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THE COACH LEADERSHIP STYLE: HOW IT IMPACTS ON THE SPORTS COMMITMENT AND PLAYING SKILLS OF STUDENT TENNIS ATHLETES?

Setiyo Hartoto[1ABCDE], Mochamad Ridwan[1ABCDE], Dony Andrijanto[1BDE], Joesoef Roepajadi[1BD], Muhamad Asrul Sidik[1BE], Armando Monterrosa-Quintero[2ACD], Dan Iulian Alexe[3ACD], Dragos Ioan Tohanean[4ACD] and Edi Setiawan[5ACD]

[1]Universitas Negeri Surabaya
[2]Universidad Surcolombiana
[3]University of Bacau,
[4]Transilvania University of Brasov
[5]Universitas Suryakancana

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Corresponding Author: Setiyo Hartoto, E-mail: setiyohartoto@unesa.ac.id
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Abstract

Study purpose. The objective of this study was to investigate the effect of the coach's leadership style model on increasing the level of sports commitment and tennis skills.

Materials and methods. A mixed method was applied in this study. The participants (n=30) were student athletes at Surabaya State University. This study used the quantitative instrument which used the sports commitment grade scale to assess the level of sports commitment, the forehand and backhand tests were used to measure playing skills. While the qualitative instrument used in-depth interviews. The independent sample t-test was used to present differences in sports commitment scores and playing skills before and after the experiment in the experimental and control groups. The paired sample t-test was used to evaluate the effect of the coach's leadership style model on the experimental and control groups. Qualitative statistical analysis used qualitative thematic analysis.

Results. The quantitative study results showed that there was no difference in the level of sports commitment and playing skills between the experimental and control groups before the experiment ($p>0.05$), but there was a difference after the experiment ($p<0.05$). The paired sample t-test proved that the effect on increasing sports commitment and playing skills in the experimental group was better than in the control group ($p<0.05$). In qualitative research, student athletes stated that the coach's leadership style had advantages and disadvantages.

Conclusions. Finally, student athletes emphasized that this program had a real and positive impact on the development of their sports commitment and playing skills.

Keywords: coach's leadership style, sports commitment, tennis skills, mixed method research.

Introduction

Tennis is one of the competitive sports that was negatively affected by the COVID-19 pandemic and there are many coaches make efforts to restore the declining performance of students-athletes so that their performance will be improved in the future. Data reported the negative impact caused by COVID-19 among student-athletes, included psychological problems (Leyton-Román, de la Vega & Jiménez-Castuera, 2021; Samsudin et al., 2023), until decreased tennis playing skills. To achieve high achievements, psychological factors and skills in playing tennis must be fostered and improved significantly (Sobko, Koliesov & Ulaeva, 2019; Kozina, Yevtyfiieva, Muszkieta, Krzysztof & Podstawski, 2020; Nugroho, Hidayatullah, Doewes & Purnama 2023).

Sports commitment is one of aspects that has been significantly affected by COVID-19 (Leyton-Román, de

la Vega & Jiménez-Castuera, 2021), and this is proved by the large number of student-athletes who did not have a commitment to carry out sports post COVID-19. Sports commitment can be interpreted as a psychological state of a person who shows the desire or continuing to be involved in sports activities (Derakhshanpour, Mousavi & Taheri, 2018; Pulido, Sanchez-Oliva, Sanchez-Miguel, Amado & Garcıa-Calvo, 2018; Sánchez-Miguel et al., 2019; Notario-Alonso, Prieto-Ayuso, García-Notario & Contreras-Jordán, 2023). According to Hagiwara (2017), sports commitment is a desire and determination to participate in sports activities. With a high level of commitment in student-athletes, they will carry out sports more often, while a low level of commitment will have an impact on the failure and cessation of student-athletes' careers in sports activities (Berki, Pikó & Page, 2020). Previous studies reported that the level of athlete commitment to carry out exercise was a parameter for having good performance potential to achieve higher success than other student athletes (Notario-Alonso, Prieto-Ayuso, García-Notario & Contreras-Jordán, 2023). In addition, according to the research of Ohji et al (2021), there was other benefit of having a commitment which can showed by students-athletes had greater adherence to rehabilitation.

