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## The Use of Arms in Wrestling Kumite

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### INTRODUCTION:

The purpose of wrestling is to take down the opponent. Leg attack is the most important technique to this end and obtain scores (1). The set up is an efficient way to improve the leg attack success rate (2). The situation in which wrestlers push or pull the opponent to execute the set up and leg attacks is defined as kumite. In kumite, wrestlers use arms to gain control over the opponent to break their balance. A wrestler's stance is usually putting one leg about one foot in front of the other. The hand closest to the opponent is called close hand (CH) and the hand furthest is called far hand (FH). Little is known of the role of each arm in kumite, although coaches and athletes would understand its importance. The purpose of this study is to clarify arm use in kumite to improve wrestlers' performance.

### METHODS:

We conducted a survey using a questionnaire (Google form) and collected responses from 110 collegiate wrestlers. Survey items covered how wrestlers use their CH and LH in kumite by selection and explanation. From the answer options, participants chose from "pull", "push", "stop", and "relax". Additionally, wrestlers responded regarding their competition level. The chi-square test was incorporated to investigate the relationship between arm use and competition level, as well as the opinions related to their CH and LH.

### RESULTS:

There was no significant association between wrestlers arm use and competition level in CH ( $p = 0.321$ ) and FH ( $p = 0.090$ ). As for each hand placement, pushing is considered important in CH and pulling is important in FH ( $p < 0.001$ ). In explanations regarding CH, there were varied responses such as sensing the opponents movement, measuring the distance to the opponent, and touching the opponent. Explanations concerned with FH, most were related to the pulling movement.

### CONCLUSION:

This study revealed athletes focus on pulling the opponent with the FH, while pushing the opponent and feeling the opponent's move and response with the CH. Before executing the leg attack, wrestlers try to cause the opponent to lose balance. The most effective, fundamental movement is to push the opponent with the CH. In this case, the opponent usually try to push back because they lose one point if they go outside the mat circle. The attacker can break the opponent's balance by pulling their opponent as they push back. Thus, by sensing the opponents movement and pushing back with the CH, they decide when to pull or relax in response to their opponent. Therefore, it is essential wrestlers and coaches understand the role of each arm when practicing the set up and overall movement in kumite.

(1) Tunnemann and Curby, Inter J of Wrestling Science, 2016

(2) Ito, et al., Arch of Budo, 2019

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