

Changes in Technique Attempts and Contribution (%) According to Round Progress During Sparring of Gi Jiu-Jitsu (Tournament Assumption)

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Abstract

The subjects of this study were eight male high school students with blue belts who had more than 2 years of experience in Jiu-jitsu training and participated in the competition. The high-intensity sparring (5 minutes, 3Rounds) assuming the tournament was performed in a Gi. The types of technique (Takedown: TA), Guard pass: GU, sweep: SW), mount, back mount: MO, Submission: SU) and trial (number) that appear during sparring between rounds were calculated by frequency analysis.

The frequency analysis results showed that the total technique attempts between the 5 minutes and the 3 rounds (sparring) were 228 times (1R: 77times, 2R: 77times, 3R: 74times) and 1R=2R>3R was in order.

The contribution(%) between the types of technique in the round of Gi method was in the order of 1R guard pass(GU)(39%), submission(SU)(22%), mount(MO)(17%), sweep(SW)(14%), takedown(TA)(8%), and the 2R was in the order of guard pass(GU)(34%), submission(SU)(22%), sweep(SW)(20%), mount(MO) (14%), takedown(TA)(10%), 3R was followed by submission(SU)(27%), takedown(TA)(22%)=guard pass(GU)(22%), mount(MO)(13%), and sweep(SW)(9%).

In the Gi method, the contribution of the ground technique (%) was high in all rounds.

The contribution(%) of the technique attempt was confirmed as 30times(13%) for total takedown(TA), 72times(32%) for guard pass(GU), 35times(15%) for sweep(SW), 37times(16%) for mount(MO), and 54times(24%) for submission(SU).

In terms of contribution (%) of technique type, guard pass (GU) showed the highest contribution (32%) in the 3 rounds. Submission (SU) was the second-highest contribution (%) with (24%), and mount (MO) was the third (16%). Sweep (SW) was the fourth (15%) and takedown (TA) was the lowest(13%).

The guard pass(GU) with the highest contribution(%) of technique type showed 1R(30times), 2R(26times), 3R(16times) and submission(SU) showed 3R (17times), 1R=2R(17times), mount(MO) showed 1R= 3R(13times), 2R(11times), sweep(SW) showed 2R(15times), 1R(11times), 3R(9times), takedown(TA) were identified in the order of 3R(16times), 2R(8times), 1R(6times). In the Gi method, it was confirmed that the takedown (TA) (standing technique) attempt was less than the round technique type (guard pass (GU), submission (SU), mount (MO), and sweep (SW) except for the beginning of the 3rd round.

Keywords: Gi Jiu-Jitsu, Ground Technique, Standing Technique, Technique Attempt, Technique Type, Technique Contribution (%).

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INTRODUCTION

The main goal of Jiu-Jitsu is to obtain a tap-out intention

using the techniques permitted in the competition, and achieving this goal requires agile behavior and specific skills (Andreato et al., 2015). From a strategic point of view, the Gi

method, in which traditional clothing is worn, provides for technique trials in the form of holding clothing and body parts, so the usage and trial of the technique are utilized appropriately (Jones & Ledford, 2012; Yang, 2021) are expected to demonstrate its characteristics. From a technical point of view, in Jiu-Jitsu, offense and defense are initiated in a standing position (Andreato et al., 2017). Takedown is a standing technique that takedown the opponent in a standing state (IBJJF, 2021) where no part of the body is in contact with the floor (ground) except for the two feet. If a part of an athlete's body (back or buttocks) touches the floor due to a technical attempt, points can be obtained. After that, the body is divided into two positions based on the point at which it makes contact with the ground (the "ground"): a guard pass fighter (PF) and a guard play fighter (GF) (Báez et al., 2014). Ground attack and defense techniques like sweep (2 points), guard pass (3 points), and mount (Mount, Back mount: 4 points) are then performed non-periodically. In addition, other ground techniques attempt to succeed in a submission that can end the game regardless of the game time (Vidal-Andreato et al., 2011; Da Silva et al., 2013) are different as the round progresses. It can be expected that there may be differences in the contribution (%) between technique types. In an experimental study of a Gi tournament simulating an actual Jiu-Jitsu match similar to this study, Coswig (2018) reported that there was a difference in the type of technique and the number of attempts used in the second match after the first match. It was reported that the difference in the level of technology use in repeated rounds between subjects was the learning effect (Nembhard & Osothsilp, 2002) due to the prior experience of the task. However, studies that quantitatively suggest the type of technique and the number of attempts shown by such learning effects as the contribution (%) within and between rounds have not yet been conducted. Therefore, the use of techniques and the number of attempts during the 5-minute, 3-rounds sparring are divided into two types (standing and ground technique type) and five techniques(takedown (TA), guard pass (GA), mount, back mount (MO), and submission (SW), and it is deemed meaningful to identify each technical contribution (%) as well as considering the match-up characteristics of the tournament-style jiu-jitsu competition (Andreato et al., 2015). A study on the type of technique and the number of attempts (number of attempts) appearing in the Gi method competition can be used as an important basic data in terms of strategy and technique of the jiu-jitsu competition. Therefore, in this study, Gi jiu-jitsu techniques were conducted for 5 minutes and 3 rounds of sparring, assuming a tournament match for high school students (under 18 years of age) with more than 2 years of experience in jiu-jitsu in Korea. The purpose of this study was to investigate the number of attempts and contribution (%) of techniques within and between rounds in

