

**Analysis of Psychological Aspects of Taekwondo Athletes in Training Phase****Mona Fiametta Febrianty^{1✉}, Ira Purnamasari², Geraldi Novian³**

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Abstract

Maximum performance must be accompanied by structured and systematic training activities. In the training process, we know that four aspects must be considered, namely technical, physical, tactical, and psychological. This psychological aspect is often neglected in the training process, and Taekwondo (TKD) is no exception. A taekwondo athlete needs a variety of psychological components, including motivation, mental, self-confidence, concentration, anxiety, and others. All these psychological components must be following their respective portions, not less or even excess. The purpose of this study was to describe the psychological aspects of taekwondo athletes during training. The research method used in this study is a survey method with a research design using an ex post facto approach. The research instrument used is the Psychological Aspects in Training Phase Questionnaire (PATPQ) questionnaire which contains eight psychological aspects with 50 statements. The results showed as follows: aspects of motivation (82% = very high), mental toughness (81% = very high), self-confidence (76% = high), concentration (73% = high), fighting power (72% = high), emotional control (66% = high) and anxiety (53% = moderate). So it can be concluded that the psychological aspects of taekwondo athletes in the training phase are still not optimal, but have led to the best performance as the training process goes on.

How to Cite

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INTRODUCTION

Sports activities today are not just to nourish the body, but as a tool to find a source of life. High achievement achieved by an athlete is a must if the sport is used as a source of income. Maximum achievement is inseparable from the coaching process in the form of structured and systematic training. In the training process, we know that four aspects must be considered to achieve athlete success, namely: technical, physical, tactical, and mental/psychological (Harsono, 2017). These four aspects are interrelated and cannot be separated from one another. If the athlete has good physical, technical, and tactical development, but is not accompanied by a good mentality as well, then the high achievement will not be achieved (Harsono, 2017). This psychological aspect is often ignored in the training process and tends to be paid more attention to during matches (Komarudin, 2016). This is unfortunate considering that various literature studies have shown that the application of psychological strategies to improve performance in sports has grown and proven significantly over the last few decades (Abdullah et al., 2016).

Research conducted by Costa et al. examined the effect of the pre-competition phase (30 days) on anthropometric indicators, markers of muscle damage, systemic inflammation and oxidative stress, mood, and stress-recovery, and lower limb explosive power in taekwondo athletes. competition on the physical, physiological, and psychological variables of taekwondo athletes (Costa et al., 2018). The percent effect on body adiposity (-6.2% in BF%), muscle damage (-25.7% in CK), and oxidative activity (+22.7% in MDA) was verified. Although conflict/pressure conditions and depression increased by 40% and 100%, respectively, there was a positive effect on fatigue (\square 50%). Another study that examined anxiety and emotional intelligence in six martial arts sports showed that emotional ability is an important contributor to emotional intelligence, especially what distinguishes high-level athletes from other high-level athletes. The higher the emotional intelligence possessed by the athlete, the more he will be able to regulate himself, both during training and competition (Fernández et al., 2020).

A systematic review examining the psychological preparation of Judo athletes gave the result that psychological preparation should be tailored to each judoka, because there may be significant individual differences among judoka (Judo athletes) (Ziv & Lidor, 2013). Sports

practitioners working with athletes should obtain relevant information on evidence-based psychological interventions to plan sports psychological programs aimed at preparing these athletes for training sessions and competitions. This evidence-based information can help sports practitioners working with judoka to effectively plan training programs that match the specific needs of judoka to provide optimal performance (Ziv & Lidor, 2013). Research that examines the pattern of interaction between athletes and coaches in softball shows that it can have a positive effect on motivation and improving athlete performance (Buning & Thompson, 2018). Concrete evidence regarding the importance of the psychological aspect of athletes is shown in the form of percentage data from research results ranging from 50%-95% of good performance is determined by mentality (Komarudin, 2016). This shows how important mental training is to improve the performance of athletes, both in the training process and during matches to achieve maximum performance (Komarudin, 2016), following the opinion of the Research and Development of KONI which states that the goal in sports coaching is to achieve maximum performance (Effendi, 2016).

