



A Designing of Wushu Moment Choreography to Three Individual Sparring Events

Du Xingyu¹, Thawatchai Kanchanataweekul² and Prakit Hongsaenyatham³

Faculty of Sports Science and Technology, Bangkokthonburi University, Thailand

¹E-mail: 406851449@qq.com, ORCID ID: <https://orcid.org/0009-0001-4506-3203>

²E-mail: Thawatchai_kan@bkkthon.ac.th, ORCID ID: <https://orcid.org/0009-0007-1435-5143>

³E-mail: prakitsport@gmail.com, ORCID ID: <https://orcid.org/0009-0009-2196-0258>

Received 04/10/2023

Revised 06/10/2023

Accepted 10/10/2023

Abstract

Background and Aim: Currently, the Taolu movement choreography arrangement has no creativity, which reduces the enjoyment of the competition. Therefore, this research was to design wushu movement choreography for a three-individual sparring event under the competition rules, to get a higher score in the competition.

Materials and Methods: The participants in this research were 36 athletes from the top twelve teams in the three-individual boxing of wushu sparring event of the 14th National Games wushu Taolu qualification 2021, 10 wushu Taolu experts and 10 wushu referees. The researcher designed the arrangement of wushu movement choreography for three individual sparring events, through expert interviews and analysis of video competition, and the IOC value was 0.87. To confirm the efficiency of wushu movement choreography, the wushu Taolu three-individual sparring event performance was already conducted by using the designed wushu movement choreography. Then, comparing the result of the scoring of two group referees, by using an independent t-test, to confirm the efficiency of the designed wushu movement choreography.

Results: The average scores with the ratings by the two groups of referees were insignificant. The wushu movement choreography in wushu three-individual sparring events designed by the researcher was effective, and it can lead to higher scores in three-individual sparring events competitions.

Conclusion: Results of the trial run of the designed wushu movement choreography in three-individual sparring events, by two groups of wushu referees rating score showed that the ratings of the two groups of referees do not differ. The wushu movement choreography designed by the researcher for three individual sparring events is effective.

Keywords: Wushu; Taolu; Three-individual Sparring; Choreography

Introduction

Regarding the concept of wushu sparring, the older generation of wushu artists Zhang Wenguang proposed in “Changquan Pairing and single sword vs. spear” that sparring is an important content and practice form in Chinese wushu. Two or more people practice the methods of attack and defense according to the choreographed Taolu.” In addition, (Zhang, 2014) believes in “A Brief History of Martial Arts Sparring” that Taolu sparring is the skill combination or program that follows the principle of reasonable offensive and defensive wushu, it consists of kicking, hitting, throwing, and holding, and other movements of boxing and various wushu movements of equipment. Based on the above insights, wushu movement choreography in the sparring event can be defined as a form of wushu practice or performance performed by two or more people bare-handed or with equipment.

According to the event regulations, sparring events can be divided into three types: bare-handed sparring, bare-handed against equipment, and equipment against equipment. Since the 4th National Games in 1979, when the sparring event was listed as a wushu event for the first time, the sparring event has always been a competition event. In performances, the sparring event also plays an important role. Among them, sparring events are more representative of competitions and performances, the movements are compact and natural, tacit cooperation, high difficulty, high skills, and new content, which make bare-handed wushu sparring events and with equipment wushu sparring events more developed.

The goal of wushu competitions is to achieve excellent results in the competitive area. The referee's evaluation of the three-individual sparring event is based on the completion of the entire set of movements on the field, and the quality of the movement and the level of practice are judged separately. The performance of the sports level has an impact, and it is the key to determining the athletes to achieve good results. Athletes, according to their style and characteristics, use combined movements such as technique, legwork, and wrestling, scientifically and reasonably arrange Taolu





movements, and conform to the expression forms of Taolu with rich content, vivid consciousness, and offensive and defensive skills, which are the key factors to improve sports performance.

Based on this, this research will focus on designing wushu movement choreography for three individual sparring events, to get a higher score in wushu competition. Through analysis of video competition, the scoring rules, and expert interviews to choreograph the wushu movement according to competition rules. This design will improve wushu athletes' movement and get a higher score in three individual sparring events competitions.

