

## PSYCHOLOGY & COACHING

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# Relationship between sports competition anxiety and technical-tactical actions of winning and losing kurash athletes

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**Key words:** kurash, competition anxiety, technical-tactical performance, relationship

### Abstract

**Aim.** The purpose of the study is to compare the state of anxiety and the level of technical-tactical skill that defeated and victorious kurash athletes demonstrate in competition and to investigate the correlation between them.

**Methods.** Eighty-four male kurash athletes participated in the study (average age  $18 \pm 2.4$  years, weight  $73 \pm 7.3$  kg, height  $175 \pm 8.4$  cm, training experience  $8 \pm 2.8$  years). The level of anxiety of the kurash athletes was measured, and its association with technical-tactical indicators was investigated during regional and national championships.

**Results.** The results showed that the level of anxiety that the losing kurash athletes ( $20.71 \pm 0.86$ ,  $p > 0.05$ ) experienced during competitions was higher than that of the winning kurash athletes ( $19.07 \pm 1.40$ ,  $p < 0.01$ ). The total number of technical-tactical actions was lower among the losing athletes ( $8 \pm 2.1$ ,  $p > 0.05$ ) than the winning athletes ( $11 \pm 3.5$ ,  $p < 0.05$ ). Furthermore, fewer effective technical-tactical actions were performed by the losing kurash athletes ( $1 \pm 0.7$ ,  $p > 0.05$ ), than the winning athletes ( $2 \pm 0.5$ ,  $p < 0.01$ ). A correlation between the level of anxiety, and the total number of technical and tactical actions ( $r = 0.421$ ,  $p < 0.05$ ) and a positive correlation between anxiety and effective technical-tactical actions ( $r = 0.253$ ,  $p > 0.05$ ) was not observed when among losing kurash athletes. In contrast, there was a positive correlation between the level of anxiety and the number of effective technical-tactical actions ( $r = 0.734$ ,  $p < 0.05$ ), as well as between anxiety and the total number of technical-tactical actions ( $r = 0.671$ ,  $p < 0.05$ ), among the winning kurash athletes.

### Introduction

Kurash is a traditional sport that was officially recognized as a sport only in 1998, the same year that the International Kurash Association was established [Yusupov 2005; Khaitov et.al. 2020]. In 2018, for the first time, kurash was included in the program of Asian Games (Jakarta-2018). kurash is a type of combat sport and in the process of competitive activity, kurash athletes perform intense and diverse technical and tactical actions. However, the features and, theoretical and methodological foundations of this sport, in particular the psychological, technical and tactical foundations of competitive activity, have not been sufficiently scientifically studied.

The state of anxiety and fear that sports competitions evoke has been studied by a number of scientists. The large number of scholars interested in this line of

investigation indicates its relevance and importance in the field of sports theory [Guillen, Sanchez 2009; Patel et al. 2010]. Research on this psychological preparation of athletes for competitions in various sports has involved the study of athletes' state of anxiety. For example, there is research on the psychological preparation of athletes for the Olympic Games [Gould, Maynard 2009], the Paralympic Games [Martin 2012], and other prestigious sports competitions, as well as research on the state of anxiety of athletes as they participated in competitions. However, a literature review revealed that there is at present no relevant research work in kurash.

The research paper notes that psychological states such as competition anxiety and self-control arise in competing athletes for various reasons with both positive and negative effects on an athlete's performance [Fernandes et al. 2013; Reigal et al. 2019; Park 2020]. According to a number of other researchers, the name

of the competition type is directly related to the state of anxiety, which has been examined in the context of a team (futsal, volleyball, basketball) and individual (wrestling, karate and taekwondo) sports [Soltani et al. 2016]. However, the lack of such research on kurash characterizes the relevance of this study.