In the world of sports, the achievement is one of the factors in the success of sports development. In other words, sports achievement is an indicator that can be used directly to see the status or level of achievement and success in sports. Several components determine the achievement of high achievement in achievement sports, namely the state of sports facilities, the state of the competition, the psychological state of the athlete, the state of the athlete's skill ability, the state of the athlete's physical ability, the state of the body constitution and the state of tactical/strategic ability. Based on the explanation above, it can be concluded that there is a relationship between psychological aspects and athlete performance, although the psychological aspects between various sports may be the same, the gradation for each psychological aspect is different so further analysis is needed (Dimiyati et al., 2013).

However, apart from the correlation between psychological aspects and performance, psychological aspects alone cannot determine athlete performance (Abdullah et al., 2016). Of course, other factors are needed, so coaches and athletes themselves need to be able to prepare everything during the training phase. This careful preparation will have a positive impact on the next match. Coaches often only focus on analyzing technical, physical, and tactical aspects. It is still rare for coaches to analyze the psychological

aspects of athletes, but sadly athletes are always required to have good psychological aspects without being prepared beforehand. The trainer only emphasizes training for mastery of technique, tactics, and perfect skill formation, while mental development is allowed to develop naturally or by chance (Harsono, 2017). This is also confirmed by previous studies which suggest that exercise is not only a physical problem, which is related to the movements of the limbs, muscles, bones, and so on (Fadli & Ansho, 2019). The range of the sport goes beyond that. Especially sports achievement is also associated with problems and symptoms of psychological behavior. Psychological aspects are very important to be analyzed to understand and maintain the motivation of athletes to face the grueling training process over a long period, deal with pre-competition preparation, pressure during competition, redefine goals and objectives after the competition (Matsumoto et al., 2009).

Taekwondo was significantly associated with more positive self-esteem and body image assessments, and a stronger belief that taekwondo affects physical health. Research results reveal that taekwondo involves more psychological aspects besides motivation (Weiss & Miller, 2019). But unfortunately, the analysis of the psychological aspects of the sport of taekwondo has not been carried out thoroughly and tends to examine it partially. Research in 2018 also suggested that a combined analysis of pre-competition physical, physiological and psychosocial features in taekwondo has not been carried out (Costa et al., 2018). This means that in the sport of taekwondo, a comprehensive psychological aspect analysis is needed to assist athletes in preparing themselves for the training/pre-competition process before facing a match.

Taekwondo athletes generally have to overcome physical fatigue due to the constant process of losing weight quickly, which may lead to increased psychological stress. This fact is evidenced mainly by the strong relationship found between anthropometric variables/body composition and the state of emotional exhaustion formed (Costa et al., 2018). The concern about the psychological aspect of taekwondo being neglected is even greater, especially for athletes who undergo an intensive coaching process. Athletes practice almost every day with a solid training density will certainly affect the individual psychological aspects of the athlete himself. Athletes in high-level competition must be able to overcome the influence of high-stress levels, so that athletes can tolerate high external pressures, to maintain optimal performance. To deal with this stress, athletes adopt certain mental strategies and skills to

increase their self-confidence and protection. The stressful experience events of taekwondo athletes must learn to develop their mental skills to focus on high-pressure situations, self-confidence, and better mental performance as well as positive interpretations of competitive anxiety (Zandi & Mohbi, 2016).

Based on the explanation above, the researchers are interested in conducting research that analyzes the psychological aspects of martial arts athletes during training. Researchers see that analytical studies like this are still very limited, especially in Indonesia. While the results of the analysis of this psychological aspect are very much needed by coaches in dealing with athletes so that they can act according to their path. Researchers specifically chose martial athletes in the hope of providing analysis results in the form of characteristics of needs and dominance of psychological aspects in the sport. Researchers hope that the results of this study can be a reference for coaches and no longer ignore the psychological aspects of athletes, especially during training phase.

METHODS

The research method used in this study is a survey method with a research design using an ex-post-facto approach (Fraenkel et al., 2012). The subjects used in this study were West Java Regional Center and Training (Pelatda) athletes in the taekwondo sport consisting of 24 athletes with details of 12 male athletes and 12 female athletes with an age range of 18-24 years. Subjects were selected from the population using a total sampling technique. The instrument used in this research is the Psychological Aspects of Athletes in Training Phase Questionnaire (PAATPQ) which contains eight psychological aspects, namely motivation, mental toughness, self-confidence, concentration, anxiety, emotional control, self-control, and fighting power which are described in 50 items. about. This closed questionnaire uses a 5-point Likert Scale that has been tested for validity (0.632) and reliability (0.704) so that this questionnaire is feasible to use. Data analysis was carried out using SPSS version 24 (Santoso, 2017).