Objectives

Main Objective:

To design for wushu movement choreography for three individual sparring events.

Sub-Objectives:

1. To analyze the scoring rules to choreograph wushu movement according to competition rules.
2. To design wushu movement choreography according to the competition rules and get a higher score in the competition.
3. To compare the result of scoring wushu movement choreography by two groups of referees.

Literature Review

Arrangement movement Choreography

Arrangement refers to arranging things in a certain order. As the name suggests, movement choreography is to organize different actions to form a complete operational action. Huang (2014) pointed out that movement choreography is a process of organically connecting groups into routines within a certain time and space according to the characteristics of sports events. Xu (2011) pointed out that movement choreography is a prerequisite for excellent results. It should not only reflect the technical advantages and style characteristics of athletes but also attract the attention of referees and audiences in the competition. Wang (2017) believes that movement choreography should reflect its advantages, and the process of choreography should pay attention to the level changes of time and space to increase performance effects. The essential attribute of wushu is characterized by offensive and defensive techniques. Therefore, the action arrangement of wushu Taolu should reflect the essential needs of wushu while considering the artistic beauty. Zhang (2006) put forward measures based on the factors that affect the arrangement of wushu Taolu and pointed out that the arrangement of movements should highlight the style characteristics of athletes, and perfectly combine prescribed movements and novel movements. Liu (2009) pointed out that there is a direct relationship between the choreography of movements and the score of the exercise. The choreography should pay attention to the coherence between movements, fully reflect the strength, style, and rhythm, and rationally arrange the content and difficulty of movements. Zhao (2013) believes that the elements of action choreography include action elements (body posture, movement speed, movement direction, movement route, movement range, movement rhythm, movement frequency), time elements, space elements (movement direction, spatial level), and music.

To sum up, action choreography is an overall creative process. Arrangements should not only highlight the style characteristics of the project but also pay attention to the transition between actions to improve the artistic quality of action choreography.

Wushu three-individual sparring

Wushu's sparring technique is an important factor affecting the level of competition in this event. Reasonable technical training methods to improve the wushu sparring technique are a key factor, and a deep understanding of the technical characteristics of sparring is a major factor in improving sparring skills. Deng (1993) analyzed the common technical characteristics of wushu pair training and explained it through the characteristics of the training technique, the practice style of the pair training, and the training of the pair training technique. The characteristics of cooperation. Li (2000) analyzed and proposed the technical requirements and technical training methods of the training project. The technical requirements mainly involve accurate methods, reasonable attack and defense; skillful movements and rigorous coordination; rich content and compact structure; and vivid consciousness. The style is outstanding, and a targeted training method is proposed. Shi (2016) pointed out the stage characteristics of movement skills and the characteristics of each stage given the development stage of sparring project technology.

Wu (2016) put forward suggestions for the serious mismatch between single training and sparring in the current wushu competition routine mode: 1. Both offensive and defensive fists are the essential



characteristics of routines; 2. Follow the logic of the routine structure; 3. Single training The routine must show the main boxing posture of the boxing type, and use the main boxing posture to complete the form of round, series, etc. sparring; 4. The high consistency of single training and sparring forms. Yuan (2013) analyzed the subjective and objective possibility of Wushu Movement Choreography pair training to develop new difficult movements through the feasibility study of increasing the difficulty coefficient of somersault technology in Wushu pair training. Tang (2007) pointed out that Wushu Movement Choreography training is a heavy-duty event mainly relying on anaerobic glycolysis by monitoring the characteristics of the exercise load of Wushu Movement Choreography routine pair training items. Wang (2019) believes that wushu pair training is an extension of single training items and should not simply intercept the combat movements of single training items but pay attention to the realistic effect of offensive and defensive skills during the pair training process and should be arranged under the basic principles of reasonable attack and defense.

To sum up, wushu sparring should follow the principle of reasonable attack and defense. Its technical characteristics are mainly manifested in "attack and defense".

Based on the relevant research studies, it has been found that the present wushu movement is nothing new. There are only movements in the same manner, although wushu sparring has played a non-negligible role in the development of wushu, there are also some deviations in the arrangement of movements. Therefore, it is necessary to design wushu movement choreography for three individual sparring events to get the highest score. This research not only improves the score of wushu athletes' movement in three-individual sparring events but also improves wushu athletes' basic movement.