It is needed to focus on the skills of current students-athletes and it must be improved (Tafaqur, Komarudin, Mulyana & Saputra, 2017; Kolman, Huijgen, van Heuvelen, Visscher & Elferink-Gemser, 2022), because it has an important role for students-athletes to achieve high achievements in tennis (Yevtyfiieva, Korobeinik & Kolisnychenko, 2019). According to Ngatman, Guntur, Gani and Broto (2023), the skill that is considered important and must be mastered by every student-athletes in tennis is forehand and backhand. A good playing skill has the potential to support student-athletes in winning the competition (Wang, 2022), whereas student-athletes with poor skills shows low achievement and failure (Nugroho, Hidayatullah, Doewes & Purnama, 2023). According to Xiao, Bai, Geok, Yu & Zhang (2023), nowadays, a student-athlete does not only require excellent physical condition but must be supported with good technical skills. In competitive tennis competition, to improve their skills, student-athletes must undergo various kinds of training guided by a different coach's leadership style.

The coach's leadership style is an important factor in a training activity. Implementing the coach's leadership style could create a fun and meaningful training for the athletes (Lameiras, Martins, Lopes-De-Almedia & García-Mas, 2017). According to Nascimento-Júnior et al (2018), the coach's leadership style has an important role in training sessions to create a conducive environment and can ultimately improve athlete performance. There are five models of coach's leadership styles, namely the training and instruction model, the democratic model, the autocratic model, the social support model and the positive feedback model (de Albuquerque, Scheeren, Vagetti & de Oliveira, 2021). The benefits of leadership style had been well documented in previous studies, for example, it could trigger motivation (Borghi, Borges, Menegassi & Rinaldi, 2017), and higher interaction in athletes, so that they could achieve goals optimally (Kim & Cruz, 2016; Kim, Park, Love & Pang, 2021; Park, Kim, Kim & Kim, 2021). However, other studies show that the coach's leadership style that provided threats and pressure to athletes can trigger stress and failure (Moreno-Murcia, Hernández, Marín & Nuñez, 2019). Thus, the coach's leadership style during the training process is a parameter for student-athletes to succeed or fail in sports activities (Jin, Kim, Love, Jin & Zhao, 2022).

The data show that research on the coach's leadership style has been researched by previous studies (Shapie, Zenal, Parnabas & Abdullah, 2016; Ekstrand et al., 2018; Syed Ahmad & Parnabas, 2020; Huang, Lee, Lo, Chen & Hsu, 2021; Jawoosh et al., 2022). However, previous studies were carried out through correlation research, considering this gap, this study tried to present a novelty, namely to examine the effect of the coach's leadership style on increasing the level of sports commitment and playing skills in tennis students-athletes through mixed research methods. This research will contribute to the development of sports commitment and playing skills in tennis students in the future. Therefore, this study aims to assess the effect of the coach's leadership style model on increasing the level of sports commitment and playing skills.

Materials and Methods

Study participants

This study involved level 1 student athletes who were active in tennis course. They were male and came from Universitas Negeri Surabaya (n=30), which is one of the reputable universities in Indonesia. Participants were recruited through random sampling; invitations were sent to all student-athletes and only thirty who responded and willing to be involved in all research activities. Before the research was carried out, all participants and their parents were required to sign a statement letter which stated their willingness to become participants in this study. Participants were randomly allocated to the experimental group which had the coach's leadership style program (n=15, age: 19.06±2.7, weight: 51.43±5.4 kg, height: 1.60±0.5 cm) and the control group (n=15, age: 20.27±0.8, weight: 52.25±6.8 kg, height: 1.62±0.5 cm).

