

Psychological analysis of badminton players from the perspective of self confidence, stress, tension and anxiety

Análisis psicológico de jugadores de bádminton desde la perspectiva de la confidencialidad, el estrés, la tensión y la ansiedad
 *Suratmin, *I Putu Darmayasa, *Gozali Wigutomo, *Lintang Hilmi Mumtaz Surath, **Hanik Liskustyawati, ***Dewangga Yudhistira
 *Universitas Pendidikan Ganesha (Indonesia), **Universitas Sebelas Maret Surakarta (Indonesia), ***Universitas Negeri Surabaya
 (Indonesia)

Abstract. Background: The psychological aspect is sometimes only a supplement to the training program, whereas the training program is not only related to the physical but also related to the mental. Mentally related aspects such as self-confidence, stress, tension and anxiety need more in-depth discussion. In this context, research on psychological aspects of badminton athletes in Bali in 2023 has not received attention. The ability to overcome mental disorders in athletes is a supporting factor in athlete performance. The aim of this research is to conduct a psychological analysis during critical periods for athletes with aspects such as self-confidence, stress, tension and anxiety. This research uses descriptive research and survey methods with a triangulation approach. The results found in this study from the results of observations, interviews, and filling out questionnaires on the dominant self-confidence aspect of Bali province badminton players in 2023 were good 41 (64.88%), the dominant stress aspect of Bali province badminton players in 2023 was good 30 (46.88 %), the dominant tension aspect of Bali province badminton players in 2023 is quite 27 (42.19%), the dominant anxiety aspect of Bali province badminton players in 2023 is good 34 (53.13%),. Critical time analysis was carried out on badminton players in the province of Bali in 2023. The resulting data showed dominance in the aspects of self-confidence, stress and anxiety. The dominant tension aspect is sufficient.

Keywords: Psychology, Self-confidence, Stress, Tension, Anxiety, Critical Numbers, Badminton

Resumen. Abstracto. A veces, el aspecto psicológico es sólo un complemento del programa de entrenamiento, mientras que éste no sólo está relacionado con lo físico, sino también con lo mental. Los aspectos relacionados con lo mental, como la confianza en uno mismo, el estrés, la tensión y la ansiedad, requieren un debate más profundo. En este contexto, la investigación sobre los aspectos psicológicos de los atletas de bádminton en Bali en 2023 no ha recibido atención. La capacidad de los deportistas para superar los trastornos mentales es un factor que favorece su rendimiento. El objetivo de esta investigación es realizar un análisis psicológico durante periodos críticos para los atletas con aspectos como la autoconfianza, el estrés, la tensión y la ansiedad. Esta investigación utiliza métodos de investigación descriptiva y encuesta con un enfoque de triangulación. Los resultados encontrados en este estudio a partir de los resultados de las observaciones, entrevistas y cumplimentación de cuestionarios sobre el aspecto dominante de autoconfianza de los jugadores de bádminton de la provincia de Bali en 2023 fueron buenos 41 (64,88%), el aspecto dominante de estrés de los jugadores de bádminton de la provincia de Bali en 2023 fue bueno 30 (46,88%), el aspecto dominante de tensión de los jugadores de bádminton de la provincia de Bali en 2023 es bastante 27 (42,19%), el aspecto dominante de ansiedad de los jugadores de bádminton de la provincia de Bali en 2023 es bueno 34 (53,13%),. El análisis del tiempo crítico se llevó a cabo en los jugadores de bádminton de la provincia de Bali en 2023. Los datos resultantes mostraron dominancia en los aspectos de autoconfianza, tensión y ansiedad. El aspecto de tensión dominante es suficiente.

Palabras clave: Psicología, confianza en uno mismo, estrés, tensión, ansiedad, números críticos, bádminton

Fecha recepción: 03-10-24. Fecha de aceptación: 22-10-24

Suratmin

suratmin@undiksha.ac.id

Introduction

The game is an individual and doubles game that faces each other to get points by smashing and taking advantage of the opponent's mistakes (Ahmad et al., 2018). Badminton is a form of sport that can be played by all levels of society, from an early age, children, teenagers to adults, both men and women (Dameria et al., 2023; Edmizal & Maifitri, 2021; Fauzan et al., 2022).

