

# A Systematic Review of the Development of Chinese Dance Cheerleading Competition Rules (2001–2024)

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## Abstract

Cheerleading originated in the United States and entered China in 1989, developing rapidly among young people. Competition rules are crucial to guiding the sport's development. This review searched WoS, Scopus, Google Scholar, and ScienceDirect for studies on Chinese cheerleading competition rules (2014–2024). A total of 213 records were initially retrieved, and 11 articles met the inclusion criteria. The literature screening followed the PRISMA flow, and the SPIDER framework was used to guide the search strategy and inclusion criteria. Existing research primarily compares rule versions in event categories, scoring content, and difficulty evaluation, yet little attention is given to whether current rules align with China's competitive development or provide a pathway toward international standards. These findings highlight the need for evidence-based rule optimization that reflects China's specific development stage. However, the current body of literature remains small and largely descriptive, limiting the ability to evaluate the actual effects of rule implementation. Future studies should incorporate empirical assessments to establish more objective, scientific, and applicable evaluation indicators.

**Keywords:** Literature Review, Dance Cheerleading, Competition Rules

## Background

Cheerleading originated in the United States and has been developed for more than 100 years. Cheerleading became the 109th member organization of IFS on May 31, 2013, and won the provisional three-year recognition of Olympic Committee in 2016. Cheerleading was introduced into China in 1989, and developed rapidly and was loved by the majority of young people.

Cheerleading competition rules play an important role as a guide for the development of the event.

The researchers searched Web of Science (WoS), Google Scholar, Scopus and Science Direct for Chinese cheerleading competition rules. Articles from 2014 to 2024 were retrieved. The final analysis included 11 articles that met the criteria for the topic. The results show that the research on Chinese cheerleading competition rules was only compared with previous rules from the aspects of item setting, scoring content and difficulty evaluation, etc. It was too early to conform to international rules, and did not study the development status of Chinese cheerleading, which was not applicable. In the future, the research on cheerleading competition rules should be based on the development status of China's cheerleading, so that the formulation and evaluation of the competition rules can be more objective and scientific. In addition, scholars can try to analyze the applicability of the assessment indicators of competition rules to the development of cheerleading.

Cheerleading is a sport that originated in American universities in the late 19th century (Hanson, 1995). It was first used in basketball, football, baseball and other games to cheer, set off the atmosphere of the game, and show the role of the team culture. Later, it gradually evolved into a collective performance form composed of various dance movements and difficult skills under the background of music (Wang & Zhang, 2023). Cheerleading was introduced to China in 1998 and first landed in Guangdong Province. In 2001, China College Aerobics Association held the first cheerleading competition in China in Guangzhou (Yu, 2011b), marking the formal entry of cheerleading into China. With the support of the Gymnastics Management Center of the State General Administration of Sport, cheerleading has developed rapidly throughout the country and has been favored by teenagers and college students (Heng et al., 2022).

With the development of cheerleading events in China and the increasing number of participants, the competition rules have been constantly improved to adapt to the development of cheerleading events (Xian, 2019a). Up to now, China cheerleading competition rules have gone through 7 editions, namely 2001 edition, 2004 edition, 2006-2009 edition, 2010-2013 edition, 2013-2016 edition, 2017-2020 edition and 2021 edition. Among them, 2014 is an important turning point for China's cheerleading competition rules to be integrated with the world (China, 2014). From the definition and classification of events to the scoring standards to the code of conduct for coaches and referees, it has been in line with international rules (Shulin, 2022a). Cheerleading has been introduced into China for more than 20 years, and there are still some differences between cheerleading and the United States in terms of its development history, cultural precipitation, athlete selection and coach ability. The introduction of international rules is both an opportunity and a challenge (Zhang Xin, 2014).

Sports are restricted by rules, and the development of sports promotes the improvement of rules (Brams & Ismail, 2018). With the rapid development of cheerleading in China, more and more researchers begin to conduct in-depth research on cheerleading, including competition rules, cultural development, training methods and sets of arrangements (Yu, 2018). However, as the direction of the development of cheerleading, the so-called competition rules not only guide the development of cheerleading, but also restrict its development, and constantly standardize and improve the cheerleading competition (Shulin, 2022b). The existing research focuses on the evolution of cheerleading rules in China (He Shaoqi, 2016; He Shaoxi, 2016; Junli,

2023b; Ouyang Rong, 2019; Shulin, 2022b), and comparison with international rules (Qian, 2016a, 2016b; Zhang Wan Ting, 2017; Zhang Wanting, 2017), there are few studies on whether competition rules are applicable to the current situation of cheerleading development in China. This system reviews and analyzes the literature on the evolution of cheerleading rules in China in recent 10 years (2014-2024).

While Chinese cheerleading has experienced rapid and large-scale development, its competition rules still largely follow international templates and lack systematic adaptation testing to China's sporting foundation, talent structure, and training realities. This has become a key issue hindering the high-quality development of the sport. This study systematically reviews relevant literature on Chinese cheerleading competition rules from 2014 to 2024, aiming to evaluate their scientific validity and applicability from the perspective of the relationship between rules and sport development. This not only provides evidence-based support for rule revision and referee standards but also guides coaches and athletes to develop safer and more effective training methods. It is particularly valuable for the protection and development of the cheerleading population, which is mainly composed of teenagers. Therefore, it has significant practical significance and application value at the current critical stage of Chinese cheerleading's transition from "import-driven expansion" to "localized high-quality development."

## **Materials and Methods**

### *Eligibility Criteria*

The Exclusion inclusion tool of SPDER (Sample, Phenomenon of Interest, Design, Evaluation, Research Type) was used in this study to locate systematic reviews and meta-analyses by using exclusion and inclusion criteria.

The criteria for paper selection were as follows: (1) Full peer-reviewed journal; (2) date of publication from January 1, 2014 to September 1, 2024; (3) Must include keywords: cheerleading, competition rules and China (4) The article should be written in Chinese or English; (5) Include qualitative, quantitative and mixed methodology research. First of all, this time period includes the release time of all competition rules since cheerleading was introduced into China. Secondly, the limitation of regions can be more targeted to summarize the research literature.

