



ASIAN COMMUNITY PERCEPTION ON PICKLEBALL SPORT

SUSILO ^{A,*}, CHAO-CHIEN CHEN^{A, B}, AGUS SALIM^C, BOYKE ADAM MANOPO^D,
 MUCHAMAD ARIF AL ARDHA^E, ROLIMARDIAN^F ARIFUDDIN USMAN^G, BASYARUDDIN
 DAULAY^H

^a Sports Science Faculty, Universitas Negeri Jakarta

Jl. Pemuda No. 10 Jakarta, Indonesia,

^bSports Science Faculty, Asia University

No. 500號, Liufeng Rd, Wufeng District, Taichung City, Republik Tiongkok 413,

^cState Junior High School (SMP N) 64 Jakarta

Jl. Karanganyar No. 17 Jakarta, Indonesia,

^dSports Science Faculty, Universitas Negeri Jakarta

Jl. Pemuda No. 10 Jakarta, Indonesia,

^eSports Science Faculty, Universitas Negeri Surabaya

Jalan Kampus Lidah Wetan Unesa, Surabaya,

^f Sports Science Faculty, Universitas Negeri Surabaya

, jalan lintas jambi-ma bulian, kampus unja mendalo darat, Universitas,

^gSports Science Faculty, Universitas Negeri Makasar

Jl.Wijaya Kusuma no.14 Makassar Sulawesi Selatan

^hSports Science Faculty, Universitas Negeri Medan

Jln William Iskandar Pasar V Medan Estate, Universitas Negeri Medan


Abstract

This study aims to examine the public perception of member countries of the Asia Federation Pickleball (AFP) towards the sport of Pickleball which includes: (1). Aspects of the game, (2). Equipment aspect, (3). Benefit Aspect. The method used in this research is descriptive. The population of this research is all Pickleball players who are members of the Asia Federation Pickleball (AFP). The sampling technique is incidental sampling. In this study, the sample is the research sample is 494 people. Data collection techniques in this study used a questionnaire. The data analysis technique in this study used descriptive quantitative data analysis techniques. The results of the study concluded that (1). The public perception of the Pickleball game obtained data of 83.48%. (2). Public perception of the equipment used in the Pickleball game obtained data of 72.51%. (3). The public perception of the benefits that exist in the Pickleball game obtained data of 76.56%. This means that from the Asian public perception of the sport of Pickleball, it is very good in terms of the aspects of the game, equipment, and benefits because Pickleball is very easy and interesting to do for children, adults, and parents. Pickleball sport from the aspect of equipment has economic and practical value and excellent benefits in improving fitness and sports performance.

Keywords: Public perception, Pickleball, economic and practical value, sports performance.

I. INTRODUCTION

The coaching and development of sports in every country is a necessity in supporting activities and means to make the country proud. According to sports activities in each country are in principle the same, namely, they are used to meet practical needs in life because they have the attraction to develop various abilities, foster hope, provide development experiences, improve physical fitness



by involving the resulting muscular system up to participate in sports activities [1].

The presence of Pickleball has given a new color to the development of the sport in Asia. Where this sport is a combination and has almost the same characteristics as field tennis, badminton and table tennis [2]. The combination of these three sports makes Pickleball more interesting, fun, and easy to play because it can be played by all levels of society and all ages from children to the elderly, both among students and communities in society. Pickleball is generally a sport for all ages where the game is very easy and understands the rules faster and with a modified field and can be played anywhere [3].

Pickleball in Asia is still developing unevenly. Asia Federation Pickleball as a Pickleball organization in Asia still has 7 members out of 48 countries in Asia. Countries that are members of the Asia Federation Pickleball are dominated by Southeast Asian and East Asian countries. Indonesia became the last member to join the Asia Federation Pickleball [4]. The development of this sport is certainly a great opportunity, especially for Asian countries to be able to compete and excel with countries in America and Europe which developed earlier.

On the other hand, the sport of Pickleball outside Asia has developed very quickly. Pickleball in the United States is one of the fastest growing sports, with three million Pickleball players in 2016 [5]. At the Nationals event in 2017 the sport of pickleball was able to be played on 44 fields simultaneously with a registrar of more than 1,300 players [6]. The socialization and development system that has not been carried out systematically make Pickleball difficult to be recognized by the Asian community.