Instruments

Quantitative Instruments

Sports Commitment. The Sports Commitment Grade Scale was used to assess the level of commitment of athletes in carrying out sports training activities (Leyton-Román, de la Vega & Jiménez-Castuera, 2021). This instrument has two sub-indicators, namely current commitment which consists of 7 question items, for example "I will not quit, even though I experience defeat or injury", and future commitment which consists of 4 question items, for example "I devote 100% of my capability to focus in training activities in the future. To answer all of these question items, we used a Likert scale from 1 = strongly disagree to 5 = strongly agree.

Playing Skills. This instrument used to measure forehand and backhand drive skills which was adopted from the Hewitt test protocol (Nugroho, Hidayatullah, Doewes & Purnama, 2023). The test required participants to carry out forehand and backhand for 3 times, respectively, which targeted to the target number from 1 to 5 in the field. The score was calculated from the total score of the forehand and

backhand strokes. If the ball touched the net or came out of the target scoring area, the participant would get 0 score.

Qualitative Instruments

The qualitative instrument was carried out through in-depth interviews towards experimental group participants for 30 minutes per individual regarding the advantages, disadvantages and impacts of the coach leadership style model program. In addition, the interviews were conducted using Bahasa language and the results were analyzed by the researchers and 3 experts. The in-depth interview instrument has been used by several previous studies and has proven effective in uncovering a phenomenon issue (Gani et al., 2023).

Research Program

This research was conducted in February-March 2023 at Universitas Negeri Surabaya (09/UNESA-02/2023) which followed the rules and guidelines of the World Medical Association Code of Ethics for human subjects. In this mixed research there were several activities, namely carrying out quantitative research through experiments.In the first meeting (February 1, 2023) all participants carried out an initial test for filling in the Sports Commitment Grade Scale and a forehand and backhand skills test from 8.00 to 10.00 am at the Gymnasium Universitas Negeri Surabaya (Indonesia). In the second Meeting (February 3, 2023) the experimental group carried out the coach's leadership style program (training and instruction model, social support model and positive feedback model) and the control group only carried out their daily training activities, these activities were carried out 12th meeting (27 February, 2023). Then the 13th meeting (March 1, 2023) all participants carried out the final test by filling in the Sports Commitment Grade Scale and forehand and backhand test.

Whereas qualitative research was conducted through in-depth interviews on March 3, 2023 from 11.00 to 12.00 noon at the Gymnasium Universitas Negeri Surabaya. All participants from the experimental group were interviewed about the advantages, disadvantages and impacts of using the coach leadership style program. Direct interviews were conducted by the research team to the participants and the results of the interviews were recorded and analyzed.

Intervention Program

The intervention program carried out in this study was to provide a coach leadership style program with training and instruction models, social support models and positive feedback models to participants from meeting 2 to 12. The program was carried out during lectures from 8.00 to 9.00 in the morning at the Gymnasium Universitas Negeri Surabaya. The detail of the coach's leadership style program with training models and instructions presented in Table 1.

Statistical analysis

Quantitative analysis. The data obtained from the experimental research was analyzed with IBM SPSS (Armonk, New York, USA) (Gani et al., 2022). The first data presented statistical descriptive testing mean (M) and standard deviation (SD). The second data presented the results of the data normality test via Shapiro-Wilk ($p>0.05$). The third data used the Independent sample t-test to present differences in scores before (pre-test) and after (post-test) on sports commitment, forehand and backhand variables in the experimental and control groups ($p<0.05$). Paired sample t-test was used to see the effect of the coach's leadership style model in the experimental and control groups towards sports commitment and playing skills ($p<0.05$).

Qualitative analysis. Data from in-depth interviews were analyzed through qualitative thematic (Gani et al., 2022) The thematic analysis procedure is to analyze the interview results based on word by word, the data was sorted based on category, coding, and highlighting based on their similarities and arranged into three major themes. In this study used 3 themes, such as advantages, disadvantages and the impact of the coach's leadership style model program.