Exclusion criteria: (1) Articles that are not concerned with cheerleading projects will not be reviewed; (2) Articles that only provide a descriptive list of rule evolution without comparative analysis or critical evaluation will be excluded; (3) unpublished articles or meeting minutes are excluded; (4) Articles in English and Chinese were analyzed in this study; other languages were not reviewed; (5) The full text of the paper is not available. First, the lead author is responsible for guiding the search process. Second, two reviewers review the title and abstract separately. Subsequently, relevant full-text articles are selected for further investigation. If there is a disagreement between the two reviewers, the third reviewer decides the winner.

### *Data Sources and Searches*

For the systematic search of Chinese cheerleading competition rules, the research was designed and conducted according to PRISMA (Yepes-Nuñez et al., 2021) statement. The literature search was conducted using 5 well-known academic databases: CNKI, Google Scholar, Web of Science,

Scopus and Science Direct. Pre-defined keyword combinations were used (" Cheerleading "or" Cheer Sports "or" Dance Cheerleading ") and (" China "or" Chinese ") and (" Competiton Rules "or "Game Rules" or "Contest Rules").

*Research Options*

An author searched the article and removed duplicate content. Two authors independently selected the study based on the title and abstract. If unsuccessful, the papers are screened by reading the full text. Extract the following information: (1) Author/year; (2) Rule Version/Formulating unit/Research Design; (3) Project Setup/Rating content/Difficulty /Rating Method; And (4) Key findings.

(Brams & Ismail, 2018)

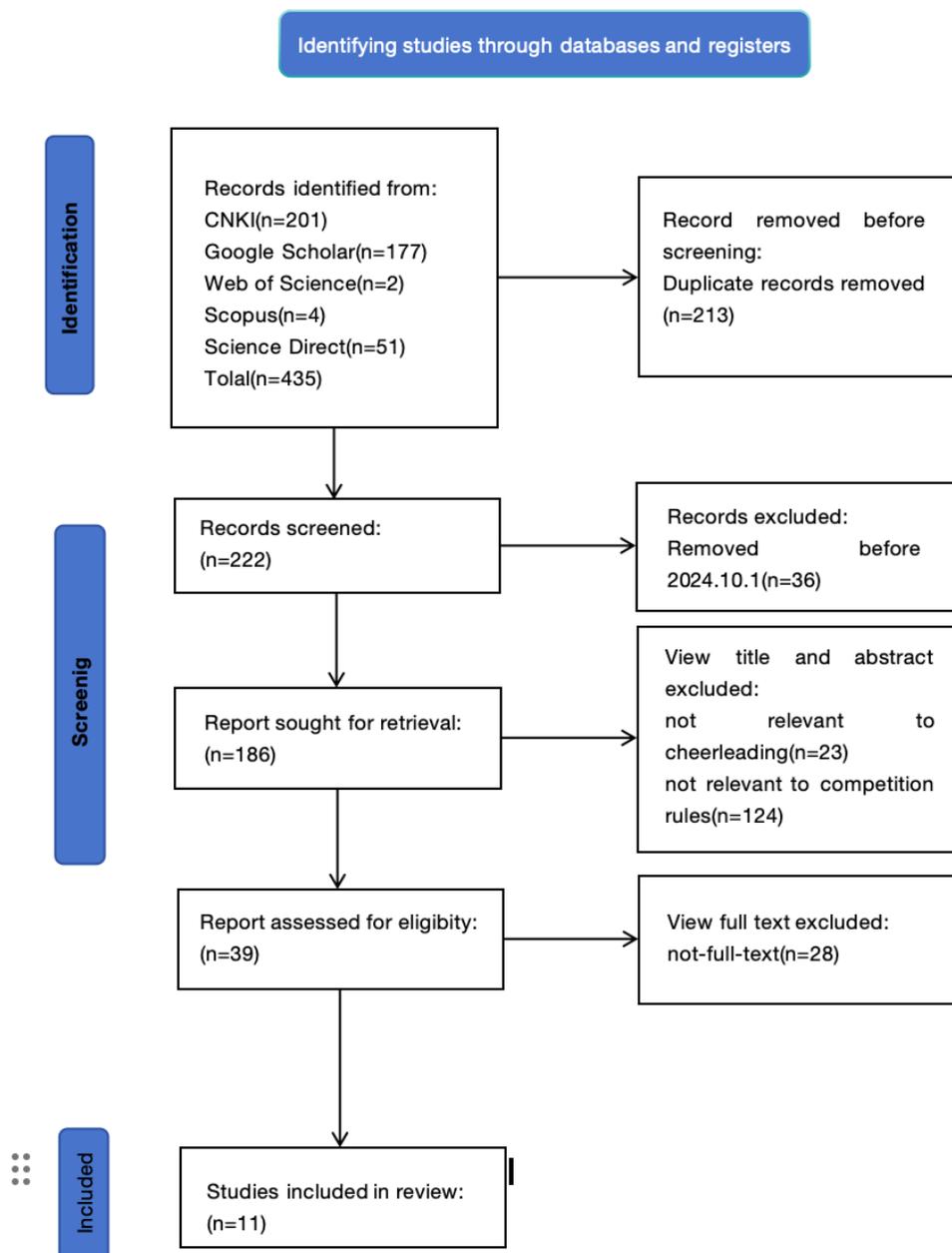


Figure 1: PRISMA flow diagram

The flow diagram in Figure 1 illustrates the process of selecting the studies to be included in the analysis. A comprehensive search strategy was applied and an advanced search was performed according to the search formula. 435 articles were retrieved, including 201 from CNKI, 177 from Google, 2 from Web of Science, 4 from Scopus, and 51 from Science Direct. After applying pre-determined inclusion and exclusion criteria, a total of 11 articles were selected for analysis, as shown in Figure 1.