Based on the description above, the public's perception of Pickleball is very much needed in developing an effective and efficient Pickleball development system in the future. The importance of this research can be used as a basis in the development of Pickleball in general in Asia, especially in Indonesia. The perception of the Asian community towards the sport of Pickleball that has not been identified has prompted researchers to conduct research on "the perception of the people of the member countries of the Asia Federation Pickleball (AFP) towards the sport of Pickleball".

In this paper, we intend to examine the public perception of member countries of the Asia Federation Pickleball (AFP) towards the sport of Pickleball which includes: (1). Aspects of the game, (2). Equipment aspect, (3). Benefit Aspect. Hence, the results can be used as consideration for the Asia Federation Pickleball, Indonesia Pickleball Federation, academics, practitioners, and stakeholders.

II. METHODS/MATERIALS

A. Perception

Perception is a process that is preceded by sensing, which is a process that takes the form of receiving a stimulus by the individual through the receptor device [7]. Perception is a process that involves the entry of messages or information in the human brain through the senses [8]. every perception is always preceded by sensing, namely the process of receiving a stimulus by the individual through the senses which is then forwarded by the nerves to the brain as the center of the nervous system and this is where the physiological process occurs which causes the individual to be aware of what is received with the senses or receptor devices [9].

Perception is related to a person's treatment of information about an object that enters him (he receives) through observation using his senses. The treatment process is related to giving meaning, description or interpretation of the object.



The process of perception is a two-way event, namely as a result of action and reaction. In order for individuals to be able to realize and make perceptions, there are several conditions that need to be met, namely: 1) The existence of the object being perceived, 2) The senses or receptors, 3) The presence of attention [7]. The process of forming a perception that occurs in an individual is influenced by the response to a stimulus received by the five senses or an individual's point of view on an object.

Factors that affect a person's perception differ from one another are: 1) External factors Consisting of intensity, size, opposites, repetition of movements, new and familiar things, family background, information obtained, knowledge and culture around. 2) Internal factors consisting of the learning process, feelings, attitudes, personality, individual, prejudice, desires or expectations, attention (focus), physical condition, psychiatric disorders, values and needs as well as individual self-interest and motivation [9]. Perceptions contained in a sport can be exploited to improve skill acquisition and evaluate coaching programs in sports [10].

Based on the various descriptions above, it can be concluded that perception is a person's actions and reactions to information that is influenced by internal and external factors. Positive perceptions can lead to motivation and interest from individuals to carry out an activity as well as possible.


B. Sports

The term "sport" includes all forms of physical activity or competitive play in the form of casual or organized participation [11]. One way to identify "sports" is to look at some of the objectives carried out, namely to maintain or improve physical abilities and skills, as well as provide pleasure to the perpetrators [12], and sports also provide entertainment for the participants (actors, connoisseurs, activists) [13].

Specifically, sport can be viewed as an institutionalized competitive activity, involving rigorous physical exertion or the use of relatively complex physical skills of the performer motivated by internal and external rewards [14]. Furthermore, exercise is also seen as adequate physical activity, which is an important prerequisite for maintaining and improving health. Physical activity strengthens the musculoskeletal system, reduces the risk of heart and blood vessel disease, arthritis and various cancer risks, and has a positive impact on human mental health [15]. Then, sport can also be interpreted as an activity or activity carried out by a person/community that is carried out consciously and does it without any pressure to compete at least with himself [16]. Sport is a universal human movement activity [17]. Sports appear in every culture, past and present, but each culture has its own definition of sport depending on space and time [18].

Based on the various descriptions above, it can be concluded that sport is a form of universal organized physical activity by mobilizing physical skills that can be competitive or recreational to provide health values, strengthen muscles, heart, and nerves, by being consciously and competitively even though one's own. Sport is a cultural event based on space and time, with internal and external motivations from the perpetrators.

Sport is of joy, or sadness and anger that lead to brutal acts. Since ancient times, sports have been an important part of human civilization. Sport is also a part of the cultural process developed by humans, its activities can be seen as having a pragmatic meaning, and having a sacred meaning. Sport has become a dynamic and complex social phenomenon with positive consequences such as health,



achievement, active participation [19], but sport has also become a negative phenomenon for individuals or society, among others, related to crime, ecological damage and financial motivation [20].