Apart from being a recreational sport, badminton can improve heart and lung health, increase endurance, and can reduce stress and anxiety. There is no need to doubt the role of badminton because it has been able to bring the Indonesian nation to the peak of world-class achievements (Nandikaz et al., 2017).

Achievement and playing skills in sports are influenced by two factors, namely external factors and internal factors.

External factors consist of sports infrastructure and equipment and the competition system. Internal factors consist of the athlete's psychological state, understanding of tactics or strategy, technical skills, physical abilities and body constitution (Fazari et al., 2017).

Apart from good physical condition, the athlete's psychological condition must also be taken into account. In every sport, movement elements related to physical conditions will be related to psychological aspects when practicing and competing. The synergistic involvement of physical, mental and technical elements will produce optimal results (Amir, 2015). Because apart from physical skills, an athlete also needs a good psychological condition.

Previous studies say that sports psychology has a direct influence on athletes and factors outside the athlete can influence performance (Effendi, 2016; Farda Kurniawan et al., 2020). When athletes experience a critical period,

athletes do not only experience one aspect of psychological disorders. However, athletes also experience aspects such as self-confidence, stress, tension and anxiety during training and competition. These aspects are interrelated in the world of sports psychology.

Psychological aspects such as self-confidence are very necessary when competing (Doorley et al., 2022). When a badminton player has thorough preparation but lacks self-confidence, it certainly has a negative effect on the match. This can be seen from mistakes when launching defense and resistance. Therefore, a coach needs to consider and relate it to sports psychology and the impact on the athlete's performance focus in competition.

Self-confidence in athletes is one of the most important factors that indirectly influences sports components in the athlete's context, sports performance, sports function, and the diversity of emotions and thoughts in the athletic context (Gunes & Yetim, 2023). Self-confidence as a tool for measuring athlete performance (Lochbaum et al., 2022). Therefore, previous research linked self-confidence to an athlete's performance. Self-confidence is important for people who want to stay healthy and mentally tough (Jekauc et al., 2023; Turiano et al., 2014). The importance of self-confidence for an athlete with a high level of performance.

Confident individuals tend to be more able to complete assigned tasks and overcome obstacles than others (Gunes & Yetim, 2023). On the other hand, individuals who have low self-confidence will experience obstacles in achieving their achievements.

Competitive-related environmental factors, such as participation in major competitions, competition with opponents, media attention, unsatisfactory refereeing, unfavorable weather conditions, or decreased performance often stress athletes (Ntoumanis & Biddle, 1998; Tossici et al., 2024). Likewise, circumstances that are part of an athlete's life, such as the death or illness of a close person, or a change of residence can influence an athlete's anxiety and stress levels (Arnold & David Fletcher, 2021). Apart from the external factors mentioned above, internal factors also have an influence as triggers for stress. A game that tends to rely on individual skills means badminton players must be able to control themselves internally.

An athlete who is overly anxious may make the wrong decision (Das & Bhosle, n.d.). Anxiety is a condition where a person thinks consciously about anxious and tense conditions that are bound by stimuli to the autonomic nervous system, so that anxiety is neither a mental nor a physiological emotion (Ford et al., 2017; M. Auliya Akhsan Al Wahib et al., 2021a). When athletes are anxious or worried about their performance, they will think extra about the possibility of failure in competition. Therefore, they will be motivated when they can control themselves to be more calm and less tense. Tension is a state of nervousness, resulting from

internal forces acting in conflict with each other as in emotional reactions such as anger or fear (Das & Bhosle, n.d.; Mmbaga et al., 2013). Badminton players often experience mental tension when competing in big competitions. Stress management techniques such as mindfulness and visualization can help them stay focused and calm (Milfayetty & Putri, 2020).