### Quality Assessment

This paper conducted quality assessment on the 11 included articles, and the results are shown in Table 1. Among them, 9 were qualitative studies and 2 were mixed studies. The findings of Zhang Bo (2019) did not make full use of data for support, and Zhang & Yan(2018) did not have enough data for support in their interpretation of the research results. The other nine articles all met the quality assessment requirements.

Table 1

*Quality evaluation of the included studies*

No.	Year	Author(s)	Screening1	Screening2	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4
1	2014	Zhang Bo	Y	Y	Y	Y	N	Y	—	—	—	—
2	2015	Xu & Yang	Y	Y	Y	Y	Y	Y	—	—	—	—
3	2016	Chen Qian	Y	Y	Y	Y	Y	Y	—	—	—	—
4	2016	He & Liu	Y	Y	Y	Y	Y	Y	—	—	—	—
5	2017	Jia & Geng	Y	Y	Y	Y	Y	Y	—	—	—	—
6	2017	Zhang & Yu	Y	Y	Y	Y	Y	Y	—	—	—	—
7	2018	Zhang & Yan	Y	Y	Y	Y	Y	N	—	—	—	—
8	2019	Zhou Xian	Y	Y	—	—	—	—	Y	Y	Y	Y
9	2019	Ou et al.	Y	Y	Y	Y	Y	Y	—	—	—	—
10	2022	Zhang Shulin	Y	Y	—	—	—	—	Y	Y	Y	Y
11	2023	Xu Junli	Y	Y	Y	Y	Y	Y	—	—	—	—

Note:

S1: Are the research questions clear? S2: Do the collected data allow the research questions to be addressed?

1. Qualitative 1.1. Is the qualitative approach appropriate to answer the research question?
- 1.2. Are the qualitative data collection methods adequate to address the research question?
- 1.2. Are the qualitative data collection methods adequate to address the research question?
- 1.3. Are the findings adequately derived from the data? 1.3. Are the findings adequately

derived from the data? 1.4. Is the interpretation of results sufficiently substantiated by data?  
 1.4. Is the interpretation of results sufficiently substantiated by data?

Abbreviations: N = no; Y = yes.

2. Hybrid Approach 2.1. Is there a good reason to use a hybrid approach design to solve a research problem? 2.2. Are the different parts of the study effectively integrated to answer the research question? 2.3. Are the results of the integration of qualitative and quantitative components fully explained? 2.4. Are differences and inconsistencies between quantitative and qualitative results adequately addressed?

**Results**

Cheerleading originated in the United States (Hanson, 1995), and it was introduced into China in 1998, and has been developed for more than 20 years (Heng et al., 2022). In the development process of cheerleading in China, competition rules, as the development guideline, further influence the development direction of cheerleading (Xian, 2019a) So far, 7 versions of cheerleading competition rules in China have been changed, namely 2001, 2004, 2006-2009, 2010-2013, 2013-2016, 2017-2020 and 2021, as shown in Table 2. With the constant changes of competition rules, China's cheerleading has gone through the primary stage of development and the stage of integration with international rules, and the 2013-2016 version of the rules is the watershed (Shulin, 2022b; Xian, 2019a) The primary stage of development has gone through the 2001 version, 2004 version, 2006-2009 version, 2010-2013 version, and the international integration stage has gone through the 2013-2016 version, 2017-2020 version and the current 2021 version. After the issuance of the 2021 edition of China Cheerleading Competition rules, no modifications have been made until 2024, and the competition rules of the 2021 edition are still used. In the primary stage of development, a total of 8 articles have studied the rules of dance cheerleading competition at this stage, and in the stage of international integration, a total of 10 articles have described them in detail.

Table 2  
*The characteristics of the 11 studies*

N o.	Author(s)	Year	Rule Version	Formulating unit	Research Design	Project Setup	Rating content	Difficulty Rating Method	Main Finding
1	Zhang Bo	2014	2010 - 2013 edition 2013 - 2016 edition	Gymnastics Management Center, General Administration of Sport State General Administration of Sport gymnastics management center	Qualitative		<b>2010-2013 edition:</b> Art (50 points), completion (50 points), plus points for difficulty <b>2013-2016 edition:</b> Technical (30 points), Team completion (30 points), Choreography (30 points), Overall rating (10 points)	2010-2013 edition - Quantitative 2013-2016 edition - Qualitative	The 2013-2016 edition of cheerleading competition rules not only made adjustments in the points of difficulty movements, competition time and venue requirements,

									scoring standards and other aspects, but also put more emphasis on artistic expression, stage effect and audience interaction.
2	Xu & Yang	2015	2010 - 2013 edition 2013 - 2016 Edition	Gymnastics Management Center, General Administration of Sport State General Administration of Sport gymnastics management center	Qualitative		<b>2010-2013 edition:</b> Art score 50, completion score 50, difficulty score <b>2013-2016 edition:</b> Technical 30, Team completion 30, Choreography 30, Overall rating 10	2010-2013 edition - Quantitative 2013-2016 edition - Qualitative	The 2014 version of the rules removed the lower limit requirements for the number and category of difficult moves, but the quality requirements for the completion of difficult moves were stricter. At the same time, a subjective scoring referee evaluation model was introduced, requiring judges to independently score based on their personal judgment.
3	Chen Qian	2016	2006 - 2009 edition	Chinese University Athletic Association	Quantitative	2006-2009 edition: Prescribed routine, dance	<b>2006-2009 edition:</b> Art points (50 points), completion	Edition 2006-2009 - Quantitative	Chinese rules pay more attention to

			2010 - 2013 edition	Aerobics Rhythmic Gymnastics Branch State General Administration of Sport Gymnastics Management Center		optional routine, skill optional routine; 2020-2013 edition: Skill cheerleading (added quintuple and duet), dance cheerleading (added jazz, street, free dance)	points (50 points), difficulty points; <b>2010-2013 edition:</b> Art (50 points), completion (50 points), difficulty points	2010-2013 edition - Quantitative	quantitative evaluation, emphasizing innovation and the quality of movement completion, and there are also obvious differences between the scoring method, difficulty evaluation and the measurement criteria of the set of arrangements and the international rules.
4	He & Liu	2016	2010 - 2013 edition Edition 2013 - 2016	Gymnastics Management Center, General Administration of Sport State General Administration of Sport gymnastics management center	Qualitative		<b>2010-2013 edition:</b> Art score (50), completion score (50), Difficulty score <b>2013-2016 edition:</b> Technical (30 points), Team completion (30 points), Choreography (30 points), Overall rating (10 points)	2010-2013 edition - Quantitative 2013-2016 edition - Qualitative	The 2014 version of the rules stipulates that a variety of difficult movements can appear in the complete set of movements, but it is not a bonus factor. The proportion of art points will be reduced, while completion points will be increased.