Behavioral theory of physical activity provides a basis for diagnosing why humans adopt and maintain certain health behaviors, the process of habituation of movement and thought, substitution of understanding exercise and participatory embodiment through planned behavior, social knowledge, autonomous activity, as well as a model of the conception of systemic environmental health [21]. Humans behave or act because of certain goals with the need (needs) from a person, motivation or goals will appear, so that humans behave including the choice of sports activities, then when the goal is achieved, the individual experiences satisfaction [22]. In addition, sport is a plural event, this is based on research from three countries (Slovenia, Croatia, Germany) showing that sports activities are cultural events that do not discriminate between age and gender differences and have six factors as the reasons: (1) Sport action with friend (sport action with friends); (2) Popularity (popularity); (3) Fitness and health (fitness and health); (4) an entity in contemporary culture, through the gym you can see the purest expressions of humanity, such as screaming with joy, crying Social status (social status); (5) Sports events (sports events); (6) Relaxation through sports [23].

Based on the description above, it can be concluded that sport, apart from being seen as competitive physical activity, can also be interpreted as a cultural event, sociologically plural, is a planned movement with various positive goals, and can have collective health value.

B. Pickleball

Pickleball is a sport that is played with a kind of bat and uses a special ball that is played on a court measuring 20 and 44 feet wide separated by a type of tennis court [3]. Pickleball can be played indoors or off a 20-foot-by-44-foot Pickleball field. Like tennis, it can be played as doubles (two players on a team) or singles.[2].

Paddle (racquet name) or tennis racket and badminton racket are made of fiber and will not be damaged in a long time, no need to pay for replacement and installation of racket strings, there are 5 advantages in the game of Pickleball, namely infrastructure, energy system, easy and fun, perspective, and easy to remember [3].

Pickleball is a very popular and rapidly growing sport. Given its convenience and low impact nature, it can be a fun way for people of all ages to be active and fit and help encourage a healthy lifestyle. As with all sports, there is a risk of various injuries. However, a few steps in preparation coupled with proper knowledge of one's own health, Pickleball can be an activity enjoyed by players of all ages [24]

In the Pickleball game there are balls made of rubber and there are balls with holes, so the speed of the ball is very slow, so anyone can play without difficulty, it will take a long time to play, so anyone can feel happy. Because this simple and fun game can be played by people who don't have a good sports foundation, so that children and the elderly can play for a long time, in the end they accidentally do cardio vascular exercises that strengthen the heart muscle with aerobic movements low impact[3].

Based on the description above, Pickleball is a sport that belongs to a small ball game using a paddle that can be played as doubles (two players in one team) or singles. Pickleball game is very easy to play and fun for both kids and adults.

C. Study Area

The population of this research is all Pickleball players who are members of the Asia Federation Pickleball (AFP). This research was conducted in 7 countries (Indonesia, Singapore, Taiwan, Japan, Philippines, India, Thailand). The sampling method is non-probability sampling with incidental sampling technique. The sample requirement used in this study is that any Pickleball players who are members of the Asia Federation Pickleball (AFP) participate fill out a google form and send it. The sample members who meet the requirements in this research sample are 494 people.

D. Measurement

The Asian people's perception questionnaire on the sport of pickleball was developed by researchers and has been validated by expert judgment. The instrument developed includes three aspects. The first aspect is people's perception of the Pickleball game. This aspect of the game is to measure the level of ease and attractiveness of the Pickleball game. The second aspect is people's perception of Pickleball game equipment. This aspect of equipment is to measure the facilities and infrastructure used in the Pickleball game. The third aspect is the public's perception of the benefits in the Pickleball game. This aspect of benefit is to measure fitness and achievement during Pickleball. Total statements in the questionnaire were 30. Respondents were asked to give their opinion on the Pickleball game using a Likert scale from 1 to 4

E. Data Collection

The questionnaire was compiled in the form of a google form. Questionnaires that have been compiled in the google form are distributed through AFP member representative coordinators to be redistributed to their members. The questionnaires began to be distributed from August 15 to October 10, 2021.

F. Data Analysis

The data analysis technique in this study used descriptive quantitative data analysis techniques. The method of calculating data analysis is to find the relative frequency of the percentage, with the formula as follows:

$$P = \frac{F}{N} \times 100\%$$

Description:

P = Percentage sought

F = Frequency

N = Number of Respondents [25]

III. RESULT AND DISCUSSION

The following data illustrates the general perception of people in Asia towards the sport of Pickleball, which is described in the following table:

Table 1. People's Perceptions in Asia of Pickleball in terms of the game aspect.