Training and competition programs can cause anxiety and stress (Rietjens et al., 2005; Salleh et al., 2021). In addition, the perception of the level of opponents, the importance of competition, confidence in one's own capacities are factors that can influence anxiety (Andrade Fernández et al., 2007; González-Campos et al., 2015; Martens, 1990). Anxiety is a negative emotion characterized by nervousness, excessive worry and fear, which correlates with a sympathetic fight-or-flight response (Salleh et al., 2021).

Athletes who can control themselves well will make better and faster decisions during the game. Successful sporting achievements provide a kind of satisfaction for all humans, including athletes (M. Auliya Akhsan Al Wahib et al., 2021b). Literature in the field of sport psychology shows that achievement motivation is the most significant and important predictor of performance for participation in sports competitions (Ayers, 2010; Deaner et al., 2016).

There have been many studies discussing athlete psychology. However, in the badminton sport, research on psychological analysis only discusses 1 aspect of sports psychology. However, there have been no studies that have examined aspects such as self-confidence, stress, tension and anxiety simultaneously and in an interconnected manner.

Such as studies from Kurniawan et al., Fauzan et al., Gunes et al., Jekauc et al. (Farda Kurniawan et al., 2020; Fauzan et al., 2022; Gunes & Yetim, 2023; Jekauc et al., 2023; Yudhistira & Tomoliyus, 2020). Only discusses one subfield of psychology. During competitions, athletes must be able to control several mental disorders such as self-confidence, stress, tension and anxiety because these aspects are interconnected during pre-competition and main competitions.

Therefore, to determine mental disorders in athletes during critical periods, the author analyzes the psychological aspects of badminton players from the perspective of self-confidence, stress, tension and anxiety.

Materials and methods

Participants and data collection

This research is descriptive research using survey methods. The model used is a qualitative and quantitative descriptive model with a triangulation approach. Triangulation is a method used in qualitative research, often also used in quantitative methods.

The population of this research is all badminton players in the province of Bali in 2023, from nine district/city

administrators in the province of Bali as coordination in sports development and coaching. The research sample was 64 badminton players in the districts/cities of Bali province in 2023. The sampling technique was carried out using a proportional random sampling technique with the criteria for badminton players who are the center for coaching district/city administrators in Bali province in 2023. The criteria for badminton players are; male and female, homogeneous in age, domiciled in Bali, and willing to be the research sample.

The research data collection procedures are as follows:

- 1) Make observations regarding coaching and sports coaching of badminton players.
- 2) Conduct interviews with administrators, coaches and badminton players.
- 3) Fill out the 2023 Bali province badminton player questionnaire.

The instruments used in this research are observation, interviews, documents/archives, and questionnaires. Data collection was carried out in stages (1) observations carried out directly by researchers (participatory) on the performance of badminton players, (2) interviews with players; self-confidence, stress, tension, anxiety) when critical badminton numbers are applied, (3) filling out questionnaires about players; self-confidence, stress, tension, anxiety) during critical badminton numbers.

Results

Self confidence

Based on the results of interviews and filling out questionnaires for badminton players regarding self-confidence analysis. The categorization of the number and percentage of good or bad self-confidence of Bali province badminton players in 2023 is presented in table 1.

Table 1.
Aspects of Badminton Player Self Confidence

Criteria			Amount	Percentage (%)
120	≤	A	19	29.69
100	≤	B < 120	41	64.06
80	≤	C < 100	4	6.25
60	≤	D < 80	0	-
		E < 60	0	-
Total			64	100

Based on the sample (N=64), it shows that the level of self-confidence of badminton players in the very good category = 19 people (29.69%), good = 41 people (64.06%), fair = 4 people (6.25%), poor = 0 people (0%), and very less = 0 people (0%), which can then be seen in the following diagram:

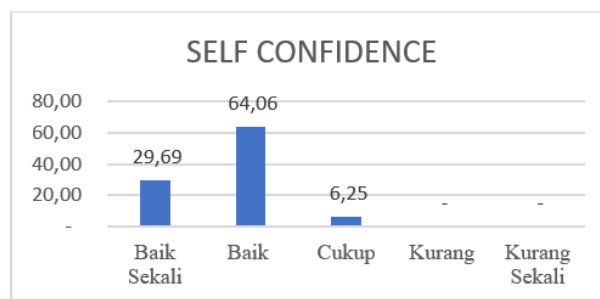


Figure 1. Self Confidence Aspects of Badminton Players

Stress Aspect

Based on the results of interviews and filling out questionnaires for badminton players regarding stress analysis. The categorization of the number and percentage of good or bad badminton players in Bali province in 2023 is presented in table 2.

Table 2.
Aspects of Badminton Player Stress

Criteria			Amount	Percentage (%)
100	≤	A	21	32.81
83	≤	B < 100	30	46.88
67	≤	C < 83	13	20.31
50	≤	D < 67	0	-
		E < 50	0	-
Total			64	100

Based on the sample (N=64), it shows that the stress level of badminton players in the very good category = 21 people (32.81%), good = 30 people (46.88%), fair = 13 people (20.31%), poor = 0 people (0%), and very few = 0 people (0%), which can be seen in the following diagram:

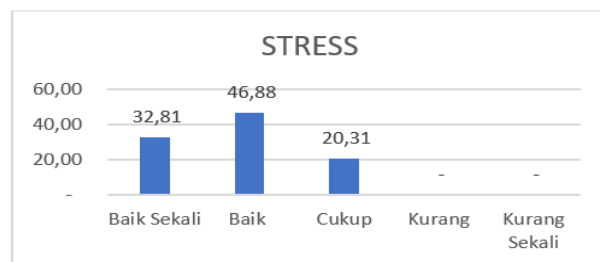


Figure 2. Aspects of Badminton Player Stress

Tension Aspect

Based on the results of interviews and filling out questionnaires for badminton players regarding stress analysis. The categorization of the number and percentage of good or bad Tension badminton players in Bali province in 2023 is presented in table 3.

Table 3.

Tension Aspects of Badminton Players

Criteria				Amount	Percentage (%)
40	≤	A		2	3.13
33	≤	B	< 40	22	34.38
27	≤	C	< 33	27	42.19
20	≤	D	< 27	5	7.81
		E	< 20	8	12.50
Total				64	100

Based on the sample (N=64), it shows that the tension level of badminton players in the very good category = 3 people (3.13%), good = 22 people (34.38%), fair = 27 people (42.19%), poor = 5 people (7.81%), and very less = 8 people (12.50%), which can be seen in the following diagram:

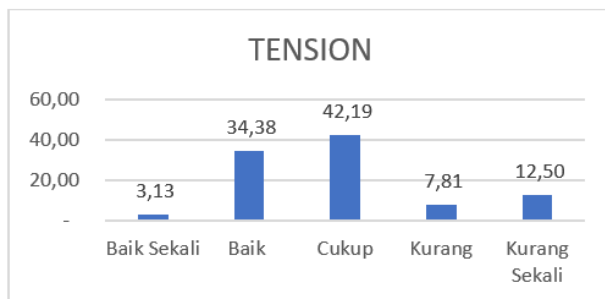


Figure 3. Aspects of Badminton Player Tension

Anxiety Aspect

Based on the results of interviews and filling out questionnaires for badminton players regarding stress analysis. The categorization of the number and percentage of good or bad Anxiety badminton players in the province of Bali in 2023 is presented in table 4.

Table 4.

