

Similarities and Differences in Aspects of Mental Skills in Individual and Team Sport

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Abstract—This study was aimed at finding out which aspects of mental skills are similar and which aspects of mental skills are significantly different in individual athletes and team sport athletes. The method used was a descriptive method with the survey technique. The research sample consisted of 455 athletes from 28 sports in Universitas Negeri Jakarta. This study used a mental skills questionnaire consisting of seven aspects: self-confidence, negative energy control, concentration, the ability of visualization and imagery, motivation, positive energy, and behavioral control. The data analysis technique used was the different tests using variance analysis. The results of the study show the followings: 1) There was a significant difference between the mental skill profile in individual sports and team sports ($p = 0.032 < 0.05$); 2) There was a significant difference in the mental skill aspects of negative energy control ($p = 0.008 < 0.05$), concentration ($p = 0.000 < 0.05$), and positive energy ($p = 0.024 < 0.05$) between athletes of individual sports and athletes of team sports; 3) There were similarities for the mental skill aspects of self-confidence ($p = 0.129 > 0.05$), visualization and imagery abilities ($p = 0.336 > 0.05$), motivation ($p = 0.315 > 0.05$), and attitude control ($p = 0.343 > 0.05$) between individual sports and team sports.

Keywords: *individual and team sports, mental skills*

I. INTRODUCTION

Many researchers pay attention to sports because sports are considered capable of developing morals and character [1]. Sport has a large role in social skills and adjustment in adolescents, which also has an impact on increasing academic achievement and reducing psychological problems [2]. Sport is considered as a series of systematic behaviors carried out together that can cause positive emotions such as optimistic, passionate, active, disciplined, courage, persistence, and self-sacrifice [3]. On the other hand, exercise can also reduce negative emotions such as fear, anxiety, anger, and guilt [3,4]. Explains that training can improve adjustment among adolescents; primarily, team sports can augment their communication skills [4].

Some of the results of the study also showed similarities in characteristics or personalities between individual athletes and team athletes. Individual and team sports have the same potential in developing values such as integrity, responsibility, and cooperation [1]. Sports activities, both individual and team sports can both increase positive emotions and reduce negative

emotions in adolescents, including athletes in college [3-4]. Other results show that there is no difference between individual athletes and team sports in aspects: neuroticism, extraversion, and openness because any sports activity is a positive activity [6].

However, some research results also show differences in characteristics between individual athletes and team sports. The results of Nia and Besharat's research [6] show that athletes in team sports have a significantly higher score on the aspects of cohesiveness and care compared to athletes in individual sports. Agreeableness or cohesiveness is an interpersonal factor that helps individuals to build relationships and activities together, so it tends to be higher in athletes in team sports. Sociology or caring is a mechanism by which individuals carry out positive interactions with others that show the strength of social relations, so, naturally, it is higher in athletes in team sports. From the same research results, it is also known that individual athletes have significantly higher scores on aspects of conscientiousness and autonomy. Conscientiousness or power of thought shows tendency and keen attention to discipline and maximum achievement, so it is natural to tend to be higher in athletes in individual sports. Likewise, autonomy, namely the individual's focus on his uniqueness, physical function and ability to control the environment.

Individual athletes also score higher in the following aspects: perseverance, positivity, resilience, self-esteem, and self-efficacy [7]. Meanwhile, the social dimension appears stronger in team sports athletes [1]. Even though team sports athletes have the same appearance orientation as individual sports athletes, the demands of personal mental readiness in team sports athletes are less than those of individual sport athletes. In athletes in team sports, the influence of the environment is stronger than in athletes in individual sports. If the environment and atmosphere in the team are positive, it will affect the athlete personally and vice versa. One example is aggressive behavior that is more common in team sports. This happens because they have the same perception as group norms so that they want to defend their teammates from the threat of opponents, referees, or parties deemed to be detrimental to the team.

The results of research on the similarities and differences in the characteristics of individual athletes and team sports are beneficial for coaches, athlete counselors, and parties related to

the search for interests and talents of athletes early on [6]. For example, a coach in team sports should not be a coercive idea or role but rather a motivator and guide that facilitates athletes through dialogues that foster mutual understanding, interest, and commitment [8]. However, studies on the characteristics of individual athletes and team sports that exist to date have only made comparisons and did not use hypotheses.

Based on the results of previous studies, researchers are interested in researching the comparison of mental skills between individual athletes and team sports. Measurement of mentality in the world of sports in Indonesia does not seem to be popular enough, including comparing it between individual and team sports. Psychological analysis or evaluation has often been used in various fields of life so far. Among the psychology professions themselves, the application of psychological assessment has almost reached 91%. Initially, the practice of professional psychologists spent 10 to 25% of their time doing psychological assessments. Theory and evaluation are also a strong foundation in the investigation of clinical cases, applicative research and various evaluation programs [9].