Gi-style competitions.

RESEARCH METHOD

1. Object

The subjects of this study were 8 high school male students with blue belt level who had at least 2 years of jiu-jitsu training experience and participated in competitions at a gym in G city. The research was carried out on individuals who provided a consent form for research participation, which included the guardian's assent, after properly explaining the study's purpose and process to the participants and their guardians before the experiment. In order to increase the reliability of the measured variable values, it was controlled to refrain from the physical activity of moderate-intensity or higher 48 hours before the experiment, and the experiment was conducted in a hydrated state by inducing sufficient water intake to the subjects. The physical characteristics of the subjects are shown in <Table 1>.

Table 1. General characteristics of study subjects

| | subjects |
|---------------|-----------|
| N | 8 |
| Age(years) | 17.0±1.6 |
| Career(years) | 2.1±0.7 |
| Height(cm) | 173.1±4.5 |
| Weight(kg) | 73.3±7.0 |

2. Treatment

A low-intensity warm-up was also carried out to prevent accidents, and after that, 5 minutes of light sparring in a Gi condition were conducted. Based on the rule book guidelines of the International Brazilian Jiu-Jitsu Federation (ADULT: Ages 18 to 31), the match time differs for each belt (belt level), and the blue belt is stipulated as 6 minutes. All three (JUVENILE II divisions) were given 5 minutes of rest, the same as the match time, regardless of the belt (IBJJF, 2021). In the event of a tap-out during sparring (round), both athletes were instructed in advance to return to the initial (standing) position and perform sparring until the remaining time is over. The technique type and the number of trials were measured and recorded based on the video sparring (3 rounds of 5 minutes).

3. Measuring equipment

1) Times of measurement and method

According to the International Brazilian Jiu-Jitsu Federation's

(IBJJF, 2021) rulebook, various jiu-jitsu techniques were used in this study. Submission, takedown, guard pass, sweep, mount, and back mount were divided into 5 categories, and to increase measurement reliability, the type of technique and the number of trials were recorded by the same person.

2) Data processing

The mean and standard deviation of each item were calculated using the SPSS 26.0 statistical program, and descriptive statistics (frequency analysis) were performed to analyze the type and number of descriptions.

RESULTS

1) Analysis of technical frequency by round in Gi Jiu-Jitsu sparring

In this study, frequency analysis was conducted on 5 types of techniques shown by attack and defense during 3 rounds of 5 minutes of 8 subjects Gi Jiu-Jitsu sparring. The mean and standard deviation of times/ (%) are as shown in <Table 2>, <Table 3>, and <Table 4>.

| Gi | | | | | | |
|--------------------|---------------|--------------|----------------|-----------|-----------|----------------|
| | | takedown TA1 | guard pass GU1 | sweep SW1 | mount MO1 | submission SU1 |
| N | validity | 8 | 8 | 8 | 8 | 8 |
| | missing value | 0 | 0 | 0 | 0 | 0 |
| Average | | 3.12 | 2.87 | 1.00 | 1.25 | 2.25 |
| Standard Deviation | | 3.563 | 1.552 | .755 | 1.752 | 2.434 |