Anxiety Aspects of Badminton Players

Criteria				Amount	Percentage (%)
52	≤	A		10	15.63
43	≤	B	< 52	34	53.13
35	≤	C	< 43	19	29.69
26	≤	D	< 35	1	1.56
		E	< 26	0	-
Total				64	100

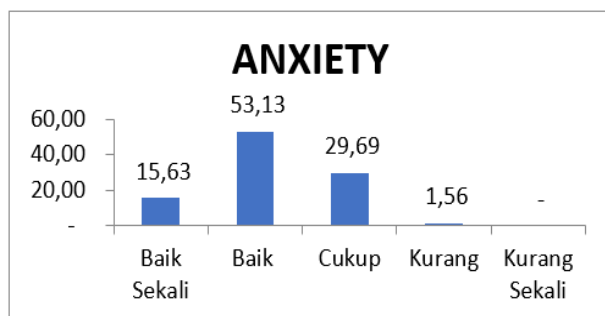


Figure 4. Aspects of Badminton Player Anxiety

Based on the sample (N=64), it is shown that the anxiety level of badminton players is in the category very good = 10 people (15.63%), good = 34 people (53.13%), regular = 19 people (29.69%), poor = 1 person (1.56%), and very few = 0 people (0%).

Discussion

The aim of this research is to analyze the psychological aspects of self-confidence, stress, tension and anxiety in critical times. The results found in the self-confidence aspect were in the very good category 19 (26.69%), good 41 (64.06%), and fair 4 (6.25%). In fact, the results of the self-confidence value show dominance in the good category. The results found in the stress aspect of the category were very good 21 (32.81%), good 30 (46.88%), and quite 13 (20.31%). In fact, the results of the stress value show that it is dominant in the good category. The results found in the tension aspect were in the categories very good 3 (3.13%), good 22 (34.38%), fair 27 (42.19%), poor 5 (7.81%), and very poor 8 (12.50%). The facts in the field from the tension value results show that it is dominant in the sufficient category. The results found in the anxiety aspect were in the categories very good 10 (15.63%), good 34 (53.13%), fair 19 (29.69%), poor 1 (1.56%), and very poor 0. Facts In the field, the results of the anxiety values show dominantly good. The novelty found in this aspect is in the form of analysis that was previously unknown to the trainer.

Based on the data above, the Bali province badminton players in 2023 have good mental control. Looking at the aspect of the training process, ideally athletes or players who have the potential for high achievement should be handled by a reliable coach (Foulds et al., 2019). This is to avoid a coaching and training process that is not of good quality and causes a lot of wasted time due to the trainer's incompetence.

Facts on the ground show that in general coaches only have experience as former athletes and do not have coaching qualifications and competencies. This condition becomes worse if the coach is only equipped with skills resulting from a course or upgrading course, so apart from being a former athlete, it is important for a professional trainer to have a sports education or sports coaching qualification. Successful achievement in sports is determined by several factors including physical preparation, technique, tactics or strategy, and mental development (Bahuguna & Tony, 2021). Mental training is usually neglected by coaches in providing training programs, even though mental maturity is a determining factor in achieving sports achievements. Mental preparation is needed to ensure optimal physical performance.

Psychology plays an important role in carrying out mental training programs, an aspect that is often overlooked by coaches and sports stakeholders (Moore & Bonagura, 2017). Based on the results of the author's analysis in the form of

observations, interviews and questionnaires, it was found that Bali badminton athletes in 2023 had good self-confidence, stress, tension and anxiety in the critical phase of the match.

The importance of having self-confidence to support athletes' performance systems in the training and competition processes. Therefore, athletes who have good self-confidence are able to overcome problems during training and competition. Apart from that, athletes who have good self-confidence are able to overcome mental disorders during other critical periods such as stress, tension and anxiety.

Several studies have proven that psychological roles play a role in determining athlete performance and building athlete personality (Candra et al., 2019). Generally, the psychological factors that determine athlete performance are motivation, mental preparation, self-confidence, anxiety control, team emphasis, and concentration (Hastuti, 2014).

This research analyzes psychological factors during the critical period for Bali Province badminton athletes in 2023. This research is still focused on quantitative research, so more in-depth research is needed.