RESULTS AND DISCUSSION

The results of the PAATPQ data distributed to the sample, the authors present in the form of tables and diagrams to make it easier to understand. Description of statistics can be seen in **Table 1**.

Table 1. Statistical Descriptive

Variable	Mean	Std. Deviation	Sum
Psychological Aspect	3.61	1.23	4327
Motivation	4.09	1.01	393
Mental Toughness	4.07	0.81	586
Confidence	3.78	1.15	545
Concentration	3.65	1.05	438
Worry	2.67	1.18	448
Emotion Control	3.30	1.34	555
Self control	3.96	1.06	761
Fighting Power	3.58	1.33	601

*n = 24

Table 1 shows a statistical description of the overall data and each psychological aspect containing the mean, standard deviation and total scores of all taekwondo athletes (n = 24) in this study. Each psychological aspect has a different average value, so it can be concluded that taekwondo athletes during training have different conditions based on each psychological aspect with the largest value obtained in the motivational aspect and the lowest value obtained in the anxiety aspect. Furthermore, the authors conducted a normality test to determine the distribution of the data, which can be seen in **Table 2**.

Table 2. Normality Testing

Variable	Asymp. Sig. (2-tailed)	Information
Psychological Aspect	0.200	Normal
Motivation	0.063	Normal
Mental Toughness	0.113	Normal
Confidence	0.200	Normal
Concentration	0.200	Normal
Worry	0.200	Normal
Emotion Control	0.200	Normal
Self Control	0.113	Normal
Fighting Power	0.063	Normal

Table 2 shows the results of the normality test of all research data using the One-Sample Kolmogorov-Smirnov Test. Based on the test results, all psychological aspects obtained the Asymp value. Sig. (2-tailed) > 0.05, it can be concluded that the data is normally distributed. Furthermore, the authors conducted a difference test using a parametric approach, it can be seen in **Table 3**.

Table 3. Difference Testing

Variable	Sig. (2-tailed)	Information
Psychological Aspect	0,034	H1 accepted
Motivation	0,005	H1 accepted
Mental Toughness	0,006	H1 accepted
Confidence	0,029	H1 accepted
Concentration	0,000	H1 accepted
Worry	0,047	H1 accepted
Emotion Control	0,032	H1 accepted
Self Control	0,018	H1 accepted
Fighting Power	0,016	H1 accepted

Table 3 shows the results of the difference test using the Independent Samples Test. The author conducted a test of differences in research data both overall and per-psychological aspects based on gender. Based on the test results, all psychological aspects obtained the value of Sig. (2-tailed) < 0.05, then H1 is accepted, which means that there is a significant average difference in psychological aspects between male and female taekwondo athletes. Furthermore, the author presents the percentage of results in the form of a bar chart, which can be seen in **Figure 1**.

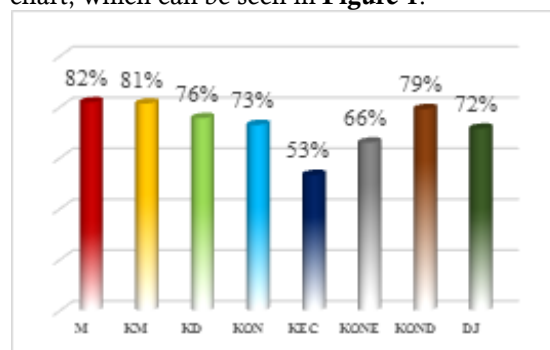


Figure 1. Taekwondo Athlete's Psychological Aspect Percentage

Figure 1 shows the percentage value of the results of all psychological aspects presented in the form of a bar chart. It can be seen that all psychological aspects have different percentage values. In addition, the psychological aspects possessed by taekwondo athletes during training are still not optimal. This percentage value also directly describes how the psychological condition of every aspect of taekwondo athletes during training. The author also categorizes the percentage value of psychological aspects into five categories, namely very high (81-100%), high (61-80%), moderate (41-60%), low (21-40%), and very low

(0-20%). 20%). In detail, it can be seen that the highest percentage value was obtained in the motivational aspect with a percentage value of 82% (very high), which was then continued on the mental toughness aspect with a percentage value of 81% (very high), self-control with a percentage value of 79% (high), self-confidence with a percentage value of 76% (high), concentration with a percentage value of 73% (high), fighting power with a percentage value of 72% (high), emotional control with a percentage value of 66% (high) and anxiety with a percentage value of 53% (moderate).