									The grading in the new rules is more specific.
5	Jia & Geng	2017	2010 - 2013 edition Edition 2013 - 2016	State General Administration of Sports gymnastics management center State General Administration of Sport gymnastics management center	Qualitative		<b>2010-2013 edition:</b> Art score (50), completion score (50), Difficulty score <b>2013-2016 edition:</b> Technical (30 points), Team completion (30 points), Choreography (30 points), Overall rating (10 points)	2010-2013 edition - Quantitative 2013-2016 edition - Qualitative	The 2013-2016 version of the rules is simplified to a "3+3+3+1" model, eliminating difficulty points and emphasizing holistic and independent scoring.
6	Zhang & Yu	2017	2010 - 2013 edition Edition 2013 - 2016	Gymnastics Management Center, General Administration of Sport State General Administration of Sport gymnastics management center	Qualitative	2010-2013 edition; Skill cheerleading optional moves, dance cheerleading optional moves; 2013-2016 edition: Skill Cheerleading (added regulation's Eastern Europe; Dance cheerleading Optional moves (added free dance);	<b>2010-2013 edition:</b> Art score (50), completion score (50), Difficulty score <b>2013-2016 edition:</b> Technical (30 points), Team completion (30 points), Choreography (30 points), Overall rating (10 points)	2010-2013 edition - Quantitative 2013-2016 edition - Qualitative	The 2013-2016 rules assign a score of 20 points to both the execution of the flowerball technique and the execution of the dance technique, leaving out musicality, creativity, originality, and difficulty level.
7	Zhang & Yan	2018	2013 - 2016	Gymnastics Management	Qualitative		<b>2017-2020 edition:</b> Evaluation of prescribed	2013-2016 edition -	"2017-2020 Cycle Cheerleading

			editi on 2017 - 2020 editi on	Center, General Administr ation of Sport State General Administr ation of Sport gymnastic s managem ent center			routines removes technical execution, adds formation changes (10 points) and stays original (10 points)	Qualitati ve; 2017- 2020 edition - Qualitati ve	Competitio n Rules" in the scoring criteria, more emphasis on choreogra phy. In the score reduction table is more specific, from the original 7 scoring criteria increased to 9 items
8	Zhou Xian	20 19	2001 editi on 2004 Associatio n Editi on 2006 - 2009 editi on 2010 - 2013 editi on Editi on 2013 - 2016	Chinese University Athletic Associatio n Aerobics Rhythmic Gymnasti cs Branch Chinese University Sports Associatio n aerobics Rhythmic gymnastic s branch Chinese University Sports Associatio n aerobics Rhythmic gymnastic s branch State General Administr ation of Sport Gymnasti cs Managem ent Center State General	Mixed	2001 edition: Choreogra phed routine for dance cheerleadi ng; 2004 version: choreogra phed dance cheerleadi ng routine; 2006-2009 edition: set movemen t, dance cheer routine, skill cheer routine; 2010-2013 edition: Skill cheer routine (pair, five, group), dance cheer routine (flower ball, street dance,	<b>2001 edition:</b> Arrangement, completion, Performance and general impression; <b>2004 edition:</b> Arrangement, Completion, Performance and general impression; <b>2006-2009:</b> Art score (50 points), completion score (50 points), difficulty bonus points; <b>2010-2013 edition:</b> 2010- 2013 edition: Art (50 points), completion (50 points), difficulty points; <b>2013-2016 edition:</b> 2013- 2016 edition: Technical (30 points), team completion (30 points), Choreography (30 points),	2001 edition - Qualitati ve; 2004 edition - Qualitati ve; 2006- 2009 edition - Quantita tive; 2010- 2013 edition - Quantita tive; 2013- 2016 edition - qualitati ve	In the initial stage of integration (before 2013), 3 groups of judges were mainly used to score in a quantitativ e way from arrangeme nt, completi on, performan ce and overall impression , and in the developm ent stage after integrating with internatio nal rules, each judge was required to complete a complete set of comprehe

				Administration of Sport gymnastics management center		jazz, free dance); 2013-2016 edition: National cheerleading competition required movements (dance, skill); Campus break cheerleading (required, optional); Square exercises (dance) (modern freehand, modern apparatus, traditional freehand, traditional apparatus) ; Cheerleading Star Competition; Chinese Star cheerleading	overall rating (10 points)		nsive scores independently.
9	Ou et al.	2019	2013 - 2016 edition - 2017 - 2020 edition	Gymnastics Management Center, General Administration of Sport State General Administration of Sport gymnastics	Qualitative	2017-2020 Edition: Dance Cheerleading (adds high kick event)	<b>2013-2016:</b> Movement execution (50 points), choreography (40 points), Communication /public image/audience appeal (10 points); <b>2017-2020:</b> Technical (30 points), teamwork (30 points), choreography	2013-2016 edition - Qualitative 2017-2020 edition - Qualitative	The "2017-2020 edition cheerleading competition Rules" has not changed much with the 2013-2016 edition as a whole. The deduction items of