Conclusion

Based on the results of the author's analysis in the form of observations, interviews and questionnaires, it was found that Balinese badminton athletes in 2023 had good self-confidence, stress, tension and anxiety in the critical phase of the match. This study analyzes psychological factors during the critical period of Bali Province badminton athletes in 2023. This study is still focused on quantitative research, so more in-depth research is needed.

Acknowledgment

The authors would like to thank the participants in this research, as well as the Yogyakarta State University agencies, for their assistance and permission to complete this research successfully.

Conflicts of interest

All authors declare no conflict of interest.

References

- Ahmad, S., Suratmin, & Dharmadi, M. A. (2018). Hubungan power lengan dan kelincihan dengan pukulan smash bulutangkis pada siswa peserta ekstrakurikuler bulutangkis sma negeri 2 gerokgak tahun 2017. *Jurnal Pendidikan Kepelatihan Olahraga Undiksha*, 9(1).
- Amir, N. (2015). Instrument Development of Self-Confidence for Badminton Athletes. *ANIMA Indonesian Psychological Journal*, 30(2), 101–110. <https://doi.org/10.24123/aipj.v30i2.539>
- Andrade Fernández, E. M., Lois Río, G., & Arce Fernández, C. (2007). [Psychometric properties of the Spanish version of the Revised Competitive State Anxiety Inventory-2 with athletes]. *Psicothema*, 19(1), 150–155.
- Arnold, R., & David Fletcher. (2021). Stressors, Hassles, and Adversity. In *Stress, well-being, and performance in sport* (1st ed., pp. 31–62).
- Ayers, S. C. (2010). *Achievement motivation and stress inoculation training: Coping through college*. Saint Louis University.
- Bahuguna, U., & Tony, A. (2021). Mental Training in Playing Competitive Sports Tournaments. *International Journal of Sports Science and Physical Education*, 6(4), 76. <https://doi.org/10.11648/j.ijsspe.20210604.13>
- Candra, A. R. D., Budiyo, K. S., & Sobihin. (2019). Psychological Characteristics of Athletes in Athletic Students Club Universitas Negeri Semarang. *Proceedings of the 5th International Conference on Physical Education, Sport, and Health (ACPES 2019)*. <https://doi.org/10.2991/acpes-19.2019.3>
- Dameria, F. D., Permono, P. S., Suratman, S., & Yudhistira, D. (2023). Analisis teknik dasar dan kondisi fisik pemain bulutangkis usia 11-13. *Multilateral : Jurnal Pendidikan Jasmani Dan Olahraga*, 22(2), 94. <https://doi.org/10.20527/multilateral.v22i2.15251>
- Das, R. K., & Bhosle, S. B. (n.d.). A comparative study of level of tension among various events of athlete. *International Journal of Health, Physical Education & Computer Science in Sports*, 131.
- Deaner, R. O., Balish, S. M., & Lombardo, M. P. (2016). Sex differences in sports interest and motivation: An evolutionary perspective. *Evolutionary Behavioral Sciences*, 10(2), 73–97. <https://doi.org/10.1037/ebs0000049>
- Doorley, J. D., Kashdan, T. B., Weppner, C. H., & Glass, C. R. (2022). The effects of self-compassion on daily emotion regulation and performance rebound among college athletes: Comparisons with confidence, grit, and hope. *Psychology of Sport and Exercise*, 58, 102081. <https://doi.org/10.1016/j.psychsport.2021.102081>
- Edmizal, E., & Maifitri, F. (2021). Pelatihan Tentang Kondisi Fisik Cabang Olahraga Bulutangkis Bagi Pelatih Bulutangkis Se Kota Padang. *Jurnal Berkarya, Pengabdian Kepada Masyarakat*, 3(1), 32–37. <https://doi.org/10.24036/jba.0301.2021.05>
- Effendi, R. (2016). Pengaruh Metode Latihan Practice Session, Test Session Dan Motivasi Berprestasi Terhadap Keterampilan Menendang Dalam Sepak Bola. *UDIKA (Jurnal Pendidikan Unsika)*, 4(1).
- Farda Kurniawan, Danang Ari Santoso, & Wawan Setiawan. (2020). Analisis Psikologi Terhadap Kepercayaan Diri Atlet Sepakbola. *Jurnal Pendidikan Jasmani (JPJ)*, 1(2), 47–58. <https://doi.org/10.55081/jpj.v1i2.126>
- Fauzan, H. A., Komarudin, K., Tafaqur, M., & Novian, G. (2022). Pengaruh Latihan Self-Talk Terhadap Kepercayaan Diri dan Peningkatan Hasil Dropshot pada Cabang Olahraga Bulutangkis. *Jurnal Kepelatihan Olahraga*, 14(1), 14–26. <https://doi.org/10.17509/jko-upi.v14i1.42922>
- Fazari, M., Damayanti, I., & Rahayu, N. I. (2017). Hubungan kecerdasan intelektual (iq) dan kecerdasan emosional (eq) dengan keterampilan bermain dalam cabang olahraga bulutangkis. *Jurnal Terapan Ilmu Keolahragaan*, 2(1), 33. <https://doi.org/10.17509/jtikor.v2i1.5350>