Results

Quantitative results

This study shows that all data were normally distributed ($p>0.05$). Table 2 presents the mean (M) and standard deviation (SD) of the experimental and control groups. Table 3 shows that there was no difference in the values of sports commitment and playing skills in the experimental and

Table 1. Coach's Leadership Style Model Program

Activities	Activity	Duration
Introduction	Before waming-up, coaches create a harmonious atmosphere between coaches and student-athletes The coach gives instructions to students-athletes to warm up the head to toe.	5 minutes
Forehand and Backhand Exercises	Coaches give instructions to student-athletes to perform forehand and backhand movement exercises without rackets. The coach instructs student-athletes to perform forehand and backhand movement exercises with rackets. The coach instructs student-athletes to perform forehand and backhand strokes to the cone target The coach instructs the student-athletes to put the ball in the basket using forehand and backhand strokes The coach provides positive attention and feedback to all student-athletes.	50 minutes
Closing	The coach gives instructions to student-athletes to cool-down all limbs.	5 minutes

Table 2. Statistical descriptive value

Dependent Variable	Measuring unit	Experimental Group (n=15)		Control Group (n=15)	
		Pretest	Posttest	Pretest	Posttest
		M(SD)	M(SD)	M(SD)	M(SD)
		Sports Commitment			
Current commitment	Score	23.07±1.43	26.47±1.06	21.73±1.28	22.73±1.53
Future commitment	Score	17.93±1.22	19.27±0.88	17.20±1.01	17.87±0.99
		Playing Skills			
Forehand	Score	13.27±0.79	14.60±0.50	11.67±0.81	12.47±1.18
Backhand	Score	11.67±0.90	13.40±0.73	10.33±0.90	11.33±0.81

Table 3. The results of differences sports commitment and playing skills on the experimental (n=15) and control (n=15) groups before (pretest) the experiment

Dependent Variable	Measuring unit	Group	Statistical Indicators		
			M(SD)	t	p
		Sports Commitment			
Current commitment	Score	Experimental	23.07±1.43	1.76	0.089
		Control	22.00±1.85		
Future commitment	Score	Experimental	17.93±1.22	1.78	0.085
		Control	17.20±1.01		
		Playing Skills			
Forehand	Score	Experimental	13.27±0.79	1.80	0.082
		Control	12.53±1.35		
Backhand	Score	Experimental	11.67±0.90	1.69	0.101
		Control	11.07±1.03		

Table 4. The results of differences Sports Commitment and Playing Skills on the experimental (n=15) and control (n=15) groups after (posttest) the experiment

Dependent Variable	Measuring unit	Group	Statistical Indicators		
			M(SD)	t	p
		Sports Commitment			
Current commitment	Score	Experimental	26.47±1.06	7.75	0.000
		Control	22.73±1.53		
Future commitment	Score	Experimental	19.27±0.88	4.08	0.000
		Control	17.87±0.99		
		Playing Skills			
Forehand	Score	Experimental	14.60±0.50	6.40	0.000
		Control	12.47±1.18		
Backhand	Score	Experimental	13.40±0.73	7.27	0.000
		Control	11.33±0.81		

Table 5. The results of the Paired Samples t-test

Dependent Variable	Measuring unit	Experimental Group (n=15)			Control Group (n=15)		
		Pre-Post	t	p	Pre-Post	t	p
		M(SD)			M(SD)		
		Sports Commitment					
Current commitment	Score	3.40±1.63	8.03	0.000	1.00±1.25	3.09	0.008
Future commitment	Score	1.33±0.61	8.36	0.000	0.66±0.81	3.16	0.007
		Playing Skills					
Forehand	Score	1.33±0.48	10.58	0.000	0.80±0.86	3.59	0.003
Backhand	Score	1.73±0.45	14.66	0.000	1.00±0.84	4.58	0.000

control groups before the experiment ($p>0.05$), but there were differences in the values of sports commitment and playing skills after the experiment ($p<0.05$). Meanwhile, the paired sample t-test proved that the experimental group had a better effect than the control group on increasing sports commitment and playing skills ($p<0.05$).

