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The Effect of Social Media and Sports Technology Exposure on Anxiety Among Late Adolescent Athletes

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Abstract: The purpose of this study was to determine the level of anxiety among late adolescent athletes based on gender and sports category. The method used in this study is research Cross-sectional research is a type of research design in which you collect data from many different individuals at a single point in time. The population of this study was 135 people and 101 samples were obtained using accidental sampling techniques. The survey data collected, was entered into the IBM SPSS 25 tool for analysis statistics with ANOVA two-way. As a result of this study, the anxiety data for males' totaling 64 respondents, the average age is 19.67 years, and the average anxiety level is 66.84 ± 6.47. Of the four sports categories, the order of anxiety levels from highest to lowest is the measured sports category at 69.40%; the martial arts category at 65.80%; the game sports category at 68.68%, and the lowest was in the accuracy sports category at 65.14%. and females' there are 37 respondents with an average age of 19.08 years, with an average anxiety level of 65.35 ± 7.06. Of the four sports categories, the order of anxiety levels from highest to lowest is the measured sports category at 671.80; the martial category at 65.60%; the game sports category at 65.43%, and the lowest was in the accuracy sports category at 62.69%. Males' anxiety levels in the accuracy, martial, and game sports categories are higher than females. However, it is inversely proportional to the category of measured sports which is that females' anxiety levels are higher than males. Anxiety levels between categories did not differ significantly except that in the accuracy exercise category with the measured sports category there was a significant difference (p-value <0.05), in both males and females.

Keywords: Anxiety, Athletes, Adolescence, Sports Category, Gender

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INTRODUCTION

Anxiety is a common emotional state experienced by athletes at all levels of performance. In general, anxiety is made up of cognitive (e.g., worrying thoughts and apprehensions) and somatic (e.g., degree of physical activation) components. Anxiety can manifest itself as a stable part of one's personality known as trait anxiety, or as a temporary, more malleable, situation-specific state anxiety (Weinberg & Gould, 2019).

A certain level of anxiety is an active individual's natural and obligatory feature. Everyone, and especially a sportsman, is characterized by an individual optimal level of agitation at which psycho-physical abilities are maximum. The "Zone of optimal functioning"

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of the psyche is inherent in every sportsman. The efficiency of a sportsman's activity will be the best when the level of sensitivity is within this zone (Popovych et al., 2022).

During adolescence, numerous changes occur within the individual, including pubertal development, increases in cognitive abilities, alterations in emotion processing, and the development of autonomy and identity (Forbes & Dahl, 2010; Smetana et al., 2006; Yurgelun-Todd, 2007). The beginning of adolescence is marked by the transition to a larger, more complex school (middle school), quickly followed by a transition to an even larger, more complex school (Eccles & Roeser, 2011; Waters et al., 2014). Anxiety among late adolescent athletes, including performance injuries, expectations, social pressure, and stressful life events. Factors associated with anxiety symptoms among athletes provide useful information for preventative intervention or acute phase management (Rice et al., 2013).

The current study shows that, in the general population, anxiety symptoms first decrease during early adolescence and subsequently increase from middle to late adolescence. These findings extend our knowledge of the developmental course of anxiety symptoms during adolescence. This is the first study to separate the development of anxiety symptoms from that of symptoms of depression (Van Oort et al., 2009).

Kogan et al. (2016) classifies symptoms of anxiety into three types of symptoms, including:

1) Physical symptoms of anxiety, namely: restlessness, trembling limbs, sweating a lot, difficulty breathing, racing heart, feeling weak, chills, irritability, or offense.
2) Behavioral and anxiety symptoms, namely: avoiding behavior, shaken, attached and dependent
3) Cognitive symptoms of anxiety, namely: worry about something, disturbing feelings of fear of something that will happen in the future, belief that something scary will happen soon, fear of being unable to solve problems, thoughts feeling mixed or confused, difficulty concentrating

Cognitive anxiety arises due to psychological changes as anxiety arises due to fear of surroundings, failure, and lack of confidence. In contrast, somatic anxiety is a physiological response that includes changes in heart rate level, difficulty in breathing, and changes in muscle tension. However, the physical symptoms occur due to psychological influence criteria. Notably, the level of competitive anxiety significantly differs between individual sports and team sports. Individual sports such as archery, darts, rifle shooting, running, gymnastics, judo, and golf require high individual skills in self-concentration and confidence level, and strong skills in the kind of sport itself (Loh & Chong, 2018). The obtained results on reactive and personal anxiety are confirmed in the studies of the classics in the research on anxiety.