- Ford, J., Ildefonso, K., Jones, M., & Arvinen-Barrow, M. (2017). Sport-related anxiety: current insights. *Open Access Journal of Sports Medicine, Volume 8*, 205–212. <https://doi.org/10.2147/OAJSM.S125845>
- Foulds, S. J., Hoffmann, S. M., Hinck, K., & Carson, F. (2019). The Coach–Athlete Relationship in Strength and Conditioning: High Performance Athletes' Perceptions. *Sports, 7*(12), 244. <https://doi.org/10.3390/sports7120244>
- González-Campos, G., Valdivia-Moral, P., Zagalaz, M. L., & Romero, S. (2015). The self-confidence and control of stress in soccer players: Review of studies. *Revista Iberoamericana de Psicología Del Ejercicio y El Deporte, 10*, 95–101.
- Gunes, E., & Yetim, A. (2023). Coping with stress and self-confidence in athletes: A Review. *Journal of Theory and Practice in Sport, 2*(1), 46–63. <https://dergipark.org.tr/en/pub/jtps/issue/77932/1279344>
- Hastuti, T. A. (2014). Karakteristik Psikologis Atlet di Pusat Pendidikan dan Latihan Pelajar (PPLP). *Jurnal Psikologi, 40*(2), 143–158.
- Jekauc, D., Fiedler, J., Wunsch, K., Mülberger, L., Burkart, D., Kilgus, A., & Fritsch, J. (2023). The effect of self-confidence on performance in sports: a meta-analysis and narrative review. *International Review of Sport and Exercise Psychology, 1–27*. <https://doi.org/10.1080/1750984X.2023.2222376>
- Lochbaum, M., Sherburn, M., Sisneros, C., Cooper, S., Lane, A. M., & Terry, P. C. (2022). Revisiting the Self-Confidence and Sport Performance Relationship: A Systematic Review with Meta-Analysis. *International Journal of Environmental Research and Public Health, 19*(11), 6381. <https://doi.org/10.3390/ijerph19116381>
- M. Auliya Akhsan Al Wahib, Tomoliyus, Imam Hariadi, & Sapto Adi. (2021a). Psychological Factors Influencing Athlete Performance: A Meta-Analysis. *PalArch's Journal of Archaeology of Egypt / Egyptology, 18*(09), 1410–1420. <https://archives.palarch.nl/index.php/jae/article/view/9709>
- M. Auliya Akhsan Al Wahib, Tomoliyus, Imam Hariadi, & Sapto Adi. (2021b). The psychology and motivation of the junior badminton athlete in the competition. *PalArch's Journal of Archaeology of Egypt / Egyptology, 18*(09), 1410–1420. <https://archives.palarch.nl/index.php/jae/article/view/9709>
- Martens, R. (1990). Development and validation of the Competitive State Anxiety Inventory-2 (pp. 127-140). En R. Martens, RS Vealey, & D. Burton. *Competitive Anxiety in Sport*.
- Millfayetty, S., & Putri, U. N. (2020). Memberi penguatan pada guru menerapkan mindful breathing dalam menghadapi pandemi covid 19 di sd inklusi jalan sei petani no 19 medan. *Jurnal Vokasi, 4*(2), 113. <https://doi.org/10.30811/vokasi.v4i2.2002>
