I. INTRODUCTION

Emotion is a reaction of a person’s feelings which is shown when feeling happy, afraid, even angry about something. We define emotions as episodic, relatively short-term, biologically based patterns of perception, experience, physiology, action, and communication that occur in response to specific physical and social challenges and opportunities [1]. There are eight basic emotional dimensions, arranged in four pairs: joy versus sorrow, anger versus fear, acceptance versus disgust, and surprise versus expectancy [2]. Emotion has many benefits in helping human life. Our emotions are often our best allies, helping us to respond energetically and effectively to the opportunities and difficulties we encounter [3]. In the world of sports emotions are one of the factors that determine one’s achievement. Emotion will always be involved in any type of sport. However, each branch of sport has different characteristics, which means that the emotions involved will be little or much different. Emotions can effect performance, depending on the athlete and the type of sport [4].

There are several emotions related to sports and achievement. Anger is a frequent emotion in sport [5]. Emotion that has received enough attention in performance situations is anxiety [6]. There is sufficient empirical evidence to suggest that at least five emotions are particularly relevant to sport settings ... the emotions are anger, anxiety, dejection, excitement, and happiness [7].

II. METHODS

The population in this study were athletes registered as players at the Regional Sports Week / Pekan Olahraga Daerah (PORDA) of West Java in 2018. Using a purposive sampling technique, the determined sample was 60 West Java PORDA athletes divided into 2 groups, each of 30 athletes for individual game sports (27 squash athletes, 3 badminton athletes), and 30 martial arts athletes (18 karate athletes, 12 taekwondo athletes).

The research method used is causal comparative. This research took place on 6-14 October 2018. The research instrument used was the Sport Emotion Questionnaire (SEQ) developed by Jones, et al. (2005) as a tool to measure emotions that occur in sports (pre-match). Processing is done using one way ANOVA statistics.

III. RESULTS AND DISCUSSION

A. Difference Between Sport Emotion in Individual Game Sports and Martial Arts

Table 1 shows sport emotion anxiety between individual sports and martial arts has a sig. 0.625 > 0.05, which means there is no difference. Table 2 shows the sport emotion dejection between individual game sports and martial arts has a sig. 0.611 > 0.05, which means there is no difference.
Table 3 shows the sport emotion excitement between individual game sports with martial arts has a sig value. 0.388 > 0.05, which means there is no difference.

Table 4 shows the sport emotion anger between individual game sports with martial arts has a sig value. 0.002 < 0.05, which means there is a difference.

Table 5 shows the sports emotion happiness between individual game sports with martial arts has a value of sig. 0.058 > 0.05, which means there is no difference.

Sports emotions are an important element that is always involved in sports, especially when competing and practicing. Sport is an important part of many athletes lives, but the search for physical perfection and a strong desire for success have brought sports to a level that requires participants to expend a great deal of effort and involvement, leading to anxiety and stress [8]. Sports emotions will be increasingly visible just before the match or pre-competition. Sports emotions that occur in pre-competition will be experienced by athletes in any sport with any type and characteristics of sports. The type of sport that is individual game sports and martial arts will both experience sport emotions (emotion) especially before the competition takes place or often called pre-competition. Sports emotions that occur during pre-competition in the three types of sports indicated there are five emotions. There is sufficient empirical evidence to suggest that at least five emotions are particularly relevant to sport settings ... the emotions are anger, anxiety, dejection, excitement, and happiness [7], meaning that five very relevant emotions occur in sports including anger, anger, dejection, excitement, and happiness. Of the five sports emotions, it will be known which type of sport has higher or lower sports emotions during pre-competition.

The characteristics of each sport will make a difference both to the athlete’s personality and to the athlete’s emotions. This indicates that the sport’s emotions will vary according to the type of exercise. This research proves that some sports emotions such as anxiety, dejection, and anger have differences in individual game sports and martial arts. As excitement and happiness are no different, this allows that both individual games, and martial arts really enjoy before the competition takes place.

| No | Variable                  | Sig.     |
|----|--------------------------|----------|
| 1  | Individual with Martial Arts | 0.625 > 0.05 |
|    |                           |          |

| No | Variable                  | Sig.     |
|----|--------------------------|----------|
| 1  | Individual with Martial Arts | 0.611 > 0.05 |
|    |                           |          |

| No | Variable                  | Sig.     |
|----|--------------------------|----------|
| 1  | Individual with Martial Arts | 0.388 > 0.05 |
|    |                           |          |