The 1st round of technical attempt(times) is a takedown average of 0.75, standard deviation 1.035, guard pass average 3.75, standard deviation 1.281, sweep average 1.37, standard deviation 1.685, mount average 1.62, standard deviation 1.505, submission average 2.12, standard deviation are 2.031 was shown.

| Gi | | | | | | |
|--------------------|---------------|--------------|----------------|-----------|-----------|----------------|
| | | takedown TA2 | guard pass GU2 | sweep SW2 | mount MO2 | submission SU2 |
| N | validity | 8 | 8 | 8 | 8 | 8 |
| | missing value | 0 | 0 | 0 | 0 | 0 |
| Average | | 1.00 | 3.25 | 1.87 | 1.37 | 2.12 |
| Standard Deviation | | 1.414 | 2.314 | 1.807 | 2.326 | 2.356 |

The 2nd round of technical attempt(times) is takedown average 1.00, standard deviation 1.414, guard pass average 3.25, standard deviation 2.314, sweep average 1.87, standard deviation 1.807, mount average 1.37, standard deviation 2.326, submission average 2.12, standard deviation is 2.356 was shown.

3 rounds of technical attempt(times) are average takedown 2.00, standard deviation 2.070, average guard pass 2.00, standard deviation 1.511, sweep average 1.12, standard deviation 1.356, mount average 1.62, standard deviation 1.597, submission average 2.50, standard deviation are 2.828 was shown.

2) Contribution of technique type between rounds in Gi sparring (time/%)

The results of the analysis of the technical type and contribution(time/%) in the round of sparring in the 3rd round are as follows: <Table 5>, <Table 6>, <Table 7>, <Table 8>, <Table 9>.

| | | technique | frequency | ratio(%) |
|---------------------------------|-------|-------------------------|-----------|----------|
| Technique type in round (times) | .00 | Takedown(TA) attempts | 4 | 50.0 |
| | 1 | | 3 | 37.5 |
| | 3 | | 1 | 12.5 |
| | total | | 8 | 100 |
| | 2 | Guard pass(GU) attempts | 2 | 25 |
| | 3 | | 1 | 12.5 |
| | 4 | | 2 | 25 |
| | 5 | | 3 | 37.5 |

| | | | | |
|--|-------|-------------------------|-----|------|
| | total | | 8 | 100 |
| | .00 | Sweep(SW) attempts | 3 | 37.5 |
| | 1 | | 2 | 25 |
| | 2 | | 2 | 25 |
| | 5 | | 1 | 12.5 |
| | total | | 8 | 100 |
| | .00 | Mount(MO) attempts | 3 | 37.5 |
| | 1 | | 1 | 12.5 |
| | 3 | | 4 | 50 |
| | total | | 8 | 100 |
| | .00 | Submission(SU) attempts | 2 | 25 |
| | 1 | | 2 | 25 |
| | 2 | | 1 | 12.5 |
| | 3 | | 1 | 12.5 |
| | 5 | | 2 | 25 |
| | total | | 100 | 100 |

The technical type and contribution (%) in the 1st round of sparring of Gi are as shown in <Table 5>. Takedown(TA) is 4 people 0 times(50%), 3 people 1 time(37.5%), 1 person 3 times(12.5%) 6 times, guard pass(GU) 2 people 2 times(25%), 1 person 3 times(12.5%), 2 people 4 times(25%), 3 people 5 times(37.5%) 30 times, sweep(SW) 3 people 0 times(37.5%), 2 people 1 time(25%), 2 people 2 times(25%), 1 person 5 times(12.5%) 11 times, mount(MO) 3 people 0 times(50%), 1 person 1 time(12.5%), 4 people 3 times(25%) 13 times, Submission(SU) 2 people 0 times (25%), 2 people 1 time (25%), 1 person 2 times(12.5%), 1 person 3 times(12.5%), 2 people 5 times(25%) were confirmed 17 times. The technical contribution (%) within the 1 round was in the order of guard pass(39%), submission(22%), mount(17%), sweep(14%), and takedown(8%).