				managem ent center			(30 points), overall evaluation (10 points)		cheerleadi ng exercises have been increased in the rules, and the deduction rules are becoming more and more perfect. The deduction of complete sets of time strictly controls the grasp of a set of exercises on time.
10	Zhang Shulin	20 22	2006 - 2009 Editi on 2010 - 2013 editi on 2013 - 2016 2017 - 2020 editi on 2021 editi on	Chinese University Athletic Associatio n aerobics Rhythmic Gymnasti cs branch State General Administr ation of Sport Gymnasti cs Managem ent Center State General Administr ation of Sport gymnastic s managem ent center Internatio nal General Administ	mixed	2006-2009 Edition: Skill Cheerleadi ng, Dance cheerleadi ng, Prescribed Routines; 2010-2013 edition: Skill cheerleadi ng (five people added); Dance cheerleadi ng (subdivide d flower ball, street dance, and jazz); 2013-2016 edition: Dance cheerleadi ng (added pairs), skill cheerleadi	<b>2006-2009 edition:</b> Art points (50 points), completion points (50 points), difficulty points; <b>2010-2013 edition:</b> Art (50 points), completion (50 points), difficulty points; <b>2013-2016 edition:</b> Technical (30 points), teamwork (30 points), choreography (30 points), overall evaluation (10 points); <b>2017-2020 edition:</b> Technical (30 points),	2006- 2009 edition - Quantita tive; 2010- 2013 edition - Quantita tive; 2013- 2016 edition - Qualitati ve; 2017- 2020 edition - Qualitati ve; 2021 edition - Qualitati ve	The main event competitio n rules of China's cheerleadi ng have been completely the same as the rules of ICU cheerleadi ng competitio n, but due to the differences in culture and developm ent, there will be certain differences in the interpretat ion of the rules of cheerleadi

				ation of Sport gymnastics management center national cheerleading committee		ng (added small groups), National cheerleading competition school break cheerleading, set routines; 2017-2020 edition: Skill cheerleading (added pairs); Dance cheerleading (added free dance); 2021 version: Dance cheerleading (adds high kicks); And add a cheer aerobics program for the disabled	teamwork (30 points), choreography (30 points), overall evaluation (10 points); <b>2021 edition:</b> Technical completion (30 points), group completion (30 points), choreography (30 points), overall effect (10 points)		ng competition and the cognition of the implementation of the project.
11	Xu Junli	2023	2013 - 2016 edition - 2017 - 2020 edition - 2021 Edition	State General Administration of Sport Gymnastics Management Center State General Administration of Sport gymnastics management center International	Qualitative	2013-2016 Edition: Skill Cheerleading (group tricks, small group tricks) Dance cheerleading (jazz, street, flower ball, couples); 2017-2020 edition: Skill cheerleading	<b>2013-2016 edition:</b> Technology (30 points), teamwork (30 points), Choreography (30 points), overall evaluation (10 points); <b>2017-2020 edition:</b> Technology (30 points), teamwork (30 points), choreography (30 points), overall	2013-2016 edition - Qualitative; 2017-2020 edition - Qualitative; 2021 edition - Qualitative	In the current rules for scoring changes, skill cheerleading focuses on difficult movements, dance cheerleading focuses on technical, choreography and group completion, and covers a

				General Administration of Sport gymnastics management center national cheerleading committee	ng (added pairs); Dance cheerleading (competition day added); 2021 edition: Added penalty points for time, flips, lifts, difficulty, and overall impression.	evaluation (10 points); <b>2021 edition:</b> Technical completion (30 points), group completion (30 points), choreography (30 points), overall effect (10 points)		more comprehensive range of points reduction.
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*The Primary Stage of Development*

China's first cheerleading competition was held in Guangzhou in 2001, with the publication of the first edition of China's cheerleading competition rules -2001 edition (Jiangang, 2012), followed by rule modifications every 3-4 years (Junli, 2023a). Among the included literatures, three articles focus on the 2001, 2004 and 2006-2009 competition rules (Qian, 2016a, 2016b; Shulin, 2022b; Xian, 2019a, 2019b). The Scoring rules of Chinese Student Cheerleading Competition in 2001, 2004 and 2006-2009 were formulated by the Aerobics and Rhythmic Gymnastics Branch of the Chinese University Sports Association (Jiangang, 2012). It is mainly explained in detail from the aspects of general rules, scoring rules, arbitration and judgment, disciplinary punishment, etc. In terms of project setting, the rules of cheer competition for 2001 and 2004 set up dance cheer competition items, which mainly refer to the characteristics of aerobics events and set up free hand and light equipment items (Xian, 2019a). In terms of project characteristics, it still follows the project style of aerobics, and there is no specific description of the project style of cheerleading; However, in the 2006-2009 edition of the cheerleading competition rules, the style of cheerleading is defined, and two categories are set, namely, skill cheerleading and dance cheerleading (Shulin, 2022b). Skill cheerleading is one of the most primitive and oldest events in the development of cheerleading. It originally originated in the United States. With the development of the project, it gradually refined the style of dance cheerleading and finally distinguished the two events.

Skill cheerleading is a sport that fully shows the athletes' superb skills, reflecting the youthful energy and positive team spirit. Athletes pursue team glory and performance through collective execution of unique difficult movements, transitions, basic gestures and complex dance moves (Hong, 2013). The complex techniques of skill cheerleading include somersaults, throws, lifts, and human towers. Completing a complete set of moves requires a high degree of coordination and cooperation between athletes (Thomas et al., 2004). It is a competitive sport that requires a high degree of teamwork ability.

Through difficulty and technically difficult movements such as kicking, dance cheerleading presents significant features of cheerleading entertainment and performance (Qian, 2016a) It integrates the traditional chanting slogans, formation changes and teamwork with music and dance skills, and requires a balanced distribution of dance movements and difficulty movements to form a form of performance with ornamental, artistic and competitive features (Press, 2010)

In the main scoring content, the 2001 and 2004 editions mainly followed the scoring system of aerobics and rhythmic gymnastics events, and judged the competition set from three aspects: arrangement, completion, performance and overall impression (Xian, 2019a) The scoring criteria focus on the design of movements and the overall completion, while the concept of cheerleading is vague (Xian, 2019a) The evaluation of difficulty was added to the cheer competition rules of the 2006-2009 edition. According to the scoring rules of rhythmic gymnastics, trampoline and aerobics of the International Gymnastics Federation, three sets of judges, art, completion and difficulty, were used to score independently, in which 50 points were scored for art and 50 points for completion. The difficulty points are evaluated from 0 points in the form of bonus points (Xu Zhongqiu, 2006). In such a scoring system, difficulty becomes the key to improve performance. Art is rated on a 10-point scale using a 5-point scale; And the completion aspect is judged by a detailed error deduction method (Xu Zhongqiu, 2006).