In the initial studies conducted on the state of anxiety, special classifications were used. In particular, as noted in the study of Spielberg [1994], the state of anxiety, among those participating in competitions, can be divided into the following two classifications: state anxiety and trait anxiety. Other researchers have noted that this issue has components such as physical and mental anxiety [Morris et al. 1981]. Nevertheless, at competitions, the question of the relationship between the level of competitive anxiety and the technical and tactical skills of athletes is still a controversial scientific problem. The fact that the scientific research and experimental results on this research topic are not unanimous once again confirms the relevance of the research topic. Based on the abovementioned, the following research questions arise: 1) Do the level of competitive anxiety and the technical and tactical skills of losing and winning kurash athletes differ from each other? 2) Is there a correlation between the state of anxiety and the technical and tactical skills of the kurash athletes?

It is assumed that (1) the state of competition anxiety and the level of technical-tactical skills differ between losing and winning kurash athletes and (2) the competition anxiety and technical-tactical performance of the winner kurash athletes have a positive relationship.

## Purpose

The purpose of this study is to compare the state of anxiety and the level of technical and tactical skills of losing and winning kurash athletes in competitions and to determine the relationship between competitive anxiety and technical-tactical actions.

## Methods

### Participants

In total, 84 kurash athletes took part in our study as volunteers (losers- $n = 42$ , winners- $n = 42$ , average age  $18 \pm 2.4$  years, weight  $73 \pm 7.3$  kg, height  $175 \pm 8.4$  cm, training experience  $8 \pm 2.8$  years). The participants did not receive any medications during the study process or before it, and none showed signs of disease.

### Procedure

Volunteers took part in trials during competitions at regional and national championships. The regional com-

petitions were held at least 3 weeks before the national championship. The participants of regional competitions had on average 3-4 fights and 5-6 competitions at the national championships.

### Ethical Considerations

At the beginning of the study, the kurash athletes received an oral explanation of the purpose of the study and were assured that their personal data would be kept confidential. The study was conducted in accordance with the Local Ethical Rules.

### Assessment

The kurash athletes responded to a special questionnaire designed by Martens two hours before the first fights in the competition process [Martens 1977]. The response opinions to the 15 questions were never, sometimes and often. The highest score is 30, and the lowest is 10. A low score indicates a low anxiety level, while a high score indicates a high anxiety level. In the first contest, the technical and tactical indicators of the athletes who were defeated or won were determined, and the correlation with the level of anxiety evoked by the competition was determined.

The issue of evaluation of technical-tactical actions in kurash has not yet been studied. For this reason, the evaluation criteria were suggested by us. The following variables expressed in corresponding indexes are assumed as the basic criteria for the evaluation of technical-tactical during a kurash fight:

I. Index of total technical-tactical actions which is the proportion of the attacks, counterattacks and defensive actions performed by the athletes during a fight (TTA).

II. Index of the effective technical-tactical actions which is a proportion of attacks and counterattacks, for which points were granted, to the number of attacks, and counterattack actions undertaken (EA).

### Statistical Analysis

The data were analysed with SPSS for Windows and expressed as mean and standard deviation. To test the research hypotheses the Pearson correlation coefficient test was used and P values were set at  $p < 0.05$  for all measures.

## Results

As described in Table 1, there was a significant difference in anxiety level, total technical-tactical actions, and effective technical actions between the winning and losing kurash athletes.

**Table 1.** Comparisons of the competitive anxiety and technical-tactical actions of losing and winning kurash athletes (n=84, M±SD)

Groups	SCAT	TTA	EA
Losers	20.71±0.86**	8±2.1	1±0.7
Winners	19.07±1.40**	11±3.5*	2±0.5**

Notes:

\*Statistical significance  $p < 0.05$

\*\*Statistical significance  $p < 0.01$

The comparison reveals that the competitive anxiety of losing kurash athletes was  $20.71 \pm 0.86$ , while that of the winning kurash athletes lower, at  $19.07 \pm 1.40$ . The winning athletes' results were statistically significant ( $p < 0.01$ ) while the losing athletes' results there were not observed statistical significance ( $p > 0.05$ ). Regarding the total technical and tactical actions, there was also a difference between the losing and winning kurash athletes. In particular, the losing kurash athletes performed an average of  $8 \pm 2.1$  actions, and the winning kurash athletes performed an average of  $11 \pm 3.5$  actions. The difference was statistically significant between the groups ( $p < 0.05$ ).