Table 6. Contribution between technique types in Gi Jiu-Jitsu 2nd round sparring (times/%)

| | | technique | frequency | ratio(%) |
|--------------------------------------------------|-------|-------------------------|-----------|----------|
| n=8 Technique type in round (times) | .00 | Takedown(TA) attempts | 4 | 50 |
| | 1 | | 2 | 25 |
| | 2 | | 1 | 12.5 |
| | 4 | | 1 | 12.5 |
| | total | | 8 | 100 |
| | .00 | Guard pass(GU) attempts | 1 | 12.5 |
| | 1 | | 1 | 12.5 |
| | 2 | | 1 | 12.5 |
| | 3 | | 2 | 25 |
| | 5 | | 2 | 25 |
| | 7 | | 1 | 12.5 |
| | total | 8 | 100 | |
| | .00 | Sweep(SW) attempts | 2 | 25 |
| | 1 | | 2 | 25 |
| | 2 | | 2 | 25 |
| | 4 | | 1 | 12.5 |
| | 5 | | 1 | 12.5 |
| | total | | 8 | 100 |

| | | | | |
|--|-------|-------------------------|-----|------|
| | .00 | Mount(MO) attempts | 5 | 62.5 |
| | 1 | | 1 | 12.5 |
| | 4 | | 1 | 12.5 |
| | 6 | | 1 | 12.5 |
| | 총계 | | 8 | 100 |
| | .00 | Submission(SU) attempts | 3 | 37.5 |
| | 1 | | 1 | 12.5 |
| | 2 | | 1 | 12.5 |
| | 3 | | 1 | 12.5 |
| | 5 | | 1 | 12.5 |
| | 6 | | 1 | 12.5 |
| | total | | 100 | 100 |

The technical type and contribution (%) in the 2nd round of sparring of Gi are as shown in <Table 6>. Takedown(TA) 4 people 0 times(50%), 2 people 1 time(25%), 1 person 2 times(12.5%), 1 person 4 times(12.5%) 8 times, guard pass(GU) 1 person 0 times(12.5%), 1 person 1 time(12.5%), 1 person 2 times(12.5%), 2 people 3 times(25%), 2 people 5 times(25%), 1 person 7 times(12.5%) 26 times, sweep(SW) 2 people 0 times(25%), 2 people 1 time(25%), 2 people 2 times(25%), 1 person 4 times(12.5%), 1 person 5

times(12.5%) 15 times, mount(MO) 5 people 0 times(62.5%), 1 person 1 time(12.5%), 1 person 4 time(12.5%), 1 person 6 times(12.5%), 11 times, submissions(SU) 3 people 0 times (37.5%), 1 person 1 time (12.5%), 1 person 2 times(12.5%), 1 person 3 times(12.5%), 1 person 5 times(12.5%), 1 person 6 times(12.5%) were confirmed 17 times. The technical contribution(%) within the 2 round was in the order of guard pass(34%), submission(22%), sweep(20%), mount(14%), and takedown(10%).

Table 7. Contribution between technique types in Gi Jiu-Jitsu 3rd round sparring (times/%)

| | | technique | frequency | ratio(%) |
|----------------------------------------------|-------------------------|-------------------------|-----------|----------|
| n=8 Technique type in round (times) | .00 | Takedown(TA) attempts | 2 | 25 |
| | 1 | | 2 | 25 |
| | 2 | | 2 | 25 |
| | 4 | | 1 | 12.5 |
| | 6 | | 1 | 12.5 |
| | total | 8 | 100 | |
| | .00 | Guard pass(GU) attempts | 1 | 12.5 |
| | 1 | | 2 | 25 |
| | 2 | | 3 | 37.5 |
| | 3 | | 1 | 12.5 |
| | 5 | | 1 | 12.5 |
| | total | 8 | 100 | |
| | .00 | Sweep(SW) attempts | 3 | 37.5 |
| | 1 | | 3 | 37.5 |
| | 2 | | 1 | 12.5 |
| | 4 | | 1 | 12.5 |
| | total | | 8 | 100 |
| | .00 | Mount(MO) attempts | 2 | 25 |
| | 1 | | 3 | 37.5 |
| | 2 | | 1 | 12.5 |
| 4 | 2 | | 25 | |
| total | 8 | | 100 | |
| .00 | Submission(SU) attempts | 4 | 50 | |
| 3 | | 1 | 12.5 | |
| 5 | | 1 | 12.5 | |
| 6 | | 2 | 25 | |

| | | | |
|--|-------|-----|-----|
| | total | 100 | 100 |
|--|-------|-----|-----|

