'/14 x 7 m, surrounded by a clear area at least 10 ft/3 m wide on each side. The height space free from any obstacle must be at least 23 ft/7 m height from soil.

The variants of the Water Volley may provide for the participation of teams of 2 or more athletes or mixed teams.

The net is 27' 3''/8.50 m length and 3' 3''/1 m wide (+ / - 1' / 3 cm), stretched vertically above the axis of the center of the court.

All four buoys (with a diameter of 6'-8''/15-20 cm and brightly colored) located at the four ends of the field, have joined the intersections of the boundary lines. They are considered integral parts of the field.

4. Conclusions

ELATE, TENDENCIES, AMERICAN AND EUROPEAN VOLLEYBALL

Water volleyball is ranked among recreational sports.

Recreation is expressed, as a relaxing and creative game, as an optional creative sport activity and form of healthy and stimulating performance. Water volleyball is little written and explored but modern practice has fruited its possibilities. Pool volleyball has been developed in the offer of tourist facilities, in relaxation tourism and university campuses. [25][26][27]

Water sports are particularly interesting from this point of view, as they form as a healthy activity. Then there is a positive medical psychology, a sports psychology that is not recognizable at first in other types of sports activities. Aquatic activities are one grateful field of sport medical psychology, because they discern positive synergy or harmony in the manifestation and effectuation of human playing movements.

Sport is an active health plan. In sports, as a leisure activity, as well as in the beginnings of this new beautiful water sport, variety of health and sporting benefits are recognized within different innovative forms and groups: outdoor, intramural, warm water volleyball, co-eds, junior, intercollegiate, senior, competitive or recreational. [25][29]

There has been affirmed convention made up on tournaments concerning volleyball court dimensions. Author of this article is for transition from practical to professional volleyball rules, as preliminary pattern for further research on technical recommendations.

Volleyball convergence criteria could lead to 52'x26' dimensions, and different scoring system. [30]

Practice can refine that figures toward more efficient and outwardly attractive game. Talks between national volleyball associations and volleyball federation should be made considering international volleyball standards, and continental criteria, scoring system, 8x16, and other improvements. Within US Water volleyball different suggestions could also be found within clubs, colleges, and universities.

Court size is in negative correlation with player speed, or motion in aqua fluid. On the other side play speed will cause sloppier reception or reception with even smaller game efficiency. [31]

There are basically two variants. Italian volley is an outdoor volleyball played in small depth protective pools. American water volleyball is however, intramural professional swimming pool game. Water volley is not adjustable to Olympic or intramural standards, as open game liable to weather conditions. Further, one must have in mind well developed practice of German pool water volleyball, and widespread American standard of this water sport.

Convergences are required. Depth of the pool in water volley is 9'', while that in water volleyball is 4', court size is the same, but the features again are different. Water volleyball could be played in Olympic swimming pools, while water volley not, but only on open courts.

In this sport, relationships specific to leisure activity and sports recreational engagement are greatly present. [11]

Water volleyball is relatively new sport. Club practice of this sport has already been established. Further steps will involve transit from associational to professional aspects, creating unique standard and recommendations on general view. However, consideration should be made in order to provide global aquatic modes and implement efficient activities.

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