Athlete psychology is one aspect that must be considered by both coaches and athletes themselves. We need to know that several factors can significantly affect the appearance of athletes in achieving their achievements, namely physiological, anthropometric and psychological factors. This is in line with the following statement "it is necessary to realize that the problem of athletes' appearance in achieving achievements.... There are at least three basic factors that are believed to affect the athlete's appearance, namely physiological, anthropometric and psychological factors" (Supriyanto, n.d.). It is also said that essentially psychology applied in the field of sports includes factors that directly affect athletes and factors outside of athletes that can affect the athlete's performance (Handayani, 2019). Therefore, it is very feasible if the psychological aspect is used as one of the factors that can support improving the appearance and even the achievements of an athlete.

In this psychological aspect, there are several psychological aspects that researchers have revealed, including motivation, mental toughness, self-confidence, concentration, fighting power, emotional control, and anxiety. For some of these psychological aspects, the researchers tested on several athletes in martial arts, especially taekwondo. From the results of the questionnaire that the researchers conducted, it turned out that the psychological aspects possessed by the West Java regional athletes were in a very high category, in this case, namely motivation and mental toughness. Motivation is something that consistently involves cognitive, affective responses and the desired achievement (Collins, 2016). The desired achievement concerning this discussion is a goal of a coach and also an athlete, which is of course to achieve the highest achievement. This rationale is also based on research (Masrun, 2016) that motivation influences the related variable, namely sports achievement. Increased sports

achievement is closely related to the level of good athlete performance.

While mental toughness is a situation or condition of a person's soul in which there is an ability to deal with disturbances, threats both from within and from outside an athlete. Mental toughness must be possessed by an athlete both during training and competition, this is intended so that the athlete can still master the course of the match, especially in conditions of facing the possibility of defeat. So that by having excellent mental toughness an athlete will be able to quickly get up and return to looking good in a match. Research on the effect of mental toughness on performance has been conducted by previous study (E. Setiawan et al., 2020) which states that the aspect of mental toughness is closely related to sports activities, especially in displaying performance. It's just that other research states that this contribution depends on certain situations, for example when going to take a penalty kick, falling behind in the number of goals, not being able to block the opponent's attack, in situations like this mental endurance is very important for athletes to determine the level of success (Cowden, 2017).

The next psychological aspects discussed in this article are self-confidence, concentration, fighting power, and emotion control which are in the high category. These four aspects are no less important than the two previous psychological aspects, namely Motivation and Mental Toughness. All of these psychological aspects are of course closely related to the performance of an athlete. So they cannot be separated from each other. Self-confidence is the self-confidence possessed by a person (athlete) that he can achieve high achievements following predetermined targets. Self-confidence will create a sense of security which can be seen from the attitude and behavior that looks calm, not easy to hesitate (Hardiyono, 2020). This self-confidence is consistently identified as a very important influence in achieving athlete performance (Kinasih et al., 2021). An athlete's self-confidence will affect the athlete's performance to deliver the athlete's achievement to the highest achievement. In an article on sports self-confidence, it is stated that self-confidence is a key factor for success in sports. This level of self-confidence is the key to mutual success (Kostovski & Saiti, 2014). Concerning martial arts, an athlete who has self-confidence will be in line with the possession of a high fighting spirit.

Next is the athlete's concentration. Concentration is a person's ability to focus on a selected stimulus at a certain time (Nusufi, 2016).

The point is how a process of concentration occurs due to the concentration of attention over a long period. So that concentration is needed in training activities and even matches. Every sport of achievement with a high level of concentration is mandatory in addition to having several factors other than that. The concept of concentration is also concluded by previous study (Acharya, 2002) that concentration is a form of higher attention and is needed by every player/athlete and can be developed in training. Concentration is very important for an athlete because if someone has good concentration, especially taekwondo, it will easily determine the relevant decisions, decisions about what action to take next to be able to beat the opponent in a match. So that a high level of concentration will be one of the parameters of the good and bad performance of an athlete. When attention and concentration decrease, the athlete will focus his attention on irrelevant clues. So that athletes will often make mistakes that result in athletes failing (Uray, 2016).