In addition, a significant difference was also found in the number of average effective technical and tactical actions used by losing and winning kurash athletes. The winning kurash athletes performed  $2 \pm 0.5$  more effective ( $p < 0.01$ ) technical and tactical actions, while the losing kurash athletes performed fewer effective technical-tactical actions averaging  $1 \pm 0.7$  ( $p > 0.05$ ).

The degree of correlation between the level of anxiety and the total technical-tactical action as well as the effective technical-tactical action performed in the competition by the losing and winning kurash athletes, is described in Table 2.

**Table 2.** The relationship between the competition anxiety and technical-tactical performance of losing and winning kurash athletes during the competition

Groups	-	TTA	EA
Losers	SCAT	0.421	0.253
Winners	SCAT	0.734*	0.671*

Notes:

\*Correlation significance  $p < 0.05$

There was a low correlation between the state of anxiety and the level of technical-tactical skill demonstrated by the losing kurash athletes. The correlation between the competition anxiety level and total technical-tactical actions (TTA) was  $r = 0.421$ , and the correlation between the competition anxiety level and the effective technical-tactical actions (EA) was  $r = 0.253$ . The results were not statistically significant ( $p > 0.05$ ). However, a positive correlation was observed between the competition anxiety level and the technical-tactical performance of the winning kurash athletes. In particular, the correlation between the competition anxiety level and the total technical-tactical actions (TTA) was  $r = 0.743$ , and that between the competition

anxiety level and effective technical-tactical actions was  $r = 0.671$ . The statistical significance  $p < 0.05$  was reached.

## Discussion

The analyses of the pre-competitive psychological conditions and their relationships with the technical-tactical actions should be an indispensable element of psychological and technical-tactical training planning for contestants. The data taken from the research may be used by the coaches for effective planning of technical and tactical training as well as psychological preparation of athletes. The study confirmed that there is a correlation between the technical and tactical skills and pre-competitive psychological status of athletes.

The results of the study showed that the losing and winning kurash athletes differed not only in the level of their technical and tactical performance, but also in their competition anxiety level. Our results indicated that the anxiety that the winners experienced during kurash competitions was lower than that experienced by the losing kurash athletes. Another important result is that the number of technical and tactical actions of the winning kurash athletes was significantly higher than that of the losing kurash athletes. A number of studies have noted that the level of competition anxiety experienced by competitors in team and single sports has a negative impact on the skills of athletes [Bueno et al. 2007; Buceta et al. 2003; Guirado et al. 1995]. The results of our study are consistent with the scientific conclusions of previous studies and confirm their reliability. Other studies have found that the motivational behaviour of coaches has a positive effect on the level of anxiety that an athlete experiences at competitions [Smith et al. 2007; Weiss et al. 2009; Mago et al. 2003]. In addition, other studies confirm that there was a positive correlation between the coaching leadership styles (training and instruction, democratic and social behaviors) and athletes' satisfaction with athletes [Mohammad et al. 2016]. However, in this work, this aspect was not focused on and the level of influence of coaches on the athletes was not studied.

Another important result of this study on the losing and winning competing kurash athletes, was the empirical confirmation of the logical connection between their level of anxiety and their technical and tactical skills. The winning kurash athletes have a low state of anxiety, which was directly related to their high level of technical-tactical skill, and the hypothesis of the study was confirmed. In contrast, the losing kurash athletes had a high level of competition anxiety, as determined by observations, which negatively affected their technical-tactical performance. A number of publications contain scientific conclusions confirming the results of our research in this regard. In particular, the level of

competition anxiety is related to the level of skill of the athlete at the moment [Mellalier et al. 2009], and problems associated with an increased likelihood of injury also have an effect [Nippert et al. 2008; Kavassin et al. 2015; Evans et al. 2012]. Furthermore, other authors confirm that athletes who play in their home country (host) will be more in control of their anxiety as exemplified in international competitions such as Asian Games in combat sports [Dimiyati et al. 2020].