Qualitative Results

The results of qualitative research through in-depth interviews obtained the following findings:

Theme 1: Advantages

The advantage is important factor that must be revealed through in-depth interviews with participants. In this case the participants argued that:

"In our opinion, the advantage of the coach's leadership style model program is it can create an interesting training situation, because the trainer provides various kinds of training and instructions to athletes in order to complete several training tasks" (Results of interviews with participants 1, 4, 5, 8, 9, 10, 15).

"Yes!!..It is clear that the coach's leadership style model focuses on giving us several training assignments, so this is an advantage of the model" (Results of interviews with participants 2, 6, 7).

"We believe that this program has many advantages, for example we can do various forehand and backhand training assignments with various variations and even the trainers gave us direct attention and positive feedback" (Results of interviews with participants 3, 6, 11, 12, 13, 14).

Theme 2: Disadvantages

The second theme that should be revealed through this interview is the disadvantages of the coach's leadership style model program. Some participants argued that:

"In our opinion, the drawback in implementing this program is it requires a long duration for training, because the trainer has to provide several training assignments and feedback to individual participants" (Results of interviews with participants 2, 6, 7, 9, 10, 13, 14).

"This training style model will be less effective if it is not supported by adequate facilities such as rackets and balls. Therefore, the facility must be considered." (Results of interviews with participants 1, 3, 4, 5, 6, 8, 9, 11, 12, 15).

Theme 3: Impact program

The last theme related to the impact of the coach's leadership style model program towards sports commitment and tennis skills. Participants argued that:

"This program has a positive impact on us, for example we are more committed to carry out exercises in tennis, which cause our forehand and backhand skills gradually improved" (Results of interviews with participants 4, 7, 9, 12, 13, 14, 15).

"We agree!!..The coach's leadership style model program has significantly impacted on our sports commitment and playing skills, we are more serious and motivated to carry out training activities now and in the future. In addition, we feel that our forehand and backhand skills show an improvement" (Results of interviews with participants 1, 2, 3, 5, 6, 8, 10, 11).

Discussion

Our research aims to assess the effect of implementing the coach's leadership style model program on increasing the level of sports commitment and playing skills among student-athletes.

There are several findings in quantitative study. First, the coach's leadership style model was proven had positive effect in increasing sports commitment among student-athletes. This is because the coach leadership style model has advantages that can create harmonious relationships between coaches and student-athletes, with good relationships, student-athletes could be more enthusiastic, and happy in carrying out training activities (Huang, Lee, Lo, Chen & Hsu, 2021; Romão, Ribeiro, Gomes & Singh, 2022). This was also explained by Nascimento-Júnior et al. (2018)Confirmatory Factor Analysis and Structural Equation Modelling were conducted, as well as Latent Profile Analysis. Results showed significant relationships between leadership style and both social (10%, that coach leadership style has an important role in a training, because it can create cohesiveness and ultimately has the potential to improve team performance. The results of previous studies reported similar results that the coach's leadership behavior was closely related to motivation (Moreno-Murcia, Hernández, Marín & Nuñez, 2019), interaction (Park, Kim, Kim & Kim, 2021) among students-athletes in sports activities. On the other hand, other studies report that the coach's leadership style is an important factor, because it can motivate (Subijana, Martin, Tejon & Cote, 2021), and make student-athletes commit to a sports training activity (De Clerck, Willem, Morbée, Van Dyck & Haerens, 2022).

Second, the coach leadership style model has proven to positively have the strength to improve the playing skills possessed by student-athletes. This is because the coach leadership style model promotes a rich experience or forehand and backhand training assignments for student-athletes. In addition, student-athletes got positive feedback individually, which cause their forehand and backhand technique skills could increase significantly. The result of this study is in line with previous research which reported that the coach's leadership style is unquestionable and has proven to be an effective indicator of improving performance (Bum & Shin, 2015; Shapie, Zenal, Parnabas & Abdullah, 2016) and student-athlete satisfaction in sports activities (Jin, Kim, Love, Jin & Zhao, 2022). Another study explains that the coach leadership style model seeks to improve athlete performance by providing training and instructions on the basic techniques of a sport (Jawoosh et al., 2022). In addition, giving attention and positive feedback is claimed to have the potential to improve movement errors, so that student-athletes can learn movements optimally (de Albuquerque, Scheeren, Vagetti & Oliveira, 2021). Similar results were reported by Fouraki, Stavrou, Apostolidis & Psychountaki (2020), that the coach leadership style has a positive power to influence the performance of bad student-athletes to be good.