The technical type and contribution (%) in the 3rd round of sparring of Gi are as shown in <Table 7>. Takedown(TA) 2 people 0 times(25%), 2 people 1 time(25%), 2 people 1 time(12.5%), 2 people 2 times(25%), 1 person 4 times(12.5%), 1 person 6 times(12.5%) 16 times, guard pass(GU) 1 person 0 times(12.5%), 2 people 1 time(25%), 3 people 2 times(37.5%), 1 person 3 times(12.5%) , 1 person 5 times(12.5%) 16 times, sweep(SW) 3 people 0 (37.5%), 3 people 1 time (37.5%), 1 person 2 times (12.5%), 1 person 5 times(12.5%), mount(MO) was 2 people 0 times (25%), 3 people 1 time(37.5%), 1 person 2 times(12.5%), 2 people 4 times(25%) 13 times, Submission(SU) 4 patients 0 times(50%), 1 person 3 times(12.5%), 1 person 5 times(12.5%), and 2 patients 6 times(25%) were confirmed 20times. The technical contribution(%) within the 3 round was in the order of submission(27%), takedown(22%)=guard pass(22%), mount (13%), and sweep (9%).

DISCUSSION

Gi sparring in 3 rounds (5 minutes of sparring, followed by 5 minutes of rest) is used in this study to examine how the technical type and technical contribution (percent) change as the round goes on.

However, it is determined that comparing the significant difference between rounds by the number of times may lead to a statistical error since there are differences in the types of techniques used within each round, the trials were conducted irregularly, and the overall momentum (number of attempts). Therefore, the researcher would like to present the contribution (%) by converting the technical type and the number of technique attempts according to the round into a percentage (%).

Table 8. Contribution of technique type within a round in Gi Jiu-Jitsu sparring(times/%)

| n= | validity | 1R | | | | | 2R | | | | | 3R | | | | | | | |
|----------------------------------------|---------------|----------|-----------|-----------|-----------|-----------|---------|----------|-----------|-----------|-----------|-----------|---------|-----------|-----------|----------|-----------|-----------|---------|
| | | TA | GU | SW | MO | SU | TA | GU | SW | MO | SU | TA | GU | SW | MO | SU | | | |
| 8 | missing value | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Total (times) | | 6 (5) | 30 (1) | 11 (4) | 13 (3) | 17 (2) | 77 | 8 (5) | 26 (1) | 15 (3) | 11 (4) | 17 (2) | 77 | 16 (2) | 16 (2) | 9 (4) | 13 (3) | 20 (1) | 74 |
| Contribution within a round (%) | | 8 | 39 | 14 | 17 | 22 | 100 (%) | 10 | 34 | 20 | 14 | 22 | 100 (%) | 22 | 22 | 12 | 18 | 27 | 100 (%) |

TA: (Takedown), GU: (Guard Pass), SW (Sweep), MO (Mount), SU (Submission)

Contribution within a round (%)
 1R: GU>SU>MO>SW>TA 2R: GU>SU>SW>MO>TA 3R: SU>GU=TA>MO>SW

The contribution(%) between the types of technique in the round appeared in the 5 minutes 3 round sparring of the Gi method is the same as <Table. 8>.

The technical attempts were confirmed 256 times (1R: 77 times, 2R: 77 times, 3R: 74 times) and 1R=2R>3R in order.

Contribution(%) between technical types within 1st round is Guard Pass(GU)(39%), Submission (SU)(22%), Mount(MO)(17%), Sweep(SW)(14%), Takedown(TA)(8%) appeared in the order. The standing technique type, takedown (TA) attempt, was the lowest at 8% of the total technical contribution, and the four ground technique types contributed 92% to the 1 round technique attempt. It is judged that these results indicate the characteristics of Gi Jiu-Jitsu, in which most of the techniques used from the beginning to adapt to

the level and method of techniques are ground-type.