As for the requirements of difficulty content, there are great differences between 2001 and 2004 edition and 2006-2009 edition of cheerleading competition rules. Which 2001, 2004 edition of the competition rules did not have a clear description of the difficulty, so the choice of difficulty more use of aerobics, artistic gymnastics difficulty type; However, the competition rules of 2006-2009 edition set the classification of difficulty, preliminarily established the classification of difficulty and the quantity and level of difficulty, emphasized the minimum completion standard of the difficulty of cheerleading, and added diagrams (Qian, 2016a). The change of this content is conducive to the improvement of the scoring system of cheerleading competitions in China, the enhancement of judges' objective evaluation of cheerleading, and the promotion of cheerleading events in China (Xian, 2019a).

The year 2010 marked a turning point in the history of cheerleading in China. Cheerleading was independent from aerobics and rhythmic gymnastics, and the Gymnastics Management Center of the General Administration of Sport of China was responsible for the operation, training, teaching and cultural communication of cheerleading events (Press, 2010) In the included literature, eight articles made a detailed analysis of cheerleading (He Shaoqi, 2016; Qian, 2016a, 2016b; Shulin, 2022b; Xian, 2019a; Xiaolan, 2017; Xu Wenqing, 2015; Zhang Wan Ting, 2017; Zhou Jianshe, 2014a, 2014b), 2010-2013 edition of cheerleading competition rules summarized the concept of cheerleading on the basis of referring to international rules. The regulation routine is cancelled, the five-person coordination skills are added, and the types of dance cheerleading are enriched (Shulin, 2022b), which are divided into four events: pom poms, jazz, hip-hop and free dance, among which free dance is designed to combine the national conditions of China. So that coaches and athletes can choose the style of the event according to their actual conditions (Xian, 2019a). The diversity of participating events is conducive to enriching the style of cheerleading events, highlighting the innovation and artistry of cheerleading events, and providing certain guiding significance for cheerleading training (Qian, 2016a).

In terms of referee setting, the content of the 2006 version of the rules is followed, which is divided into three categories of judges: art, completion and difficulty. Among them, there are 4 art judges, 4 completion judges and 2 difficulty judges, and the sight judge is canceled (Press, 2010) The main scoring content did not change much, and the choreography was changed to artistic choreography in the dance cheerleading project, which distinguished the artistic evaluation of skill cheerleading and dance cheerleading, in which the score of dance element was higher than that of music and performance (Xian, 2019a). The change in scoring content reflects the high requirements for choreography and is in line with the unique artistic characteristics of cheerleading.

In the 2010-2013 edition of cheerleading competition rules, the division of difficulty levels and quantities is more detailed. The difficulty classification of dance cheerleading is modified, the difficulty of kicking class is removed, and flexibility class is added, which provides a new idea for the creation of the complete set of dance cheerleading (Yu, 2011b) As a bonus point, the difficulty score will be the key to the performance of the participating team if the artistic score and the completion score are the same (Zhou Jianshe, 2014b). In the new version of the rules, difficulty symbols are designed while reducing the difficulty coefficient, which is convenient for coaches to use simple and vivid symbols to explain in the training process, and more conducive to the objective evaluation of referees (Shulin, 2022b) The tendency of the rules to difficulty makes cheerleading exercises of artistic value and increases its technical content, which improves the artistic value and ornamental value of cheerleading events (Zhou Jianshe, 2014b).

#### *Stage of Integration with International Standards*

On May 31, 2013, the International Cheerleading Union (ICU) officially became the 109th member organization of the International Federations, followed by the enactment of the new international rules in 2014 and the introduction of its new competition rules in China in the same year (Jinxia & Yinghong, 2015; Qiuxia, 2015; Xian, 2019a; Zhang Xin, 2014). In the 2013 cheerleading competition rules, safety standards were put in the first place, and the importance of safety was reflected in the protection of athletes' own safety while the development of the event (Xian, 2019a). The definition of the event is more clear, distinguishing the specific style of each event. For the pom poms dance cheerleading, 100% use of pom poms is required in the set (Qian, 2016a).

The 9 articles included in this literature review all make a detailed analysis of this version of the competition rules. The 2013-2016 edition of the cheerleading competition rules integrates the current situation of China's cheerleading development into international rules, and is more diversified in the project setting, adding the required movements of the national cheerleading competition and the required movements of campus cheerleading. Among them, the regulation routines of skill cheerleading are set in different levels, which lowers the threshold of cheerleading, allows more people to participate in cheerleading, and enhances the popularity of cheerleading (China, 2014) (GSAC, 2014). In addition to the development of traditional cheerleading events, a national cheerleading competition square event has been set up, the development object of which was dominated by schools in the past has been abandoned, and the age limit for participating in cheerleading has been broadened. The diversification of competition events can make more middle-aged and elderly people who love cheerleading join cheerleading (Erlin, 2017a; Jinxia & Yinghong, 2015; Qiuxia, 2015).

Compared with the previous cheerleading competition rules, the 2013-2016 edition of the rules has made major changes in the scoring content. Before that, the competition rules of China's cheer exercises were in the imitation stage. In terms of scoring content, we learned from other difficult competitive sports, such as aerobics, rhythmic gymnastics, synchronized swimming, etc., including the setting of judges, three groups of judges scored independently (Lapochuk, 2014; Orlenko, 2011), the 2013-2016 edition of Chinese cheerleading competition rules adopts the ICU international rules for each judge to independently evaluate the complete set of competitions, and the final results are added by the scores of all judges (Qiuxia, 2015). The evaluation content of dance cheerleading was changed to four aspects, namely technique, teamwork ability, choreography and overall evaluation (Shulin, 2022b). The score for the execution of pom poms technique and the execution of dance movements was increased by 10 points each compared with the international rules, while the evaluation of musicality, creativity and originality, and difficulty level were ignored (Zhang Wan Ting, 2017).