No	Indicator	Value	Max	Percentage (%)	Average (%)
1	Easiness	8037	9880	81.35	83.48
2	Attractions	8459	9880	85.62	

The public's perception of the sport of pickles in this study was reviewed on the aspect of the game as measured by ease and attractiveness. Easy indicator statements presented to respondents include: (1) Pickleball is an easy game to play (2) Pickleball technique is easy to teach/taught (3) Pickleball game rules are easy to reach (4) Pickleball can only be played by people who have good movement skills (5). It takes a long time to master the game of Pickleball. The attractiveness indicator statements presented to the respondents include: (1) Playing basketball is fun (2) I enjoy playing basketball (3) I feel more relaxed after playing basketball (4) Playing basketball gets boring quickly (5). Pickleball is not entertaining.

Based on the data, it is known that the public perception of the Pickleball game obtained data of 83.48%. This means that people think that Pickleball is easy and interesting to be an option in sports activities. Considering from the aspect of the game, Pickleball is very easy to do and get fun when playing.

Table 2. People's Perceptions in Asia of Pickleball in terms of equipment.

No	Indicator	Value	Max	Percentage (%)	Average (%)
1	Facilities	6674	9880	67.55	72.51
2	Infrastructure	7654	9880	77.47	


The public's perception of the sport of Pickleball in this study was reviewed on the aspect of equipment measured through facilities and infrastructure indicators. The statements presented by the facilities indicator to respondents include: (1) I find it easy to get Pickleball sports equipment (2) Pickleball equipment is very practical to carry everywhere (3) Pickleball sports equipment is not easily damaged (4) Not many sports shops sell Pickleball equipment (5). Pickleball sports equipment belongs to the expensive category. The statements of infrastructure indicators presented to respondents include: (1) Pickleball can be played anywhere (2) Pickleball can take advantage of existing field facilities (3) Pickleball can be played in public areas (4) Pickleball is more suitable to be played outside room (5). Pickleball is more suitable to be played indoors.

Based on the data obtained, it is known that the public perception of the equipment used in the Pickleball game obtained data of 72.51%. This means that people think that Pickleball game equipment is easy to obtain and can be played anywhere. The Pickleball tool itself has excellent economic value, is not easily damaged and does not require maintenance costs. The flexibility of the infrastructure used allows Pickleball to be played in public areas.

Table 3. Public Perceptions in Asia of Pickleball in terms of benefits.

No	Indicator	Value	Max	Percentage (%)	Average (%)
1	Fitness	7910	9880	80.06	76.56
2	Achievement	7219	9880	73.07	

Public perception of the sport of Pickleball in this study was reviewed on the aspect of benefits measured through indicators of fitness and achievement. Statements of fitness indicators presented to respondents include: (1) I have been actively exercising by playing Pickleball so far (2) My body is more fit after playing Pickleball (3) My health has improved since playing Pickleball regularly (4) Pickleball is a sport that has low intensity (5). My body aches every time I play Pickleball. The achievement indicator statements presented to respondents include: (1) I feel I have the potential to excel in Pickleball (2) I can explore my best abilities in Pickleball (3) My movement skills improve by playing Pickleball



(4) I find it difficult to develop achievement in Pickleball (5). Pickleball sport just to pass the time to exercise.

Based on the data obtained, it is known that the public perception of the benefits that exist in the Pickleball game obtained data of 76.56%. This means that people think that Pickleball has very good benefits in improving fitness and sports achievement.

The results showed that the perception of the Asian community towards the sport of Pickleball from the aspect of the game was very good. The game of Pickleball is very well received in Asian society. Based on the data obtained by the community, it is considered that in terms of the game, Pickleball is very easy and attractive for all levels of society. Several studies have shown that Pickleball combines all age groups and skill levels, is socially motivating, easy to learn, and competitively fun. It is growing in popularity and has strong social interactions that motivate and encourage participants to play sports [26].

The equipment used in the Pickleball game has a good economic value. Pickleball equipment is not easily damaged because it is made of fiber, which explains that professionals can tailor effective sports opportunities for older adults by designing programs that are low cost and convenient [27]. The infrastructure aspect of the field itself can be played anywhere by utilizing existing facilities both indoors and outdoors. Pickleball is generally a sport for all ages where the game is very easy and understands the rules faster and with a modified field and can be played anywhere [3].