Then we will discuss in more detail the adversity quotient. For sports, achievement, especially fighting power, is very important for a martial athlete, in this case, taekwondo. Indeed, every human being has a fighting power, the difference is the value of the fighting power itself, which is low or high. Characteristics of individuals who have high fighting power, among others, are optimistic, persistent, and tenacious in dealing with problems, think and act carefully and wisely, can motivate themselves, dare to take risks in facing challenges and life changes, work with high spirits, are future-oriented. and commit to moving forward, disciplined, say optimistic things in the face of problems. While the characteristics of individuals who have low fighting power are pessimistic and easily frustrated in dealing with problems, think and act tend to be uncreative and do not dare to take risks, blame others as the cause of a problem or difficulty, tend to run away from the problems at hand, work not enthusiastically. and is not ambitious, tends to be emotional in doing work, is not future-oriented and avoids challenges, says pessimistic things in dealing with problems (Stoltz, 2000).

While the meaning of fighting power itself is a person's ability to overcome difficulties and persist in overcoming the difficulties he is currently facing (Stoltz, 2000). So that someone who has high fighting power will not let himself be down by the obstacles that stand in front of him. Even if he fell, he would easily rise from the slump. It is different with someone who has high fighting power, someone who has low fighting power will

not take advantage of the advantages he has and will tend to make the situation worse because he feels helpless (Wardani & Saidiyah, 2016). One of the causes of low fighting power has been studied by previous study (Sulastri et al., 2019) that low fighting power can be influenced by the level of injury experienced by athletes and the role of coaches who have not been optimal in assessing psychological aspects during training and competition.

Based on the results of these studies and seen from the characteristics of the taekwondo sport which requires physical contact, especially on the *kyourugi* number, the possibility of injury is very high. So the role of the coach will greatly affect the level of fighting power possessed by an athlete. Next is emotional control. We need to know that emotions are really important for an athlete to have both in training and competitions. Emotional enhancement is needed to achieve one's peak performance. However, we also have to sort out what emotions are good to be in athletes. Feelings of frustration, fear of defeat, or disappointment are circumstances that we cannot avoid, especially in achievement sports. Likewise, feeling happy, excited, and confident is part of the activity.

Emotions can be described as an unbalanced physiological and psychological state (Nugroho, 2004). Emotions are also defined as the awakening of feelings accompanied by changes in the body, such as muscle tension and a fast heart rate (Sukadiyanto, 2015). If a person faces a situation that can make him uncomfortable, then negative emotions will arise. This will affect the athlete's performance in the match he is undergoing. Moreover, as we know taekwondo is a body contact sport that basically will have a high level of emotional reaction compared to non-body contact sports (Sukadiyanto, 2015). Therefore, emotional control is needed by every martial arts athlete, especially taekwondo. The role of the coach in having good emotional control of an athlete depends on how the coach provides treatment during training activities before the competition phase begins.

The last psychological aspect is anxiety. As we can see in the results of data analysis, the level of anxiety possessed by West Java taekwondo athletes is in the moderate category. This aspect is the only aspect that is in the moderate category which means the lowest compared to other psychological aspects. We can also interpret this moderate level of anxiety as means that West Java taekwondo athletes and coaches have been able to handle anxiety quite well. Anxiety is a form of

response to certain conditions that are considered a threat (Maulana & Khairani, 2017). Anxiety is defined as a negative emotional state characterized by feelings of nervousness, worry, and fear related to the activity at hand (Jarvis, 2005). Thus we can think of anxiety as an unpleasant condition that must be resolved so that athletes do not have high levels of anxiety. Anxiety will occur in any sport, both body contact and non-body contact. What makes it different is the environment and climate that surrounds it, especially during competitions (Espejel & Walle, n.d.). In addition, athletes who are involved in individual sports have a higher level of anxiety compared to group sports. In one study, it was shown that about 65% of the athletes involved were individual sports (fighting degrees, kempo, karate, boxing, taekwondo, fencing, archery, athletics, and shooting). This explains whether body contact or non-body contact sports experience the same anxiety (Maulana & Khairani, 2017). Why does it happen to an individual or individual sport? The reason is that every individual human being has his way of dealing with competition anxiety. In individual sports, in dealing with anxiety, it cannot be channeled or divided to his friends in the team as shown. occurs in group sports. So he has to solve the situation himself at that time. Therefore, coaches who handle teams with individual sports must be better at handling the anxiety of their athletes.