Difference from previous studies namely this study is that there have been no studies that have specifically examined anxiety in late adolescent athletes based on their gender and category of sport, especially in the categories of accuracy, games, martial, and measurable sport. Other relevant research, namely Gender Differences in Anxiety Trajectories from Middle to Late Adolescence research from (Ohannessian et al., 2017) which says that this research specifically examines gender differences in the trajectory of the development of symptomatic anxiety disorders (generalized anxiety disorder, panic disorder, and social anxiety disorder) from mid to late adolescents in a diverse community sample (N = 1000; 57% female; 65% White), assessed annually for 2 years.

Thus, the relationship between exercise anxiety and cognitive emotion regulation is obtained. this suggests that the cognitive component of exercise anxiety, i.e., worry may accompany its concentration deficits that tend to result in an increased preference for

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maladaptive emotion regulation strategies (Horvath et al., 2022). The results of other studies from (Tóth et al., 2019) show that regular exercise has a positive effect on anxiety self-concept.

To help reduce anxiety among late adolescent athletes, it is important to provide a supportive and positive environment that promotes mental health and well-being. This may include techniques such as relaxation techniques, positive self-talk, and goal setting, as well as seeking support from coaches, teachers, or mental health professionals if necessary. Overall, it is extremely important for late adolescent athletes to be aware of any signs of anxiety and seek support when needed, to maintain their mental health and well-being and reach their full potential in sports and other areas of their lives.

METHODS

The process of preparing the questionnaire was based on the theory of (Jeffrey S. Nevid, 2005) and has been validated by the Asosiasi Pelatih Mental Olahraga Indonesia (APMOI). The population of this study was 135 people and 101 samples were obtained using accidental sampling techniques. Questionnaires were distributed to athletes online. From the distribution of this questionnaire, 101 respondents were obtained. The method used in this study is research Cross-sectional research is a type of research design in which you collect data from many different individuals at a single point in time. In cross-sectional research, you observe variables without influencing them (Bethlehem, 1999).

The instrument used in this study was a questionnaire in which there were questions about their name, place, date of birth, age, perceived physical condition, psychological condition, the role of the trainer during training, as well as the facilities and infrastructure for training. Anxiety was measured by the Likert scale (Taherdoost, 2019) This consists of 24 statements, which are divided into three dimensions, namely physical, behavioral, and cognitive symptoms. Each item is rated on a scale of 1 to 5 with the division of positive and negative statements. The survey data collected, was entered into the IBM SPSS 25 tool for analysis statistics with ANOVA two-way. Then, we obtained the mean (M), minimum value, maximum value, and standard deviation of percentage anxiety.

RESULTS

After analyzing the results of the validity and reliability of the questionnaire, we found that the 24 statements, which were derived from the anxiety aspect, were valid. Because the data were valid, the researcher then distributed the questionnaire to the participants in this study. After they were analyzed, the results are provided below.

Table 1. Result of Measuring the Percentage Of Males

Row Labels	Sum of Gender	Mean of Ages	Average of Anxiety (%)	Std Dev of Anxiety	Max of Anxiety (%)	Min of Anxiety (%)
Males	**64**	**19.67**	**66.84**	**6.47**	**86.00**	**54.00**
Accuracy	22	20.91	65.14	7.42	83.00	54.00
Martial	15	19.00	65.80	5.35	75.00	59.00
Games	22	19.09	68.68	6.18	86.00	56.00
Measured	5	18.80	69.40	4.83	75.00	64.00

Based on table 1, the anxiety data for males', totaling 64 respondents, the average age is 19.67 years, and the average anxiety level is 66.84 ± 6.47. Of the four sports categories, the order of anxiety levels from highest to lowest is the measured sports category at 69.40%; the

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martial arts category at 65.80%; the game sports category at 68.68%, and the lowest was in the accuracy sports category at 65.14%.

Table 2. Result of Measuring the Percentage Of Females

Row Labels	Count of Gender	Sum of Ages	Sum of Anxiety (%)	Std Dev of Anxiety	Max of Anxiety (%)	Min of Anxiety (%)
Females	**37**	**19.08**	**65.35**	**7.06**	**81.00**	**52.00**
Accuracy	13	20.08	62.69	6.77	77.00	52.00
Martial	14	18.36	65.43	5.93	76.00	57.00
Games	5	18.80	65.60	8.50	78.00	56.00
Measured	5	18.80	71.80	7.01	81.00	63.00

Based on table 2 above, there are 37 respondents with an average age of 19.08 years, with an average anxiety level of 65.35 ± 7.06. Of the four sports categories, the order of anxiety levels from highest to lowest is the measured sports category at 671.80; the martial category at 65.60%; the game sports category at 65.43%, and the lowest was in the accuracy sports category at 62.69%.