## Conclusions

The scientific hypothesis put forward in the course of the study was confirmed, and the state of anxiety of the kurash athletes during the competition, as well as their technical and tactical skills were interrelated. Moreover, the state of anxiety of winning kurash athletes is lower and their level of technical-tactical skills were higher than those of the losing athletes. The results of this study show that this aspect of kurash athletes' state anxiety and technical-tactical skills, which are a special element of the modern sport theory, contribute to achieving success. The results obtained can be used to inform the training system for kurash athletes.

## Future research

There was previously no adequate research on kurash. In the future, there is a need for in-depth study of the scientific and methodological foundations of kurash in order to train kurash athletes.

In the future research we aimed to compare advanced research methods in assessing kurash athletes' precompetitive anxiety (SCAT and CSAI-2) and technical-tactical skills in the context of various weight, ages and gender.

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## Conflict of Interests

The authors declare that there are no conflicts of interest.

## References

- Buceta J.M., De La Llave A.L., Llantada M.D.C.P., Vallejo M., Del Pino M.D. (2003), *Estado psicologico de los corredores populares de maraton en los días anteriores a la prueba*, “Psicothema”, vol. 15, no. 2, pp. 273-277 [in Spanish].
- Bueno J., Capdevila L., Fernandez-Castro J. (2007), *Sufrimiento competitivo y rendimiento en deportes de Resistencia*, “Revista De Psicología Del Deporte”, vol. 11, no. 2, retrieved from <https://revistes.uab.cat/rpd/article/view/132> [in Spanish].
- Covassin T., Beidler E., Ostrowski J., Wallace J. (2015), *Psychosocial aspects of rehabilitation in sports*, “Clinics in sports medicine”, vol. 34, no. 2, pp. 199-212; doi: 10.1016/j.csm.2014.12.004.
- Dimiyati, Djoko P.I., Ria L. (2020), *Exploring the Psychological Skills of Indonesian Penchak Silat Athletes at the 18<sup>th</sup> Asian Games*, “Ido Movement for Culture. Journal of Martial Arts Anthropology”, vol. 20, no. 2, pp. 10-16; doi: 10.14589/ido.20.2.2.
- Evans L, Wade R, Hanton S, Mitchell I. (2012), *Stressors experienced by injured athletes*, “Journal of Sports Sciences”, vol. 30, no. 9, pp. 917-927; doi: 10.1080/02640414.2012.682078.
- Fernandes M., Nunes S., Vasconcelos-Raposo J., Fernandes H. (2013), *Factors influencing competitive anxiety in Brazilian athletes*, “Revista Brasileira de Cineantropometria e Desempenho Humano”, vol. 15, pp. 705-714; 10.5007/1980-0037.2013v15n6p705.
- Gould D., Maynard I. (2009), *Psychological preparation for the Olympic Games*, “Journal of sports sciences”, vol. 27, no. 13, pp. 1393-1408; doi: 10.1080/02640410903081845.
- Guillen F., Sanchez R. (2009), *Competitive anxiety in expert female athletes: sources and intensity of anxiety in National Team and First Division Spanish basketball players*, “Perceptual and Motor Skills”, vol. 109, no. 2, pp. 407-419; doi: 10.2466/PMS.109.2.407-419.
- Guirado P., Salvador A., Miquel M., Martinez-Sanchis S., Carrasco C., Gonzalez-Bono E., Suay F. (1995), *Ansiedad y respuestas electrofisiológicas a una tarea de estrés mental tras un ejercicio aeróbico máximo*, “Revista de Psicología del Deporte”, vol. 7, no. 8, pp. 19-29 [in Spanish].
- Khaitov O., Abdulakhatov A., Norboyev K., Kulbulov F., Azamkhonov O., Ahmedov F. (2020), *Kurash: history, theory and methodics*, Monograph, Shawnee, USA; pp. 52; doi: 10.37057/M\_9.
- Kristiansen E., Roberts G.C. (2010), *Young elite athletes and social support: coping with competitive and organizational stress in “Olympic” competition*, “Scandinavian journal of medicine & science in sports”, vol. 20, no. 4, pp. 686-695; doi: 10.1111/j.1600-0838.2009.00950.x.
- Mageau G.A., Vallerand R.J. (2003), *The coach-athlete relationship: a motivational model*, “Journal of sports sciences”, vol. 21, no. 11, pp. 883-904; doi: 10.1080/0264041031000140374.
- Martens R. (1977), *Sport Competition Anxiety Test*, Human Kinetics, Champaign, IL.
- Martin J. (2012), *Mental preparation for the 2014 Winter Paralympic Games*, “Clinical journal of sport medicine: official journal of the Canadian Academy of Sport Medicine”, vol. 22, no. 1, pp. 70-73; doi: 10.1097/JSM.0b013e31824204cc.