Conceptual Framework

The conceptual framework for this research is as follows:

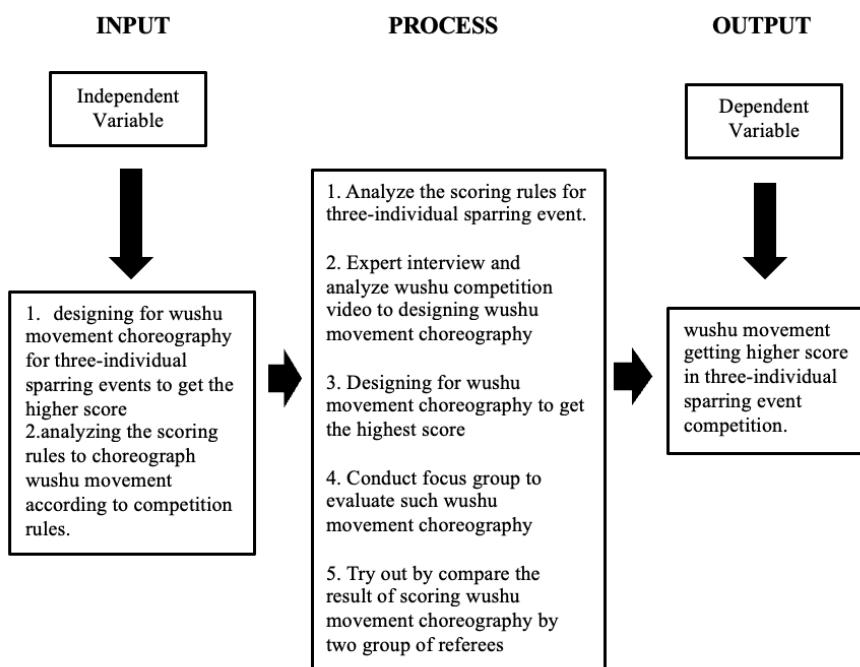


Figure 1: Conceptual framework

Methodology

Research Tools

The researcher designed the arrangement of wushu movement choreography for three individual sparring events, through expert interviews and analysis of video competition, and the IOC value was 0.87.

Population and Sample



Participants in this research include experts in wushu Taolu, coaches, wushu three-individual sparring event athletes, and wushu referees. In this study, participants are selected by purposive sampling.

Phase 1: analyze and draft wushu movement choreography

Conduct expert interviews with 10 wushu experts and analyze recording video of 36 athletes of the top twelve teams in the three-individual boxing wushu sparring event of the 14th National Games wushu Taolu qualification 2021, to draft the wushu movement choreography for three-individual sparring events.

Phase 2: evaluate wushu movement choreography

After designing the arrangement for wushu movement choreography to get the highest score, a focus group with 3 wushu Taolu experts will be conducted to evaluate such wushu movement choreography.

Phase 3: confirm the efficiency of wushu movement choreography

10 wushu referees will be divided into 2 groups, 5 referees per group, and then conduct wushu performance to compare the result of scoring wushu movement choreography by 2 groups of referees.

Data Collection and Analysis

1. Review related literature and analyze the scoring rules for three individual sparring events. Conduct an expert interview and analyze the competition video to draft wushu movement choreography.

2. Designing for wushu movement choreography to get the highest score in three individual sparring events. Analyze the content validity of wushu movement choreography using the Indexes of Items of Objective Congruence (IOC), a method for analyzing the validity of programs.

3. Confirm the efficiency of such wushu movement choreography by conducting wushu three-individual sparring events performance using the designed wushu movement choreography

4. Comparing the result of scoring wushu movement choreography of two groups of referees. by using an independent t-test, to confirm the efficiency of the designed wushu movement choreography, the significant difference level is 0.05.