B. Sport Emotion Levels in Individual Game Sports and Martial Arts

Figure 1 shows that the highest emotion anxiety occurred in pre-competition / before the sport competition in individual game sports, while the lowest occurred in martial arts. Individual game sports differ in the personality characteristics of their athletes compared to other sports such as team game sports. The results revealed that individual sports athletes scored significantly higher on conscientiousness and autonomy than did team sports athletes [9]. Personality of individual sports athletes has a higher awareness, which means responsibility for the game or performance in determining victory is in him. Indeed, if viewed from the characteristics of individual sports, the sense of responsibility of victory is determined by each of them not by anyone, even the coach is only as an outside media that helps improve performance. Some examples of athletes such as singular in badminton, tennis, and squash show a high sense of taste aware of the responsibility only on themselves. This sense of awareness is more demonstrated when in competition and practice. Athletes who have a higher awareness or work ethic in training, will obviously be better than the performance displayed during the competition. In addition to higher awareness, autonomy or independence from individual sports athletes is also higher compared to team sports. This if seen from the characteristics of the sport makes the personality of individual sports athletes accustomed to practice more independently. This does not mean that team sports cannot be independent but because team sports that require more complete personalities in order to be able to exercise optimally and foster a sense of togetherness or cohesion make team sports lower than individual sports in terms of independence. Therefore individual sport games have a higher sense of responsibility or burden of victory and this is directly proportional to the emotions of the sport they experience. Sports emotions such as anxiety will be higher although other factors also determine such as the number of hours spent playing by each athlete. However, it is still in accordance with the characteristics of individual sports with higher awareness which make the pressure to perform well, increasing some sports emotions such as anxiety, that is more felt when approaching a competition or during a match.

The highest sport emotion dejection occurs in martial arts, while the lowest occurs in individual game sports. While Sport emotion anger is highest in martial arts, whereas the lowest occurs in individual game sports. The results show that anger is higher in self-defense sports (physical contact sport) this is because anger emotions can be used as a reference to increase morale and suppress fear so that it can improve sports performance or performance. Athletes involved in physical

| No | Variable                  | Sig.     |
|----|--------------------------|----------|
| 1  | Individual with Martial Arts | 0.002 < 0.05 |
|    |                           |          |

| No | Variable                  | Sig.     |
|----|--------------------------|----------|
| 1  | Individual with Martial Arts | 0.058 > 0.05 |
|    |                           |          |
contact sports often interpret their competitive anger as beneficial to sports performance [5].

Sport emotion excitement and happiness are equally high compared to anxiety, dejection, and anger. This result can be interpreted that athletes in individual game sports and martial arts are very much looking forward to and happy to compete despite the anxiety, dejection, and anger athletes also feel. This proves that excitement and happiness are important elements that are always involved in pre-competition. Sport emotion excitement is highest in individual game sports, while the lowest occurs in martial arts. Whereas Sport emotion happiness is highest in individual game sports, while the lowest occurs in martial arts.

![Tukey HSD Test](image)

**Fig. 1.** Tukey HSD Sport Emotion Test.

### IV. CONCLUSIONS

Sports emotions have been proven to occur in any sport. The characteristics or types of sports actually have an impact on the sporting emotions experienced by athletes. Sport emotion in terms of anxiety, dejection, and anger has differences in both individual sports and martial arts. While excitement and happiness does not show the difference between individual sports and martial arts. Improving achievement is the main goal of athletes in any sport. To be able to improve the achievements of athletes must be able to regulate emotions, especially before the match. For this reason, controlling emotions is closely related to performance. The ability to manage emotions will affect the performance displayed. Cultivating emotions that are helpful and managing emotions that are harmful is one of the central concerns of the field of emotion regulation [10]. Emotion regulation refers broadly to processes by which individuals are influenced by which emotions they have, when they have them, and how they experience and express these emotions [11]. The capacity to regulate emotions is central to psychosocial functioning and impacts various important outcomes, such as mental and physical health, social functioning relationships and work performance [12]. Control or regulation of good emotions will have a positive impact on the performance / achievement displayed. Conversely, emotional control that is not good can have a negative impact and hinder the performance of emotions such as sports anxiety that is too excessive to make athletes become unfocused on the performance displayed. Researchers have shown that high-anxiety conditions negatively affect sports performance, including anticipation judgments and their underlying visual search behaviors, regardless of skill level because they affect the focus of distracted attention [13]. Anxiety impairs the shifting (which involves using attentional control to shift attention optimally within and between tasks) and inhibition (which involves using attentional control to resist disruption of interference from task-irrelevant stimuli) functions of the attention system [14]. It is not only the characteristics of sports that affect sports emotions in athletes. There are several factors that affect sports emotions, one of which is gender. Indicate that there are some gender differences in how achievement goals and perceptions of the climate influence anxiety performance ... Females reported higher levels of performance worry, concentration disruption and somatic anxiety than males [15]. Besides anxiety, other emotions such as dejection, anger, excitement, and happiness allow differences due to gender factors. For this reason, it is hoped that there will be more research on sports emotions by paying attention to gender differences in competitive sports. Besides gender, age, economic level, and environment can influence sports emotions. Also expected in further research to examine the emotions of sports during the competition or after the competition.