Whereas qualitative research through in-depth interviews found that the majority of student-athletes stated that the advantages of the coach leadership style model program could create an interesting training situation because the coach provided various kinds of training and

instructions to athletes in order to complete several training tasks, even the coach paid attention and immediate positive feedback (Soto Garcia, García Herrero, Carcedo & Sánchez García, 2021). Then student-athletes stated that this model also has drawbacks such as requiring a relatively long training time, because the coach has to give several training assignments and feedback to them individually. In addition, this training style model is less effective if it is not supported by adequate facilities such as a relatively large number of rackets and balls. Finally, the student-athletes emphasized that this program had a real and positive impact on the development of their sports commitment and playing skills.

The uniqueness and novelty of the findings of this study is that coach leadership style can promote an increase in the level of sports commitment and playing skills (forehand and backhand) of student-athletes through mixed research methods.

Conclusions

This study concluded that the coach's leadership style model program through this mixed research method is proven to have a positive effect on increasing the level of sports commitment and playing tennis skills of student-athletes. This research contributes to the innovation and development of tennis sports training models, so that coaches can apply them in the present and in the future to obtain high achievements in student-athletes. Althouth this study has successfully demonstrated that the coach's leadership style has increased the le level of sports commitment and tennis skills, it has certain limitation in terms of the limited number of student athletes from one kind of sports which is tennis. Thus, it is recommended that future research needs to be carried out by involving a large number of students-athletes from other sports.

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Conflict of Interest

We as the authors of this manuscript emphasize that there is no conflict of interest in this research.

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СТИЛЬ ЛІДЕРСТВА ТРЕНЕРА: ЯК ВІН ВПЛИВАЄ НА ВІДДАНІСТЬ СПОРТУ ТА ІГРОВІ НАВИЧКИ СТУДЕНТІВ-ТЕНІСИСТІВ?

Сетійо Хартото[1ABCDE], Мохамад Рідван[1ABCDE], Доні Андріджанто[1BDE], Джузуф Рупаяаді[1BD], Мухаммад Асрул Сідік[1BE], Армандо Монтерроса-Кінтеро[2ACD], Ден Юліан Алексе[3ACD], Драгос Йоан Тоханян[4ACD], Еді Сетіаван[5ACD]

[1]Сурабайський державний університет
[2]Південно-Колумбійський університет
[3]Університет імені Василе Александрі в Бакеу
[4]Трансільванський університет Брашова
[5]Університет Сур'яканчана

Авторський вклад: A – дизайн дослідження; B – збір даних; C – статаналіз; D – підготовка рукопису; E – збір коштів

Реферат. Стаття: 9 с., 5 табл., 40 джерел.

Мета дослідження. Метою цього дослідження було вивчення впливу моделі стилю лідерства тренера на підвищення рівня відданості спорту та навичок гри в теніс.

Матеріали та методи. У цьому дослідженні застосовували змішаний метод. Учасниками (n=30) стали студенти-спортсмени Державного університету Сурабая (Індонезія). У цьому дослідженні використовували кількісний інструмент, який передбачав використання шкали оцінки відданості спорту для оцінки рівня відданості спорту, а для вимірювання навичок гри використовували тести на удари ракеткою справа і зліва. Тоді як якісний інструмент передбачав використання глибинних інтерв'ю. Для представлення відмінностей у показниках відданості спорту й ігрових навичок до та після експерименту в експериментальній і контрольній групах використовували t-критерій Стьюдента для незалежних вибірок. Для оцінки впливу моделі стилю лідерства тренера на експериментальну та контрольну групи використовували t-критерій Стьюдента для парних вибірок. Для якісного статистичного аналізу використовували якісний тематичний аналіз.