Results

1. Explore the existing problem and draft concept of wushu movement choreography in three individual sparring events

1.1 Interview method

Based on the results of interviews with wushu experts, it was found that there is a serious situation in the Taolu movement choreography arrangement of three individual sparring events. Taolu movement choreography arrangement has no creativity, which reduces the enjoyment of the competition. Therefore, the arrangement of movements choreography should reflect its rationality, clarify the offensive and defensive techniques of the movements, and reflect the innovation of the arrangement. Moreover, the arrangement of movements and choreography has a significant impact on the performance score. Within a limited time, the selection and reasonable arrangement of basic movements and difficult movements not only can show the fluency of the Taolu but also reflect the diversity and competitive nature of the movement content.

1.2 The Analysis of wushu competition video

From the analysis of the competition video of 36 athletes of the top twelve teams in the three-individual boxing of wushu sparring event of the 14th National Games wushu Taolu qualification 2021, the details of wushu choreography in the performance are as follows.

The analysis of the competition video of the top twelve teams in the three-individual boxing of wushu sparring event of the 14th National Games wushu Taolu qualification 2021, analyzing the choreography structure of wushu Taolu movement showed that palm techniques 420 times (32.3%), fist techniques 345 times (26.54%), leg techniques 295 times (22.7%), falling techniques 205 times (15.76%), difficult movement (jumping techniques) 35 times (2.7%).



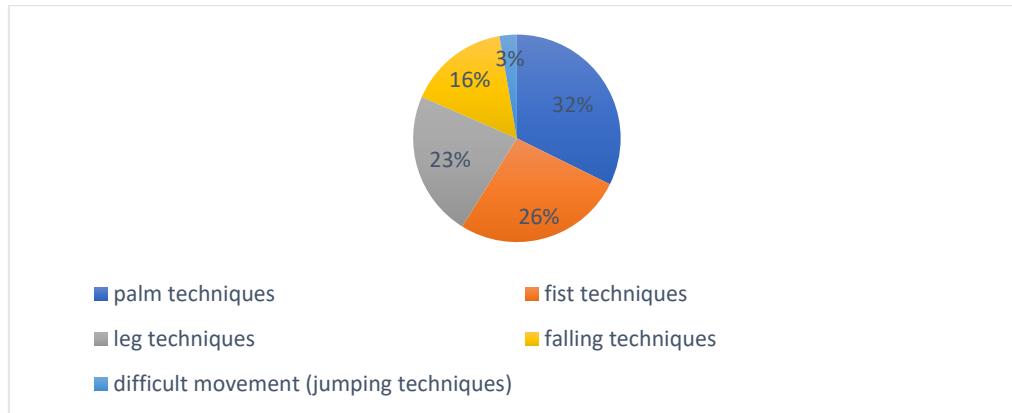


Figure 2: The analysis of structural characteristics of Taolu movement in three-individual sparring

From Figure 2, it was found that the frequency of movement is the number of times it is completed within a unit of time. Twelve teams are more inclined to palm techniques in the selection of Taolu movements. The reason is that palm movements consume relatively little physical energy and can also have a good visual and auditory effect on the referee and the audience. When the opponent uses leg techniques to attack, the defensive side's palm techniques blocking movement give people a sense of impact and a crisp sound effect, which will make the entire Taolu more attractive to watch and more eye-catching.

Secondly, in the combination of hand and leg techniques, most of them are two times of hand movements plus one time of leg movement. Compared with leg techniques, hand movements are more flexible and variable, and the speed is faster. Leg movements are relatively large in amplitude, the speed is slower than the hand, and the requirements for physical fitness are higher than the hand. To comply with the spirit of competition and meet the requirements of wushu, which are "high, difficult, beautiful, and creative", the appearance of difficult movement (jumping techniques) has become a necessary condition for three-individual sparring. However, since difficult movements (jumping techniques) have high requirements on the physical fitness of athletes, in the selection of difficult movements (jumping techniques), each team only arranges a few difficult movements (jumping techniques) in the Taolu to ensure high-quality and stable completion of difficult movements.

Based on the above analysis, a reasonable arrangement of wushu Taolu of three individual sparring events is essential for excellent performance. First, the close connection between the timing of the entire set of movements and the placement of difficult movements is an important factor in achieving excellent results. Second, the use of non-offensive and defensive movements in the entire set of movements as reasonable transitions between the two can help to improve the overall level of the Taolu and enhance its effectiveness, thus making the three-individual sparring event more aesthetically pleasing.