15. Mehrsafari A. H., Strahler J., Gazerani P., Khabiri M., Sanchez J., Moosakhani A., Zadeh A. M. (2019), *The effects of mindfulness training on competition-induced anxiety and salivary stress markers in elite Wushu athletes: A pilot study*, "Physiology & behavior", vol. 210: 112655; doi: 10.1016/j.physbeh.2019.112655.
16. Mellalieu S.D., Neil R., Hanton S., Fletcher D. (2009), *Competition stress in sport performers: stressors experienced in the competition environment*, "Journal of Sports Sciences", vol. 27, no. 7, pp. 729–744; doi: 10.1080/02640410902889834.
17. Morris L.W., Davis M.A., Hutchings C.H. (1981), *Cognitive and emotional components of anxiety: literature review and a revised worry-emotionality scale*, "Journal of Educational Psychology", vol. 73, no. 4, pp. 541–555.
18. Muhammad N.M.S., Zareha Z., Vincent P., Nagoor M.A. (2016), *The Correlation between the Leadership Coaching Style and Satisfaction among University Silat Olahraga Athletes*, "Ido Movement for Culture. Journal of Martial Arts Anthropology", vol. 16, no. 3, pp. 34–39; doi: 10.14589/ido.16.3.4.
19. Nippert A.H., Smith A.M. (2008), *Psychologic stress related to injury and impact on sport performance*, "Physical medicine and rehabilitation clinics of North America", vol. 19, no. 2, pp. 399–418; doi: 10.1016/j.pmr.2007.12.003.
20. Park S.H., Park I.H., Lim S.T., Lee E. (2020), *Changes in Psychological Anxiety and Physiological Stress Hormones in Korea National Shooters*, "Brain sciences", vol. 10, no. 12, pp. 926; doi: 10.3390/brainsci10120926.
21. Patel D.R., Omar H., Terry M. (2010), *Sport-related performance anxiety in young female athletes*, "Journal of pediatric and adolescent gynecology", vol. 23, no. 6, pp. 325–335; doi: 10.1016/j.jpag.2010.04.004.
22. Reigal R.E., Vazquez-Diz J.A., Morillo-Baro J.P., Hernandez-Mendo A., Morales-Sanchez V. (2019), *Psychological Profile, Competitive Anxiety, Moods and Self-Efficacy in Beach Handball Players*, "International journal of environmental research and public health", vol. 17, no. 1, p. 241; doi: 10.3390/ijerph17010241.
23. Smith R.E., Smoll F.L., Cumming S.P. (2007), *Effects of a motivational climate intervention for coaches on young athletes' sport performance anxiety*, "Journal of sport & exercise psychology", vol. 29, no. 1, pp. 39–59; doi: 10.1123/jsep.29.1.39.
24. Soltani H., Hojati Z., Attarzadeh H., Seyyed R. (2016), *Comparative analysis of competitive state anxiety among team sport and individual sport athletes in Iran*, "Physical Education of Students", vol. 20, pp. 57–60; doi: 10.15561/20755279.2016.0508.
25. Spielberger C. D., Sydeman S. J., Marush, M.E. (1994), *State-Trait Anxiety Inventory and State-Trait Anger Expression Inventory*, "The use of psychological testing for treatment planning and outcome assessment", Lawrence Erlbaum Associates, Inc. ger, pp. 292–321.
26. Weiss M.R., Amorose A.J., Wilko A.M. (2009), *Coaching behaviors, motivational climate, and psychosocial outcomes among female adolescent athletes*, "Pediatric exercise science", vol. 21, no. 4, pp. 475–492; doi: 10.1123/pes.21.4.475.
27. Yusupov K. (2005), *International kurash rules, technique and tactics*, Tashkent, "Gafur Gulom", pp. 132 [in Uzbek].