Результати. Результати кількісного дослідження показали, що до початку експерименту різниці в рівні відданості спорту та ігрових навичок між експериментальною та контрольною групами не було ($p>0,05$), але після завершення експерименту різниця була ($p<0,05$). За допомогою t-критерію Стьюдента для парних вибірок було доведено, що вплив на підвищення рівня відданості спорту й ігрових навичок в експериментальній групі був сильнішим, ніж у контрольній групі ($p<0,05$). У якісному дослідженні студенти-спортсмени заявили, що стиль лідерства тренера має переваги та недоліки.

Висновки. Зрештою, студенти-спортсмени підкреслили, що ця програма мала реальний і позитивний вплив на розвиток їхньої відданості спорту та їхніх ігрових навичок.

Ключові слова: стиль лідерства тренера, відданість спорту, навички гри в теніс, дослідження з використанням змішаного методу.

Information about the authors:

Hartoto, Setiyo: setiyohartoto@unesa.ac.id; https://orcid.org/0000-0003-1310-3570; Faculty of Sport Sciences and Health, Universitas Negeri Surabaya, Jl. Lidah Wetan, Lidah Wetan, Kec. Lakarsantri, Kota SBY, Jawa Timur 60213, Indonesia.

Ridwan, Mochamad: mochamadridwan@unesa.ac.id; https://orcid.org/0000-0001-7385-0960; Department of Sports Education, Faculty of Sports Sciences, Universitas Negeri Surabaya, Jl. Lidah Wetan, Lidah Wetan, Kec. Lakarsantri, Kota SBY, Jawa Timur 60213, Indonesia.

Andrijanto, Dony: donyandrijanto@unesa.ac.id; https://orcid.org/0000-0002-6209-3770; Faculty of Sport Sciences and Health, Universitas Negeri Surabaya, Jl. Lidah Wetan, Lidah Wetan, Kec. Lakarsantri, Kota SBY, Jawa Timur 60213, Indonesia.

Roepajadi, Joesoef: joesoefroepajadi@unesa.ac.id; https://orcid.org/0009-0005-7716-7719; Faculty of Sport Sciences and Health, Universitas Negeri Surabaya, Jl. Lidah Wetan, Lidah Wetan, Kec. Lakarsantri, Kota SBY, Jawa Timur 60213, Indonesia.

Sidik, Muhamad Asrul: muhammadsidik@unesa.ac.id; https://orcid.org/0009-0004-4282-1007; Faculty of Sport Sciences and Health, Universitas Negeri Surabaya, Jl. Lidah Wetan, Lidah Wetan, Kec. Lakarsantri, Kota SBY, Jawa Timur 60213, Indonesia.

Monterrosa-Quintero, Armando: armando.monterrosa@usco.edu.co; https://orcid.org/0000-0002-7150-4834; Department of Physical Education and Sports, Universidad Surcolombiana, Avenida Pastrana Borrero, Carrera 1, Neiva, Huila, Colombia.

Alexe, Dan Iulian: alexedaniulian@ub.ro; https://orcid.org/0000-0002-6396-761X; Faculty of Movement, Sports and Health, Sciences, "Vasile Alecsandri" University of Bacău, Calea Mărășești 157, Bacău 600115, Romania.

Tohanean, Dragos Ioan: dragos.tohanean@unitbv.ro; https://orcid.org/0000-0002-6740-1867; Faculty of Physical Education and Mountain Sports, Transilvania University of Brasov, Bulevardul Eroilor 29, 500036, Brasov, Romania.

Setiawan, Edi: edisetiawanmpd@gmail.com; https://orcid.org/0000-0001-7711-002X; Faculty of Teacher Training and Education, Universitas Suryakancana, Jl. Pasirgede Raya, Bojongherang, Kec. Cianjur, Kabupaten Cianjur, Jawa Barat 43216, Indonesia.

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