In terms of difficulty evaluation, there is no clear definition and score of difficulty in the rules of Chinese cheerleading competition in 2001, 2004 and 2006-2009, while the difficulty scale and corresponding score are set in the rules of cheerleading competition in 2010-2013 to quantify the evaluation of difficulty. The 2013-2016 edition of China Cheerleading competition rules adopted the qualitative evaluation of difficulty in international rules, paying attention to the degree of participation in difficulty and the adaptability of selection, combined with the completion of difficulty to conduct a comprehensive evaluation, and emphasized the innovation of difficulty arrangement (China, 2014) For the evaluation of difficulty, China's cheerleading competition rules have gone through the process of qualitative to quantitative and then qualitative, which is undoubtedly a huge challenge for referees, coaches and athletes (Zhang Xin, 2014). The evolution of rules lays the foundation for the development of cheerleading, and at the same time restricts the development of events (Qian, 2016a).

The 2017-2020 edition of China Cheerleading Competition rules is not much different from the 2013-2016 edition in terms of event Settings, which were analyzed in 4 articles included in the literature. In the 2017-2020 edition of the competition rules, the cheerleading Star competition and the star cheerleading try-out competition were removed, and the high kick event of dance cheerleading was added. To promote the trend of diversification of cheerleading (Xian, 2019a) The requirement to be innovative has been added to the competition evaluation of the specified movements, while remaining original, and no modification of hand movements and difficulty is allowed (China, 2016) The rule removed the evaluation criteria for technical execution from the score table of prescribed routines and shifted the emphasis to choreography (Li Xiangxiang, 2017) The score deduction table was modified to increase the number of score deduction indicators from the original 7 to 9, and the score deduction intensity was adjusted while increasing the content of score deduction, which was stricter for the example of score deduction (China, 2016).

The new rules strictly distinguish the styles of the four events of pom poms, hip-hop, jazz and high kick. The scoring content and difficulty evaluation are basically consistent with the 2013-2016 edition of cheerleading competition rules. Qualitative evaluation is adopted for each type of difficulty in the set. The requirements for the diversity, fluency and artistry of cheerleading

difficulty are increasingly high(Rong et al., 2019). The development time of cheerleading in China is relatively short, the popularity is not widespread enough, and the public's understanding and evaluation of cheerleading events are still limited to fixed thinking and poor innovation, which is the drawback of the development of cheerleading in China and an urgent problem to be solved(jinying, 2017a, 2017b; Ouyang Rong, 2019; Rong et al., 2019) The rule change has prompted Chinese cheerleading referees to evaluate the competition set from part to whole, requiring referees to have high standards and a deep understanding of the competition rules in order to make more fair and accurate judgments in the competition (Xian, 2019a).

There are two literature studies on the 2021 edition of competition rules, and the current 2021 edition of cheerleading competition rules are basically consistent with the international rules (Shulin, 2022b). On the basis of the previous edition, the 2021 edition of cheerleading competition rules adds the event of competition day dance, and the addition of the disabled cheerleading (Center, 2020). The event setting and the number of events are increased to encourage more people to participate in cheerleading competition events. Give full play to the charm of cheerleading(Junli, 2023a) The length of the competition sets has also been changed, from the original group event requirement of no more than 2 minutes 30 seconds, revised to no more than 2 minutes 15 seconds, the overall length has been shortened by 15 seconds (Center, 2020). On the one hand, the shortened time provides sufficient support for the athletes' physical fitness, on the other hand, it also brings challenges to the choreography of the set (Wang & Yang,2022).

As for the regulations of dance cheerleading somersaults, the 2021 version of cheerleading competition rules stipulates that it is forbidden to flip the hips higher than the head while holding the pom poms or props (except for rolling back and forth); Flying in the air is allowed; In the air movement with hand support, landing with the shoulder upside down or vertical upside down is allowed(Shulin, 2022b) . In the combined lift, the base does not need to maintain contact with the ground during the shoulder position and below the shoulder position (Center, 2020). The regulations on the flapping movements in dance cheerleading greatly enrich the creation space and require coaches to make reasonable creation on the basis of the actual ability of the athletes to fully demonstrate the competitiveness of cheerleading(Quan, 2023). The 2021 version of the cheerleading competition rules adds the deduction surface and deduction content of the judges. For the time, flip, lift, difficulty and the overall impression are scored, the scoring surface has become more comprehensive, and the content of the deducted points is more stringent (Center, 2020)

The rules of the 2021 edition are basically the same as those of the 2013-2016 and 2017-2020 editions in terms of the difficulty requirements of the dance cheerleading competition. The evaluation of the difficulty is still qualitative, and the evaluation is given according to the whole set of choreography and the quality of the athletes(Xiaolan, 2021).

## **Discussion**

Cheerleading is still a new sport in China. Cheerleading was introduced into China in 1998. After 20 years of development, although cheerleading has made some progress in events, the number of participants and the level of difficulty, there are still big differences with the United States, Japan, Mexico and other international cheerleading powers(Junli, 2023a). Before the

2014 edition, the cheerleading competition rules were all designed according to the specific development of China. After the 2014 edition, the cheerleading competition rules in China continue to maintain Chinese characteristics while being in line with international standards (Junli, 2023a). This study includes the research on the evolution of competition rules since the introduction of cheerleading into China, and analyzes the changes of rules and the development direction of cheerleading in China.

Zhang Shulin (Shulin, 2022b) (2022) studied the evolution of cheerleading competition rules in China based on institutional ethics in his research. He pointed out that the evolution of cheerleading competition rules mainly follows institutional ethics and guides cheerleading to a healthy and positive direction based on the evolution goals of value rationality, tool rationality and form rationality (Junli, 2023a). The development of China's cheerleading competition rules has changed from qualitative to quantitative to qualitative, and the rapid evolution of the rules is not necessarily in line with China's current development situation, so it is necessary to view the competition rules scientifically and objectively (Zhang, 2022).