- Mmbaga, E. J., Leyna, G. H., Ezekiel, M. J., & Kakoko, D. C. (2013). Fertility desire and intention of people living with HIV/AIDS in Tanzania: a call for restructuring care and treatment services. *BMC Public Health, 13*(1), 86. <https://doi.org/10.1186/1471-2458-13-86>
- Moore, Z. E., & Bonagura, K. (2017). Current opinion in clinical sport psychology: from athletic performance to psychological well-being. *Current Opinion in Psychology, 16*, 176–179. <https://doi.org/10.1016/j.copsyc.2017.05.016>
- Nandika, R., Hadi, D. T., & Ridho, Z. A. (2017). Pengembangan model latihan strokes bulutangkis berbasis footwork untuk anak usia pemula (U-15). *GLADI JURNAL ILMU KEOLAHRAAGAN, 8*(2), 102–110. <https://doi.org/10.21009/GJIK.082.03>
- Ntoumanis, N., & Biddle, S. J. H. (1998). The relationship of coping and its perceived effectiveness to positive and negative affect in sport. *Personality and Individual Differences, 24*(6), 773–788. [https://doi.org/10.1016/S0191-8869\(97\)00240-7](https://doi.org/10.1016/S0191-8869(97)00240-7)
- Rietjens, G. J. W. M., Kuipers, H., Adam, J. J., Saris, W. H. M., van Breda, E., van Hamont, D., & Keizer, H. A. (2005). Physiological, Biochemical and Psychological Markers of Strenuous Training-Induced Fatigue. *International Journal of Sports Medicine, 26*(01/02), 16–26. <https://doi.org/10.1055/s-2004-817914>
- Salleh, R. M., Kuan, G., Aziz, M. N. A., Rahim, M. R. A., Rahayu, T., Sulaiman, S., Kusuma, D. W. Y., Adikari, A. M. G. C. P., Razam, M. S. M., Radhakrishnan, A. K., & Appukutty, M. (2021). Effects of Probiotics on Anxiety, Stress, Mood and Fitness of Badminton Players. *Nutrients, 13*(6), 1783. <https://doi.org/10.3390/nu13061783>
- Tossici, G., Zurloni, V., & Nitri, A. (2024). Stress and sport performance: a PNEI multidisciplinary approach. *Frontiers in Psychology, 15*. <https://doi.org/10.3389/fpsyg.2024.1358771>
- Turiano, N. A., Chapman, B. P., Agrigoroaei, S., Infurna, F. J., & Lachman, M. (2014). Perceived control reduces mortality risk at low, not high, education levels. *Health Psychology, 33*(8), 883–890. <https://doi.org/10.1037/hea0000022>
- Yudhistira, D. Tomoliyus. (2020). Content validity of agility test in Karate kumite category. *Journal of Human Movement and Sports Sciences, 8*(5), 211–216.

Datos de los/as autores/as:

Suratmin	suratmin@undiksha.ac.id	Autor/a
I Putu Darmayasa	putu.darmayasa@undiksha.ac.id	Autor/a
Gozali Wigutomo	wigutomo.gozali@undiksha.ac.id	Autor/a
Lintang Hilmi Mumtaz Surath	lintang@student.undiksha.ac.id	Autor/a
Hanik Liskustyawati	hanik_l@staff.uns.ac.id	Autor/a
Dewangga Yudhistira	dewanggayudhistira@unesa.ac.id	Autor/a