According to James Drever in Setyobroto, mental or "mind" is the overall structure and processes of organized psychology, whether realized or unconscious, from the deepest part of the human soul [10]. Thus mentally related to all sources of the ability of the human soul, namely cognition, affection, and conation. Mental guidance in every branch of sport means maintaining and strengthening the relationship between the sources of mental abilities. Experts express several different aspects of mental skills, for example, goal setting, imagery, self-confidence, and the ability to focus on performance [11-13]. Research on Athletes use mental skills during sport injury rehabilitation explores mental skills through three aspects: goal setting, positive self-talk, and imagery [14]. Meanwhile, according to James E. Loehr in Tahki et al., mental skills consist of seven aspects, namely: self-confidence, negative energy control, concentration, visualization and imagery abilities, positive energy, motivation, and attitude control [15].

Instruments about mental skills also consist of several different aspects, such as the TOPS (Thomas's test of strategic performance) questionnaire which evaluates mental skills from 8 viewpoints: self-talk, emotional control, goal making, imaging, negative thinking, relaxation, automaticity, and activation [16]. Whereas the PACE (Performance And Competition Evaluation) questionnaire measures mental skills based on three aspects: process goals, self-confidence and relaxation [17], the Ottawa Mental Skills Assessment Tools Version 3 (OMSAT-3) measures mental skills based on 12 aspects namely: goal setting, commitment, self-confidence, stress reactions, relaxation, fear control, activation, focusing, imagery, competition planning, mental practice, refocusing [18].

This study uses a mental skills questionnaire based on seven aspects of mental skills, according to Loehr [19], because it is a continuation of previous research. Where the whole can affect each other in the process of achieving an athlete's achievement. The aspects of mental skills are: self-Confidence

[20,21], Negative Energy Control [19], Concentration [13,22], Visualization and Imagery Abilities [23], Motivation [13,24-26], Positive Energy [19], and Attitude Control [27-29].

Sport Science Faculty of Universitas Negeri Jakarta, until now fosters 28 Achievement Sports Clubs called KOP UNJ. The students who are members of the KOP have also shown many achievements both at the regional, national and international levels. At present, there are individual and team sports in the Achievement Sports Club at Universitas Negeri Jakarta. The results of the research by Tahki et al. [15] showed mental skills' aspects in team sports. The research has not compared the mental skills between individual and team sports. Therefore, we need the updates data and further analysis about the comparison of mental skills between individual and team sports besides relationship between the classes or types of sports with social adjustment [2]. This study aims to determine the comparison of mental skills between individual and team sports among student athletes at college.

II. METHOD

This research was conducted at the Faculty of Sport Science, Universitas Negeri Jakarta Jl. Pemuda No. 10 Rawamangun East Jakarta in January-June 2019. The population in this study were athletes at Universitas Negeri Jakarta, while the study samples were athletes from team sports totaling 277 people (basketball, volleyball, rugby, football, sepakakraw, soccer, futsal, hockey, and cricket) and athletes from individual sports totaling 178 people (athletics, fencing, badminton, karate, kempo, shooting, petanque, archery, squash, rock climbing, diving, roller skates, boxing, taekwondo , pencak silat, tennis, table tennis).

The method used in this study is a survey method, namely by using a mental skills questionnaire based on seven aspects of mental skills from Loehr [15, 19] namely: self-confidence, negative energy control, concentration, visualization and imagery abilities, positive energy, motivation, and attitude control. The mental skills questionnaire used was as follows: self-confidence (item no. 1, 8, 15, 22, 29, 36), negative energy control (item no. 2, 9, 16, 23, 30, 37) , concentration (item no. 3, 10, 17, 24, 31, 38), visualization and imagery abilities (item no. 4, 11, 18, 25, 32, 39), motivation (item no. 5, 12, 19 , 26, 33, 40), positive energy (item no. 6, 13, 20, 27, 34, 41), attitude control (item no. 7, 14, 21, 28, 35, 42). This questionnaire uses a Likert scale where scores or ratings for favorable questions start with numbers 5, 4, 3, 2, 1, while scores or ratings for unfavorable questions from numbers 1, 2, 3, 4, and 5 with the following score information:

- Favourable questions: 1 (never), 2 (rarely), 3 (sometimes), 4 (often), 5 (always)
- Unfavourable questions: 5 (never), 4 (rarely), 3 (sometimes), 2 (often), 1 (always).

The analysis technique used in this study is a variance analysis of variance test (t-test).