By reviewing 11 Chinese-published studies on cheerleading competition rules in China, this paper analyzes the current situation and characteristics of the development of cheerleading in China, and reviews the project setting, scoring content, difficulty evaluation and main results. This review reviews the research in this field in the past 10 years.

### *Event Setup*

As can be seen from the 2001 and 2004 versions of China's cheerleading competition rules, cheerleading events are simple and not standardized, and the development style of cheerleading events is similar to aerobics (Xian, 2019a). In the 2006 edition of the competition rules, a clear distinction was made between skill cheerleading and dance cheerleading, and a preliminary definition was given for the two events (Shulin, 2022b). The 2010-2013 edition of the competition rules has enriched the events of dance cheerleading, which are divided into four categories: pom poms, hip-hop, jazz dance and free dance (Press, 2010). In the 2014 edition of the competition rules, China for the first time in line with the international standards, on the basis of the international rules to add national cheerleading regulations and campus cheerleading regulations, lowering the entry threshold of cheerleading, but also speed up the popularity of cheerleading in China (Erlin, 2017a, 2017b; Qixia, 2015). The 2017-2020 edition of China Cheerleading Competition Rules is not much different from the 2014 edition in terms of event settings, adding the high kick item in the international cheerleading rules to promote the continued development of China cheerleading events in the direction of internationalization (Xian, 2019a). The current 2021 edition of China Cheerleading Competition Rules has added cheerleading for the disabled, encouraging more people to join cheerleading and give full play to the charm of cheerleading (Junli, 2023a).

### *Scoring Content*

Cheerleading was introduced into China in 1998. The 2001 and 2004 versions of China cheerleading competition rules follow the scoring system of calisthenics and rhythmic gymnastics, and the scoring content is divided into arrangement, completion, performance and overall impression (Xian, 2019a). In the 2006 edition, the competition rules increase the evaluation of difficulty, which adopts the method of independent scoring by three sets of judges, namely art, completion and difficulty, and the difficulty score is evaluated from 0 by

means of extra points (Xu Zhongqiu, 2006). The change of scoring content gradually transitions the original qualitative evaluation to quantitative evaluation. It is a new challenge for both coaches and referees (Zhang Xin, 2014) The cheerleading rules of 2010-2013 edition change the arrangement to artistic arrangement. The artistic evaluation of skill cheerleading and dance cheerleading will be distinguished (Xian, 2019a). The rules of the 2014 edition of Chinese cheerleading competition will be changed from the original three groups of judges to each judge's independent evaluation of the whole set of competitions, and the final result will be summed up by the scores of all judges (China, 2014) The evaluation of the sets was also changed from three aspects to four aspects, namely technique, teamwork ability, choreography and overall evaluation (Shulin, 2022b). The 2017-2020 edition of cheerleading competition rules has not changed much from the 2014 edition, except for some differences in the expression of individual evaluation indicators (Rong et al., 2019), and the scoring content of the current 2021 edition of China cheerleading competition rules is the same as that of the 2017-2020 edition (Center, 2020).

### *Difficulty Evaluation*

The evaluation of difficulty is related to the development direction of cheerleading events. In the initial competition rules, there is no clear definition and requirement for difficulty. The difficulty in aerobics and rhythmic gymnastics is basically adopted, and the difficulty and completion standards are different from those in cheerleading events (Shulin, 2022b; Xian, 2019a) The 2006 edition of cheerleading competition rules has a clear definition and classification of difficulty, and sets a difficulty diagram, which provides a reference for the training of coaches and athletes, and is also conducive to the adjudication work of judges (Qian, 2016a). The 2010-2013 version of the rules further stipulates the classification of difficulty and the minimum completion standard, and also divides the groups according to the level of difficulty, so as to quantify the evaluation of difficulty (Yu, 2011a; Zhou Jianshe, 2014b). However, in 2014, the competition rules issued after China's cheerleading was officially integrated with the international standard cancelled the quantification of difficulty, and qualitative evaluation was carried out based on the overall arrangement of the competition set and the completion of the athletes (Zhang Wan Ting, 2017). It has a certain impact on the previous arrangement concept of blindly pursuing high difficulty, and also changes the training method and arrangement concept of coaches (Yingya, 2021). The 2017-2020 edition and the current 2021 edition do not change the evaluation of difficulty, but still continue the previous qualitative evaluation method (Center, 2020).

### **Limitations**

Systematic reviews are inherently limited by the quality of the primary studies included. Our review was also limited by the quality of the summarized the primary studies. We identified the following specific limitations: (1) only three studies focused on early cheerleading rules, and their content was limited and not comprehensive, (2) cross-sectional studies were comprehensive based on referee deductions, but the details of scoring were relatively general, and (3) most of the research on competition rules was qualitative or mixed, with limited data. To improve these issues, we added a quality question to conduct a detailed analysis of all included articles. During the use of quality rating, it was found that two articles had missing data.

### **Conclusion**

This literature review shows that cheerleading has been introduced into China for more than 20 years, and a certain development model has been formed through the exploration in the initial stage of development and the gradual standardization in the stage of integrating with international rules. The existing literature has conducted comparative studies on different versions of competition rules in terms of item setting, scoring content and difficulty evaluation (Shulin, 2022b; Xian, 2019a; Zhang Wan Ting, 2017), but whether the revision and formulation of its rules conform to the development status of China's cheerleading and whether it can improve the international competitiveness of China's cheerleading under the guidance of the existing rules remains to be considered.

Future research can build upon the evaluation system established in this study, further optimizing the scoring standards and competition rules in light of the actual development of Chinese cheerleading teams. This would enhance international competitiveness and provide more scientific theoretical support for the training of coaches and athletes. Simultaneously, it is necessary to conduct empirical research based on real competition scenarios to examine the actual impact of rule or scoring method changes (such as the shift from quantitative scoring to qualitative judgment) on the fairness of the competition, athlete performance, and injury risks, thereby providing objective evidence for the effectiveness of the rules.

**Declarations****Ethics approval and consent to participate**

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**Consent for publication**

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**Competing interests**

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