The perceived benefit aspect of the game of Pickleball itself is extraordinary. The benefits are mainly for fitness and achievement. Pickleball is essentially a modified version of tennis, the smaller court size and emphasis on mobility are ideal means used to meet basic social or physical needs in order to stay physically, emotionally and physically involved. social life with age [28]. the fitness benefits of exercise, many older adults enjoy playing Pickleball as it promotes competitiveness and sociability [29].

Participation in leisure time physical activity with Pickleball can have many benefits for older adults, including increased independence of bodily functions, stamina, and psychological well-being along with a decreased likelihood of falls, chronic conditions, and depression leading to death [30]. Pickleball, in the end, they accidentally do cardio vascular exercises that strengthen the heart muscle with low impact aerobics movements [3].


IV. CONCLUSION


The results of the study concluded that the perception of the Asian community towards the sport of Pickleball was very good in terms of the aspects of the game, equipment, and benefits because Pickleball is very easy and interesting to do for children, adults, and parents. Pickleball sport from the aspect of equipment has economic and practical value and excellent benefits in improving fitness and sports performance.

The implications of the results of this study can be used as a policy basis for the Asia Federation Pickleball to develop Pickleball in other Asian countries. Pickleball is a small ball sport, therefore Pickleball can be developed in the physical education curriculum for sports and health by making it a compulsory subject at universities that have Sports Science study programs.

REFERENCES


- [1] E. P. Indah, "SISTEM OLAHRAGA PRESTASI DI INDONESIA DAN CHINA," *Riyadhoh J. Pendidik. Olahraga*, vol. 3, no. 1, pp. 15-20, 2020.

- 
- [2] M. Puyuh, "Caring for patients with pickleball injuries," *Nursing (Lond)*., vol. 49, no. 4, pp. 16-17, 2019.
- [3] D. Primanata, A. Kristiandaru, and A. R. S. Tuasika, "IMPLEMENTASI PERMAINAN PICKLEBALL BAGI SISWA SEKOLAH MENENGAH ATAS," *J. Penjaskesrek*, vol. 8, no. 1, pp. 98-111, 2021.
- [4] AFP (Asia Federation of Pickleball), "Membership AFP," 2021. [Online]. Available: <https://www.afpickleball.org/membership>.
- [5] S. & F. I. Association., "Pickleball participation report 2016," 2016.
- [6] USAPA, "History of the game," 2018.
- [7] B. Walgito, *Pengantar Psikologi Umum*. Yogyakarta: Andi Offset, 2010.
- [8] Slameto, *Belajar dan Faktor-Faktor yang Mempengaruhinya*. Jakarta: PT. Rineka Cipta, 2002.
- [9] M. Thoha, *Perilaku Organisasi, Konsep Dasar, dan Aplikasi*. Jakarta: PT Raja Grafindo Persada, 2011.
- [10] R. Gray, "Embodied Perception in Sport," *Int. Rev. Sport Exerc. Psychol.*, vol. 7, no. 1, pp. 72-86, 2014.
- [11] A. Tomlinson, C. Young, and R. Holt, "Sport in Modern Europe," *J. Sport Hist.*, vol. 37, no. 1, pp. 1-4, 2010.
- [12] P. Tomaszewski, J. Gajewski, and J. Lewandowska, "Somatic Profile of Competitive Sport Climbers," *J. Hum. Kinet.*, vol. 29, no. 3, pp. 107-113, 2011.
- [13] H. Cantelon, "The End of Amateurism in American Track and Field," *J. Hist. Sport Phys. Educ.*, vol. 42, no. 1, pp. 70-80, 2011.
- [14] A. Lyras and E. Kotziamani, "Olympism for Peace and Development: A case study analysis of an Inter-ethnic Community-based Initiative.," in *The Sixth International Peace Conference.*, 2008.
- [15] A. Kaupužs, "The Relationship Between Physical Activity and Exercise Motivation of The First Year Students From Rezekne Augstskola," *J. Sport Sci.*, vol. 4, no. 1, pp. 3-15, 2013.
- [16] J. Skinner, D. H. Zakus, and J. Cowell, "Development through Sport: Building Social Capital in Disadvantaged Communities," *J. Sport Manag.*, vol. 11, no. 3, pp. 253-275, 2008.
- [17] P. K. Tengan and J. M. Markham, "Performing Polynesian Masculinities in American Football: From Rainbows To Warriors," *Int. Journal Hist. Sport*, vol. 26, no. 16, pp. 2412-2431, 2009.
- [18] V. Duke and L. Crolley, "Fútbol, Politicians and the People: Populism and Politics in Argentina," *Int. J. Hist. Sport*, vol. 18, no. 3, pp. 93-116, 2010.
- [19] C. Lin, P. Lee, and H. Nai, "Theorizing the Role of Sport in State- Politics," *Int. J. Sport Exerc. Sci.*, vol. 1, no. 1, pp. 23-32, 2008.
- [20] Z. Yildiz and S. Çekiç, "Sport Tourism and its History and Contribution of Olympic Games to Touristic Promotion," *Int. J. Sci. Cult. Sport*, vol. 3, no. 4, pp. 326-337, 2015.
- [21] M. Verloigne *et al.*, "Self-Determined Motivation Towards Physical Activity in Adolescents Treated for Obesity: an Observational Study," *Int. J. Behav. Nutr. Phys. Act.*, vol. 8, no. 97, pp. 2-11, 2011.
- [22] J. H. Wilson, "Authority in the 21st Century: Likert's System 5 Theory," *Emerg. Leadersh. Journeys*, vol. 3, no. 1, pp. 33-41, 2010.
- [23] M. Kondric, J. Sindik, G. Furjan-Mandic, and B. Schiefler, "Participation Motivation and Student's Physical Activity among Sport Students in Three Countries," *J. Sport. Sci. Med.*, vol. 12, no. 1, pp. 10-18, 2013.
- [24] N. Greiner, "Pickleball: injury Considerations in an increasingly Popular Sport," *Mo. Med.*, vol. 116, no. 6, p. 488, 2019.