2. Design wushu movement choreography in three individual sparring events

After interviewing wushu experts and analyzing competition videos of the top twelve teams in the three-individual boxing wushu sparring event of the 14th National Games wushu Taolu qualification 2021, to assess movement skills, strengths, weaknesses, and areas for improvement, and after studying the rules and regulations of three-individual sparring events, the information gathered has been compiled. Moreover, to solve the current problems of choreographing wushu three-individual sparring, it requires careful design and continuous practice to ensure that the choreography of movements considers the skill level and physical fitness of the athletes, provides enough space, and emphasizes safety, especially continuity of movement and strong basic skills must also be emphasized.

3. Confirmation of the efficiency of wushu movement choreography

3.1 Conduct wushu three-individual sparring events performance using the designed wushu movement choreography.

In terms of confirmation of the efficiency of wushu movement choreography, the researcher already conducted wushu three-individual sparring events performance, by using the designed wushu movement choreography. In addition, a total of 10 wushu referees were invited to give scores, by using the 2012 version of wushu Taolu competition rules.





Wushu referees will be divided into 2 groups, 5 referees per group, and then conduct 2 rounds of wushu three-individual sparring events performance. The purpose of conducting 2 round wushu three-individual sparring events performance is to compare the result of scoring wushu movement choreography by 2 groups of referees, to confirm the efficiency of the designed wushu movement choreography.

3.2 Compare the results of scoring wushu movement choreography in wushu three-individual sparring events.

The comparison of the average scores of wushu three-individual sparring events performances that have been arranged and choreographed by the researcher. The scores that were used in the comparison were given by two groups of referees, and the statistical test used for the analysis was an independent t-test. The main hypothesis is that the scores in the evaluation of wushu movement choreography in wushu three-individual sparring events by two groups of referees are not significantly different. The hypothesized mean difference = is 0, and the significant level is 0.05. The results of comparing the scores given by two groups of referees are as follows:

Table 1: The results of comparing the scores given by two groups of referees

Comparison Topic	The first group referee		The second group referee		t	P
	\bar{x}	S.D.	\bar{x}	S.D.		
scoring wushu three-individual sparring events performance	9.69	0.03	9.71	0.05	-0.54	0.60

*N=5, Significant level is 0.05

The result showed that the T-value = - 0.54 and the P-value = 0.60, the p-value is greater than 0.05. The average scores of wushu three-individual sparring events performances, with the ratings by the two groups of referees not statistically significant difference.

Therefore, it can be concluded that the average scores of wushu three-individual sparring events performances, with the ratings of the two groups of referees do not differ. The wushu movement choreography in wushu three-individual sparring events designed by the researcher is effective, and it can lead to getting a higher score in three-individual sparring events competitions.

Conclusion

Three-individual sparring movement choreography can be structurally divided into two parts: (1) basic movements and (2) difficult movements. In terms of elements, it can be divided into movement elements, time elements, and space elements. Of these, movement elements are the foundation of three individual sparring event choreography.

From the study of the choreography of the top twelve teams in three-individual sparring event competitions, the movement choreography is mostly presented in the form of movement combinations. However, the selection of basic movements is heavily biased, and other types of movements are not fully utilized. Additionally, the arrangement of the Taolu is repetitive and lacks variety. Moreover, in terms of time, basic movements account for the majority of the Taolu, followed by non-offensive and non-defensive movements, and finally difficult movements. More time spent on non-offensive and defensive movements can help to ensure that offensive and defensive skills are not overlooked.

Results of the trial run of the designed wushu movement choreography in three- individual sparring events, by two groups of wushu referees rating score showed that the ratings of the two groups of referees do not differ. The wushu movement choreography designed by the researcher for three individual sparring events is effective, and it can lead to higher scores in three-individual sparring events competitions.