### ACKNOWLEDGMENT

This research was supported by the Sports Education Study Program of the Graduate School of the Indonesian University of Education. The author thanks Dr. Kardjono, M.Sc., Dr. Komarudin, M.Pd., and Dr. H. Amung Ma’mun, M.Pd. which has simplified the research process.

### REFERENCES

[1] D. Keltner & J.J. Gross, “Functional accounts of emotions. Cognition and Emotion,” vol. 13(5), pp. 467-480, 1999.
[2] W.A. Mason & J.P. Capitanio, “Basic Emotions: A Reconstruction. Emot Rev,” vol. 4(3), pp. 238–244, 2012.
[3] R.S. Lazarus, Emotion and adaptation. Oxford. United Kingdom: Oxford University Press, 1991.
[4] M.V. Jones, “Controlling emotions in sport. The Sport Psychologist,” vol. 17, pp. 471–486, 2003.
[5] G. Steffgen, “Anger management - Evaluation of cognitive-behavioral training program for table tennis players,” Journal of Human Kinetcs, vol. 55, pp. 65-73, 2017.
[6] P.J. McCarthy, M.S. Allen & M.V. Jones, “Emotions, cognitive interference, and concentration disruption in youth sport,” Journal of Sports Sciences, vol. 31(5), pp. 505–515, 2013.
[7] M.V. Jones, “Development and validation of the Sport Emotion Questionnaire,” Journal of Sport and Exercise Psychology, vol. 27, pp. 407–431, 2005.
[8] R.W. Coelho, “Use of multimodal imagery with precompetitive anxiety and stress of elite tennis players,” Perceptual and Motor Skills, vol. 114(2), pp. 419–428, 2012.
[9] M.E. Nia & M.A. Besharat, “Comparison of athletes’ personality characteristics in individual and team sports,” Procedia Social and Behavioral Sciences, vol. 5, pp. 808–812, 2010.
[10] J.J. Gross, “Emotion regulation: taking stock and moving forward,” Emotion, vol. 13(3), pp. 359–365, 2013.
[11] K.A. Tamminen, P. Gaudreau, C.E. McEwen & P.R.E. Crocker, “Interpersonal emotion regulation among adolescent athletes: a bayesian multilevel model predicting sport enjoyment and commitment,” Journal of Sport & Exercise Psychology, vol. 38(6), pp. 541-555, 2016.
[12] K. Brans, P. Koval, P. Verduyn, Y.L. Lim & P. Kuppens, “The regulation of negative and positive affect in daily life,” Emotion, vol. 13(5), pp. 926–939, 2013.

[13] D. Alder, P.R. Ford, J. Causer & A.M. Williams, “The effects of high- and low-anxiety training on the anticipation judgments of elite performers,” Journal of Sport & Exercise Psychology, vol. 38(1), pp. 93–104, 2016.

[14] M.W. Eysenck, N. Derakshan, R. Santos & M.G. Calvo, “Anxiety and cognitive performance: Attentional control theory,” Emotion, vol. 7(2), pp. 336–353, 2007.

[15] F.E. Abrahamsen, G.C. Roberts & A.M. Pensgaard, “Achievement goals and gender effects on multidimensional anxiety in national elite sport,” Psychology of Sport and Exercise, vol. 9, pp. 449–464, 2008.