- 
- [25] Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Bandung: Alfabeta, 2011.
- [26] C. Oms, E. Medina, H. Dos Santos, D. Thorpe, and A. Arechiga, "Exercise addiction in pickleball: Is it prevalent?," in *APHA's 2020 VIRTUAL Annual Meeting and Expo (Oct. 24 - 28)*, 2020, vol. 2, no. 1.
- [27] T. Liechty, "STRATEGIES FOR FACILITATING OLDER ADULTS SPORT," in *2020 NRPA Annual Conference : A Virtual Experience October 27-29*, 2020, 2020, pp. 10-12.
- [28] A. A. Buzzelli and J. A. Draper, "Examining the Motivation and Perceived Benefits of Pickleball Participation in Older Adults," *J. Aging Phys. Act.*, vol. 28, no. 2, pp. 180-286, 2019.
- [29] J. M. Casper and J. . Jeon, "Psychological connection to pickleball: Assessing motives and participation in older adults," *J. Aging Phys. Act.*, vol. 27, no. 1, pp. 28-33, 2018.
- [30] S. K. Keadle, R. McKinnon, B. I. Graubard, and R. P. Troiano, "Prevalence and trends in physical activity among older adults in the United States: a comparison across three national surveys," *Prev. Med. (Baltim.)*, vol. 89, pp. 37-43, 2016.

参考文献:

- [1] E. P. Indah, "印度尼西亚和中国的成就 体育统", Riyadhoh J. 教育家。体育, 卷.3 no. 1, pp. 15-20, 2020 年.
- [2] M. Puyuh, "照顾泡菜球受伤的患者 ·" 护理 (伦敦) , 卷.49, no. 4, pp. 16-17, 2019 年.
- [3] D. Primanata, A. Kristiandaru, and A. R. S. Tuasika, "为高中学生实施 pickleball 游戏休闲健康体育 · 卷 8, no. 1, pp. 98-111, 2021 年.
- [4] AFP (亚洲皮克球联合会) · "AFP 会员资格", 2021 年。[线] 可用 : <https://www.afpickleball.org/membership>.
- [5] S. & F. I. 协会 · "2016 年 匹克球参与报告", 2016 年
- [6] USAPA, "游戏历史", 2018 年.
- [7] B. Walgito, 一般心理学导论 · 日惹 : Yogyakarta: Andi Offset, 2010年.
- [8] Slameto, 学习和影响它的因素 · 雅加达 : PT. 里内卡·西普塔, 2002 年.
- [9] M. Thoha, 组织行为、基本概念和应用 · 雅加达 : PT Raja Grafindo Persada , 2011 年.
- [10] R.Gray, "“体育中的具体感知”, *Int. 牧师运动锻炼心理学* · 卷 · 7 , 没有。 1, 页 · 72-86 , 2014 年.
- [11] A. Tomlinson, C. Young, and R. Holt, "现代欧洲的体育运动, *J. 体育史*卷. 37, 字. 1, 页pp. 1-4,。 2010 年.
- [12]P. Tomaszewski, J. Gajewski, and J. Lewandowska"竞技体育登山者的躯体概况", *J. Hum. Kinet.*, 卷. 29, 字. 3, pp. 107-113, 2011 年.