### Związek między lękiem przed rywalizacją sportową a działaniami techniczno-taktycznymi zwyciężkich i pokonanych zawodników stylu walki kurash

**Słowa kluczowe:** kurash, lęk przed rywalizacją, działania techniczno-taktyczne, zależność

#### Streszczenie

Celem pracy było porównanie stanu lęku i poziomu umiejętności techniczno-taktycznych, jakie wykazują pokonani i zwycięscy zawodnicy stylu walki kurash podczas zawodów oraz zbadanie zależności między nimi.

Metody. W badaniu wzięło udział osiemdziesięciu czterech zawodników kurash płci męskiej (średni wiek  $18 \pm 2,4$  lat, waga  $73 \pm 7,3$  kg, wzrost  $175 \pm 8,4$  cm, staż treningowy  $8 \pm 2,8$  lat). Podczas regionalnych i krajowych mistrzostw zmierzono poziom lęku zawodników kurash i zbadano jego związek ze wskaźnikami techniczno-taktycznymi.

Wyniki. Wyniki wykazały, że poziom lęku, którego doświadczyli podczas zawodów przegrywający zawodnicy kurash ( $20,71 \pm 0,86$ ,  $p > 0,05$ ) był wyższy niż u wygrywających zawodników kurash ( $19,07 \pm 1,40$ ,  $p < 0,01$ ). Całkowita liczba działań techniczno-taktycznych była niższa wśród zawodników przegrywających ( $8 \pm 2,1$ ,  $p > 0,05$ ), niż wśród zawodników wygrywających ( $11 \pm 3,5$ ,  $p < 0,05$ ). Ponadto mniej skutecznych akcji techniczno-taktycznych wykonali przegrywający zawodnicy stylu kurash ( $1 \pm 0,7$ ,  $p > 0,05$ ), niż zawodnicy wygrywający ( $2 \pm 0,5$ ,  $p < 0,01$ ). Nie zaobserwowano korelacji między poziomem lęku, a całkowitą liczbą działań techniczno-taktycznych ( $r = 0,421$ ,  $p < 0,05$ ) oraz dodatniej korelacji między lękiem a efektywnymi działaniami techniczno-taktycznymi ( $r = 0,253$ ,  $p > 0,05$ ), gdy wśród przegranych zawodników kurash. Natomiast wśród zwyciężkich zawodników kurash stwierdzono dodatnią korelację między poziomem lęku a liczbą skutecznych działań techniczno-taktycznych ( $r = 0,734$ ,  $p < 0,05$ ), a także między lękiem a całkowitą liczbą działań techniczno-taktycznych ( $r = 0,671$ ,  $p < 0,05$ ).

Wnioski. Wyniki badań mogą stanowić informację dla systemu szkolenia zawodników kurash.