Discussion

The result of the research showed that the reasonable arrangement of wushu Taolu in three-individual sparring events is essential for excellent performance. First, the timing of the entire set of movements and the placement of difficult movements must be closely coordinated to achieve excellent results. Second, the use of non-offensive and defensive movements as transitions between offensive and defensive movements can improve the overall level and effectiveness of a Taolu and make the





three-individual sparring event more aesthetically pleasing. This is consistent with the research result of Wang (2017), which believe that the choreography of wushu Taolu should reflect the unique strengths of wushu, with attention to changes in time and space to enhance the performance. The essential attribute of wushu is offensive and defensive techniques, so the choreography of wushu Taolu should reflect this while also considering artistic beauty. Liu (2009) pointed out that there is a direct correlation between the choreography of movements and the score of the performance. The choreography should focus on the coherence of movements, fully reflect the strength, style, and rhythm, and appropriately arrange the content and difficulty of movements.

The choreography of movements in the three-individual sparring event needs to be improved. It is currently uncreative and reduces the enjoyment of the competition. The arrangement of movements should be rational, clearly demonstrate offensive and defensive techniques, and reflect innovation. Three-individual sparring events often lack basic skills and variety in their movements. To solve the current problems of choreographing wushu three-individual sparring, careful design, and continuous practice are essential. The movements must be in sync with the music, rhythm, and time. This is consistent with the conclusion of Zhao (2013) who believes that the elements of movement choreography include movement elements (body posture, movement speed, movement direction, movement route, movement range, movement rhythm, movement frequency), time elements, space elements (movement direction, spatial level) and music. The proper movement of the various elements will lead to excellent performance.

Recommendation

1. The choreography of the wushu Taolu three-individual sparring should be diversified, with rich and substantial content, a balanced structure, and the flexible use of rules to find breakthroughs in the choreography, rather than blindly pursuing conformity.
2. Increasing the variety of movement content in the rules, adding quantitative evaluation indicators, reducing subjective judgment, and fully exploring the technical style of three-individual sparring.
3. The choreography of wushu Taolu three-individual sparring should focus on the offensive and defensive techniques of the movements. As a sparring event, three individual sparring should be choreographed by the essence of wushu, using a variety of techniques to demonstrate its combativeness.

References

Deng, C. (1993). Martial arts sparring techniques and training. *Journal of Chengdu Institute of Physical Education*, 1993 (1), 51-54.

Huang, J. (2014). *Rhythmic Gymnastics Training Theory and Methods*. Beijing: Beijing Sport University Press.

Li, Q.Y. (2000). On the technical requirements and training methods of martial arts sparring events. *Journal of Chenzhou Normal College*, 2000 (4), 84-87.

Liu, J. (2009). Research on the arrangement theory of Changquan self-selected routines. *Fighting (Martial Arts Science)*, 6(9), 29-31.

Shi, L.L. (2016). *Research on the stage characteristics of technical development of outstanding athletes in martial arts sparring events in my country*. Doctor's Degree Dissertation: Northeast Normal University.

Tang, W.B. (2007). Research on the load intensity of routine training of high-level martial arts athletes. *Journal of Xi'an Institute of Physical Education*, 2007 (2), 61-65.

Wang, D.P. (2017). *Analysis of optional complete sets of movements in the 2015 National Square Dance Competition*. Master's degree Thesis: Xi'an Institute of Physical Education.

Wang, E.L. (2019). *Research on the phased development characteristics of sparring events in "Martial Arts Taolu Competition Rules"*. Master's degree Thesis: Shanghai Institute of Sport.

Wu, D. (2016). Research on the competition mode of "one-pair unification" Wushu Movement Choreography Taolu competition. *Journal of Beijing Sport University*, 39(4), 101-108.

Xu, C. (2011). Research on elements of choreography for technical cheerleading. *Journal of Capital Medical University (Social Science Edition)*, 2011 (1), 291-293.





Yuan, D. (2013). Concept of using somersault technology in martial arts sparring events. *Fighting (Martial Arts Science)*, 10(6), 54-55.

Zhang, C., Wang, G. (2014). Analysis of the Causes of Cultural Transformation of Chinese Wushu in Its Present Development. *Journal of Capital University of Physical Education and Sports*, 26(2), 11-15.

Zhang, M.L. (2006). A brief introduction to the arrangement of martial arts routines. *Fighting (Martial Arts Science)*, 2006 (1), 49-50.

Zhao, N. (2013). *Research on the theory of complete sets of broadcast gymnastics movements in my country*. Master's degree Thesis: Beijing Sport University.