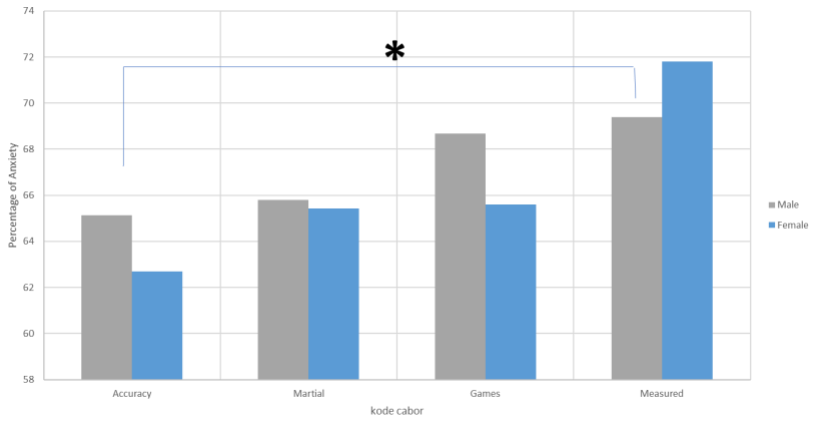

Figure 1. Anxiety Percentage by Sports Category and Gender

Figure 1 above shows the level of anxiety of males and females in the sports category. Males' anxiety levels in the accuracy, martial, and game sports categories are higher than females' anxiety levels. However, it is inversely proportional to the category of measured sports which is that women's anxiety levels are higher than men's. Anxiety levels between categories did not differ significantly except that in the accuracy exercise category with the measured sports category there was a significant difference (p-value <0.05), in both men and women.

DISCUSSIONS

The purpose of this study was to determine the level of anxiety among late adolescent athletes based on gender and sports category. And in this study, there are some interesting discussions. First, females' anxiety levels are lower than males' anxiety levels in accuracy, martial, and gaming sports. This is not in accordance with ten studies that measure anxiety levels based on gender. The ten studies showed female athletes had higher levels of anxiety than male athletes (Rice et al., 2019). However, the results of this study show the same thing as the results of the study (Andersen & Williams, 1987; Ichraf et al., 2013).

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In addition, women's anxiety levels in measured sports are higher than males. Measured sports are individual sports. Individual sports in female athletes show the highest levels of anxiety. Correia & Rosado (2019) stated that female athletes and individual sports have the highest levels of anxiety due to somatic anxiety and concentration disorders. Therefore, the results of this study are in line with the research conducted in previous studies (Correia & Rosado, 2019; Clifton & Gill, 1994).

Second, anxiety levels based on sports categories of both males' and females' have the same order. The highest levels of anxiety are measurable, games, martial arts, and accuracy. The anxiety level of games is higher than in martial and accuracy. This is in accordance with the research that states that team sport has a higher level of anxiety and low self-esteem, so individual exercise is high self-esteem and low anxiety (Ichraf et al., 2013).

Accuracy sports such as archery are sports where psychological factors act quite large, so the ability to correctly realize and control a person's mental state is important. Psychological Skill Training (PST) is a technique to practice and train psychological skills such as goal setting, imagery, self-talk, and relaxation (Kim et al., 2021). According to Kim et al. (2021), there are 17 studies showing this Psychological Skill Training (PST) is effective in archery players. Therefore, accuracy sports show the lowest anxiety value among other sports categories. Furthermore, the martial arts sport in this study showed second-order anxiety levels. This is because martial arts practice has a positive effect on reducing the symptoms associated with anxiety and depression. Research (Mcgowan et al., 1991) shows karate students have lower levels of anxiety than students who don't take karate. In addition, students who took taekwondo for six months reported significantly reduced anxiety levels (Trulson, 1986).

Research by (Ichraf et al., 2013) that team sports tend to have higher levels of anxiety than individual sports. This is inversely proportional to the anxiety value between sports games and measured sport anxiety values. On average, this sport is an individual sport, which should have a lower value than games sport. However, according to several previous studies, athletes from individual sports reported having much higher levels of anxiety than others (Correia & Rosado, 2019; Terry et al., 1996; Ramis et al., 2010). According to (Kirkby & Liu, 1999; Ramis et al., 2010), individual sports athletes have a high level of anxiety because athletes compete as individuals, and the pressure to achieve the desired results will be borne by the individual alone.

CONCLUSIONS

This study has limitations for anxiety among late adolescent athletes based on gender and sports category. This study only discusses the anxiety athletes during practice and does not discuss other variables that have an effect on anxiety.

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