CONCLUSION

Based on the results of the study, the authors can conclude that the psychological aspects of taekwondo athletes in the training phase are still not optimal, but have led to the best performance as the training process is carried out. Coaches need to pay more attention to the psychological aspects of athletes because they have the same role as other aspects of achievement. Treatment in the form of psychological skills training is needed in the training process that is integrated into the periodization of the training program.

REFERENCES

- Abdullah, M. R., Musa, R. M., Maliki, A. B. H. M. B., Kosni, N. A., & Suppiah, P. K. (2016). Role of psychological factors on the performance of elite soccer players. *Journal of Physical Education and Sport*, 16(1), 170–176. <https://doi.org/10.7752/jpes.2016.01027>
- Acharya, J. (2002). Effect of Concentration Training on Attentional Style as a function of Skill in Soccer. *Academy of Management Journal*, 5(3), 1–4.
- Buning, M. M., & Thompson, M. A. (2018). Coaching Behaviors and Athlete Motivation: Female Softball Athletes' Perspectives. *Sport Science Review*, 24(5–6), 345–370. <https://doi.org/10.1515/ssr-2015-0023>
- Collins, D. (2016). Motivation in Sport and Exercise. In *The Sport Psychologist* (Vol. 7, Issue 3). <https://doi.org/10.1123/tsp.7.3.331>
- Costa, D. de O., Oliveira, L. dos S., de Sena, E. A., de Lima, F. F., & Silva, A. S. (2018). Pre-competition physical, physiological and psychosocial states of taekwondo athletes. *Journal of Physical Education (Maringa)*, 29(1), 1–11. <https://doi.org/10.4025/jphyseduc.v29i1.2913>
- Cowden, R. G. (2017). Mental Toughness and Success in Sport: A Review and Prospect. *The Open Sports Sciences Journal*, 10(1), 1–14. <https://doi.org/10.2174/1875399x01710010001>
- Dimiyati, Herwin, & Hastuti, T. A. (2013). Karakteristik Psikologis Atlet di Pusat Pendidikan dan Latihan Pelajar (PPLP). *Jurnal Psikologi*, 40(2), 143–158. <https://doi.org/10.22146/jpsi.6973>
- Effendi, H. (2016). Peranan psikologi olahraga dalam meningkatkan prestasi atlet. *Nusantara (Jurnal Ilmu Pengetahuan Sosial)*, 1, 23–30.
- Espejel, P., & Walle. (n.d.). Pre Competitive Anxiety and Self Confidence in Pain American Gymnasts. *Science of Gymnastic Journal*, 5(I), 39–48.
- Fadli, Z., & Ansho, K. (2019). Survey Tentang Aspek-Aspek Psikologis Atlet Sepak Takraw Putra Sumut Dalam Menghadapi Pekan Olahraga Swilayah Viii Tahun 2011 Kepulauan Riau. *Jurnal Ilmu Keolahragaan*, 18(1), 31–39. <https://doi.org/https://doi.org/10.24114/jik.v18i1.14305>
- Fernández, M. M., Brito, C. J., Miarka, B., & Díaz-de-Durana, A. L. (2020). Anxiety and Emotional Intelligence: Comparisons Between Combat Sports, Gender and Levels Using the Trait Meta-Mood Scale and the Inventory of Situations and Anxiety Response. *Frontiers in Psychology*, 11(February), 1–9. <https://doi.org/10.3389/fpsyg.2020.00130>
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). *How to Design and Evaluate Research in Education* (8th Ed.). Mc Graw Hill.
- Handayani, S. G. (2019). Peranan Psikologi Olahraga dalam Pencapaian Prestasi Atlet Senam Artistik Kabupaten Sijunjung. *Gelandang Olahraga: Jurnal Pendidikan Jasmani Dan Olahraga (JPJO)*, 2(2), 1–12. <https://doi.org/10.31539/jpjo.v2i2.714>
- Hardiyono, B. (2020). Tingkat Kecemasan Sebelum Bertanding Dan Percaya Diri Pada Saat Bertanding Atlet Pelatda Pengprov Fpti Sumatera Selatan. *Kinestetik*, 4(1), 47–54. <https://doi.org/10.33369/jk.v4i1.10399>
- Harsono. (2017). *Kepelatihan Olahraga: Teori dan Me-*