Ground technical contribution (%) was in the order of guard pass(GU), submission(SU), mount(MO), sweep(SW), and takedown(TA). It can be seen that the proportion of guard pass technology to occupy a more advantageous position than the opponent (IGJJF, 2021) was high. Submission(SU) technical contribution(%) is <Table. 8> showed the second highest. In all rounds, the number of submission technique attempts (number of times) was lower than that of guard pass(GU), but higher than that of mount or sweep. This is seen as evidence that the guard pass is followed by the highest number of submission technique attempts, and that the number of guard pass attempts directly influences the technical contribution of the submission (SU)(%).

| Technique type | | Technical Contribution(times/ (%)) | | | | | | | | | | | | | | | | | | | | Total |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------------------------|-----|-----|----|-----|-----|-----|----|-----|-----|-----|----|-----|-----|-----|----|-----|-----|-----|----|---------------------------|
| | | TA | | | | GU | | | | SW | | | | MO | | | | SU | | | | |
| n=8 | Time | 1R | 2R | 3R | RT | 1R | 2R | 3R | RT | 1R | 2R | 3R | RT | 1R | 2R | 3R | RT | 1R | 2R | 3R | RT | Total |
| | | | 6 | 8 | 16 | 30 | 30 | 26 | 16 | 72 | 11 | 15 | 9 | 35 | 13 | 11 | 13 | 37 | 17 | 17 | 20 | |
| | Contribution (%) | (3) | (2) | (1) | | (1) | (2) | (3) | | (2) | (1) | (3) | | (1) | (2) | (1) | | (2) | (2) | (1) | | Total contribution (100%) |
| | | 13% | | | | 32% | | | | 15% | | | | 16% | | | | 24% | | | | |
| TA: (Takedown), GU: (Guard Pass), SW: (Sweep), MO: (Mount), SU: (Submission) RT: Round total Technical Contribution Between Round(%) TA: 3R>2R>1R, GU: 1R>2R>3R. SW: 2R>1R>3R, MO: 1R=3R>2R, SU: 3R>1R=2R | | | | | | | | | | | | | | | | | | | | | | |

The technical contribution(%) between the technique types in 2nd round is Guard Pass(GU)(34%), Submission(SU)(22%), Sweep(SW)(20%), Mount (MO)(14%), Takedown(TA)(10%) appeared in the order.

In round 2nd, the contribution of the takedown technique, which is a standing technique type, was also the lowest at 10%, similar to round 1, and the 4 ground technique types accounted for 90%. It is believed that the allotted time was insufficient to anticipate the benefits of engaging in a five-minute first round and the possibility of technical success or feedback on a first-round technique effort during the subsequent five-minute break following intense five-minute sparring. It is judged that there was a limit to the technical level and experience of the blue belt level to apply to the 2nd round sparring by analyzing the cause of failure and the like. Therefore, it is judged that the proportion of ground technology type for occupying a position maintained more than the opponent in the technical contribution (%) of the second round (IGJJF, 2021) was high.

Technical Contribution(%) between technique type within 3rd round is Submission(SU)(27%), Takedown(TA)(22%)=Guard Pass(GU)(22%), Mount(MO)(13%), sweep(SW)(9%), Guard pass(GU) in round 1st and 2nd and submission (SU) in round 3rd showed the highest contribution (%) in the round. In 3rd round, takedown(TA), a standing technique type that showed low technical contribution(%) in rounds 1st and 2nd, increased to 22%, showing the second-highest technical contribution(%), and the 4 ground technique types were 78 % was shown. It is noteworthy that in the 3rd round ground situation, the technical contribution(%) of the submission(SU) that can end

the game(IBJJF, 2021) regardless of the game time was found to be the highest. It is judged that these results show changes in technique type and contribution(%) due to the learning effect of prior technique attempts and feedback after repeated sparring with the same opponent in 1st and 2nd round.

Contribution(%) of total technique type during 3 rounds is <Table. 9>, and the guard pass(GU) showed the highest contribution(32%) of the 3 rounds.

Submission (SU) showed the second-highest contribution (%) with (24%), and mount (MO) was identified as third (16%). Sweep (SW) ranked fourth (15%). high, and takedown (TA) was confirmed as the lowest contribution (13%). Attempts in the standing technique (takedown (TA)) were less compared to the ground technique types (guard pass (GU), submission (SU), mount (MO), sweep (SW)) except for beginning of the 3rd round.

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