III. RESULTS AND DISCUSSION

Overall, the results of the study were calculated in descriptive statistics shown in the following table:

TABLE I. STATISTICAL CALCULATION RESULTS

| Aspect Mental Skills | Type of sports | N | Mean | Std. Deviation |
|----------------------------------|-------------------|-----|-------|----------------|
| <i>Confidence</i> | Individual Sports | 178 | 23.13 | 3.97 |
| | Team Sports | 277 | 23.68 | 3.61 |
| <i>Energy control (-)</i> | Individual Sports | 178 | 19.70 | 3.71 |
| | Team Sports | 277 | 20.61 | 3.39 |
| <i>Concentration</i> | Individual Sports | 178 | 20.49 | 3.66 |
| | Team Sports | 277 | 21.79 | 3.67 |
| <i>Visualisasi & Imagery</i> | Individual Sports | 178 | 23.65 | 3.07 |
| | Team Sports | 277 | 23.37 | 2.99 |
| <i>Motivation</i> | Individual Sports | 178 | 24.65 | 3.39 |
| | Team Sports | 277 | 24.96 | 3.13 |
| <i>Positive Energy</i> | Individual Sports | 178 | 24.07 | 3.29 |
| | Team Sports | 277 | 24.76 | 2.98 |
| <i>Behavioral Control</i> | Individual Sports | 178 | 23.70 | 3.24 |
| | Team Sports | 277 | 23.98 | 2.95 |
| <i>TOTAL</i> | Individual Sports | 178 | 22.77 | 2.68 |
| | Team Sports | 277 | 23.31 | 2.53 |

While different test results using variance analysis reduce the following data:

- The results of various mental skills tests between individual athletes and team sports with the significance of two-tailed values obtained 0.032 or $p < 0.05$, which means there are differences in overall mental skills profile between individual athletes and team athletes. Team sports athletes have a higher mental skills profile than individual athletes.
- The results of different mental skills tests between athletes of individual and team sports with a significance of 2 tailed obtained a value of 0.008 or $p < 0.05$ for negative energy control aspects, an amount of 0.000 or $p < 0.05$ for concentration aspects, and a value of 0.024 or $p < 0.05$ for positive energy aspects . This means that there are significant differences in the elements of negative energy control, concentration, and positive energy between individual athletes and team athletes. Team sports athletes have higher negative energy control, focus, and positive energy than individual athletes.
- The results of different mental skills tests between athletes of individual and team sports with a significance of 2 tailed obtained a value of 0.129 or $p > 0.05$ for aspects of self-confidence, an amount of 0.336 or $p > 0.05$ for aspects of visualization and imagery abilities, a value of 0.315 or $p > 0.05$ for aspects of motivation , and the value of 0.343 or $p > 0.05$ for the element of attitude control. This means that there are no significant differences in points of self-confidence, visualization abilities, motivation, and attitude control between individual athletes and team athletes. In other words, athletes from individual sports have the same confidence, visualization abilities, motivation and attitude control as athletes in team sports.

Based on the results of statistical analysis, it turns out that athletes from the team sport at Jakarta State University have a higher mental skills profile than athletes from individual sports branches (mean of team sports = 23.31 > mean of individual sports = 22.77). In addition, team sports athletes at Universitas Negeri Jakarta turned out to show three aspects of mental skills that were higher than individual sports athletes namely: negative energy control (mean of team sports = 20.61 > mean of individual sports = 19.70), concentration (mean of team sports = 21.79 > mean of individual sports = 20.49), and positive energy (mean of team sports = 24.76 > mean of individual sports = 24.07). This shows that the athletes in team sports at Universitas Negeri Jakarta are better able to manage and control their emotions so that they become positive emotions through the sports activities they have carried out so far [3, 5, 4]. They can adopt or adapt well and can develop values such as integrity, responsibility, and cooperation [1, 2]. An excellent mental skills profile in team sports athletes at Universitas Negeri Jakarta can occur due to the influence of agreeableness and sociopathy among them [6]. In team sports, athletes undergo intensive social interaction so that their opportunities to influence one another are more than in individual sports. As said by Gorgut and Tutkun [6], the social dimension in team sports athletes appears to be stronger than individual sports athletes although both have the same goal of showing maximum performance. The team sports environment at Universitas Negeri Jakarta seems to be able to exert a positive influence on each athlete personally, thereby impacting their emotional control (negative energy control aspects and positive energy aspects) and being able to maintain their focus of attention both during training and during matches (point of concentration).

Meanwhile, there are similarities in self-confidence, visualization and imagery ability, motivation, and attitude control between athletes from individual sports and athletes from team sports. In the aspect of confidence, both individual and team sports athletes at Universitas Negeri Jakarta have been able to be calm, not easily nervous, and are confident that they can show their best performances [20, 21]. In the aspect of visualization and imagery abilities, they also have an excellent mental representation so that they can describe their movements in a positive and constructive form [23]. The high motivation aspect is one of the factors that has created the achievements of Universitas Negeri Jakarta athletes so far [24,25]. Both individual athletes and team athletes maintain their attitudes and behavior both during daily training and during matches so that they are by social norms [27].

IV. CONCLUSION

The results of the study concluded that: 1) Overall, athletes from team sports in Universitas Negeri Jakarta have a higher mental skills profile than athletes from individual sports; 2) Athletes from team sports have higher in negative energy control, concentration, and positive energy than athletes from individual sports; 3) There are similarities in self-confidence, the ability of visualization and imagery, motivation, and attitude control between athletes from individual sports and athletes from team sports.

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