- todologi. Bandung: PT. Remaja Rosdakarya.
- Jarvis, M. (2005). *Sport psychology*: Routledge Modular Psychology. Routledge.
- Kinasih, D., Buhari, M., & Jailani. (2021). Cabang Olahraga Beladiri Kalimantan Timur. *Borneo Physical Education Journal*, 2, 9–20.
- Komarudin. (2016). *Psikologi Olahraga*. Bandung: PT. Remaja Rosdakarya.
- Kostovski, Z., & Saiti, B. (2014). Comparisons of the motor dimensions in multivariate space , with young athletes and nonathletic treated with eu-rofit tests. June.
- Masrun. (2016). Pengaruh mental toughness dan motivasi berprestasi terhadap prestasi olahraga atlet PPLP Sumbar. *Jurnal Performa Olahraga*, 1(1), 1–11.
- Matsumoto, D., Konno, J., & Ha, H. Z. (2009). Sport Psychology in Combat Sports. *Combat Sports Medicine*, 41–53. https://doi.org/10.1007/978-1-84800-354-5_3
- Maulana, Z., & Khairani, M. (2017). Perbedaan Kecemasan Bertanding Pada Atlet PON Aceh Ditinjau dari Jenis Aktivitas Olahraga. *Jipt*, 05(01), 97–106.
- Nugroho, S. (2004). Peran Emosi Dalam Pengajaran Pendidikan jasmani Dan Olahraga. *Jurnal Cakrawala Pendidikan*, 3(3), 481–503. <https://doi.org/10.21831/cp.v3i3.7601>
- Nusufi, M. (2016). Melatih Konsentrasi Dalam Olahraga. *Jurnal Ilmu Keolahragaan*, 15(2), 54–61.
- Santoso, S. (2017). *Complete Guide to Mastering Statistics with SPSS 24*. Jakarta: PT. Elex Media Komputindo.
- Setiawan, E., Patah, I. A., Baptista, C., Winarno, M., Sabino, B., & Amalia, E. F. (2020). Self-efficacy dan mental toughness: Apakah faktor psikologis berkorelasi dengan performa atlet? *Jurnal Keolahragaan*, 8(2), 158–165. <https://doi.org/10.21831/jk.v8i2.33551>
- Stoltz, P. G. (2000). *Adversity Quotient: Mengubah Hambatan Menjadi Peluang* (Cet.6). Gramedia.
- Sukadiyanto. (2015). Perbedaan Reaksi Emosional Antara Olahragawan Body Contact dan Non Body Contact. *Jurnal Psikologi UGM*, 33(1), 50–62. <https://doi.org/10.22146/jpsi.7085>
- Sulastri, A., Salasa, S., Rahmi, U., & Andriyani, Y. D. (2019). Injury Incident Rate Impact toward Adversity Quotient of Female Futsal Athletes. January. <https://doi.org/10.2991/icssh-pe-18.2019.45>
- Supriyanto, A. (n.d.). *Psikologi Olahraga* (T. Setiawan (ed.); Pertama, Vol. 148, pp. 148–162). UNY Press.
- Uray, G. (2016). Pentingnya Perhatian Dan Konsentrasi Dalam Menunjang Penampilan Atlet. *Peforma Olahraga*, 1, 1–11. <https://doi.org/10.24036/jpo71019>
- Wardani, W. S. K., & Saidiyah, S. (2016). Daya Juang Mahasiswa Asing. *Psymphatic : Jurnal Ilmiah Psikologi*, 3(2), 213–224. <https://doi.org/10.15575/psy.v3i2.1111>
- Weiss, E. R., & Miller, J. G. (2019). Training the body and mind: Examining psychological correlates of Taekwondo. *International Journal of Martial Arts*, November. <https://www.researchgate.net/publication/337569437>
- Zandi, H. G., & Mohbi, M. (2016). Evaluating Psychological Traits of Taekwondo Athletes Competing in World Classes and League superior. *Journal of Educational and Social Research*, December 2017. <https://doi.org/10.5901/jesr.2016.v6n2p133>
- Ziv, G., & Lidor, R. (2013). Psychological preparation of competitive judokas - A review. *Journal of Sports Science and Medicine*, 12(3), 371–380.