- 
- [13] H. Cantelon, 美国田径运动的终结”, J. Hist. 运动物理教育, 卷。 42, 字。 1, pp. 70-80, 2011年。
- [14] A. Lyras and E. Kotziamani, ““和平与发展的奥林匹克主义：基于跨种族社区的倡议的案例研究分析。””, 第六届国际和平会议, 2008 年
- [15] A. Kaupužs, “来自 Rezekne Augstskola 的一年级学生的体育活动与锻炼动机之间的关系”, J. Sport Sci., 卷。 4, 字。 1, pp 3-15。 2013 年。
- [16] J. Skinner, D. H. Zakus, and J. Cowell, ““通过体育发展：在弱势社区建立社会资本”, J. Sport Manag., 卷。 11, 字。 3, pp 。 253-275, 2008 年。
- [17] P. K. Tengan and J. M. Markham, “在美式足球中表现波利尼西亚男子气概：从彩虹到勇士”, 诠释。期刊历史。体育, 卷。 26, 字。 16 pp.2412-2431, 2009年。
- [18] V. Duke and L. Crolley, “足球、政治家和人民：阿根廷的民粹主义和政治”, Int. J. 历史。体育, 卷。 18, 字。 3, pp. 93-116, 2010年。
- [19] C. Lin, P. Lee, and H. Nai, “将体育在国家政治中的作用理论化”, Int. J. 体育锻炼。科学, 卷。 1, 字。 1, pp. 23-32 2008 年。
- [20] Z. Yildiz and S. Çekiç, “体育旅游及其历史和奥运会对旅游促进的 献”, Int. J. 科学。邪教。 体育, 卷。 3, 字。 4, pp. 326-337, 2015 年。
- [21] M. Verloigne et al., “肥胖症治疗青少年身体活动的自我决定动机：一项观察性研究”, Int. J. 行为。养分。物理法案。卷。 8, 字。 97 pp. 2-11, 2011 年。
- [22] J. H. Wilson, “21 世纪的权威：李克特的系统 5 理论。” Emerg. 领导。旅程。卷。 3, 字。 1, pp. 33-41, 2010 年
- [23] M. Kondric, J. Sindik, G. Furjan-Mandic, and B. Schiefler, “三个国家体育学生的参与动机和学生的体育活动,” J. Sport. 科学。医学, 卷。 12, 字1, pp. 10-18. 2013 年
- [24] N. Greiner, “Pickleball: 越来越流行的运动中的伤病考虑。”莫。医学, 卷。 116, 字。 6, pp. 488, 2019 年
- [25] Sugiyono, 定量、定性和研发研究方法。万隆：阿尔法贝塔。2011 年
- [26] C. Oms, E. Medina, H. Dos Santos, D. Thorpe, and A. Arechiga, “泡菜球运动成瘾：它普遍吗？”在 APHA 的 2020 年虚拟年会和博览会 (Oct. 24 - 28), 卷 2, 字。 1.2020 年
- [27] T. Liechty, “促进老年人运动的策略”, 2020 年 NRPA 年会：虚拟体验。2020 年 pp. 10-12.10 月 27 29, 2020 年,
- [28] A. A. Buzzelli and J. A. Draper, “检查老年人参加匹克球的动机和感知的好处。”J. Aging Phys. 法案, 卷。 28, 字 2, pp. 180-286, 2019 年
- [29] J. M. Casper and J. . Jeon, “与 pickleball 的心理联系：评估老年人的动机和参与。”J. Aging Phys. 法案, 卷。 27, 字 1, pp. 28-33. 2021 年。



[30] S. K. Keadle, R. McKinnon, B. I. Graubard, and R. P. Troiano, “美国老年人体育活动的流行率和趋势：三项全国性调查的比较。”上一页。医学。（巴尔的摩）。, 卷. 89 pp. 37-43。2016 年.