



## EFFECT OF MULTI-INTENSITY OVERLOAD TRAINING TO IMPROVE OFFENSIVE PERFORMANCE EFFICIENCY IN WRESTLERS

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### ABSTRACT

**Background.** Defined as the lack of offensive efficiency during matches among Greco-Roman wrestlers. The need to use a multi-intensity overload training method to address this weakness. Research Objectives to determining the effectiveness of the training program in developing the speed and accuracy of executing offensive holds. Identifying the effect of multi-intensity overload training on improving offensive performance efficiency in Greco-Roman wrestlers. **Objectives.** This study aimed to detect intensity overload training on improving offensive performance efficiency of Greco-Roman wrestlers. **Method.** The researcher used an experimental design with a single group and pre- and post-tests on a sample of eight wrestlers from Damouk Sports Club. A training program was implemented for eight weeks, consisting of three training sessions per week, for a total of 24 sessions. **Results.** This study relied on three tests to measure offensive performance efficiency accuracy of execution of offensive holds, speed of execution of hold, and the number of successful offensive holds. Pre-tests were administered before program, and post-tests were administered after its completion. Results showed statistically significant differences between pre- and post-tests, favoring post-tests in all variables, indicating effectiveness of training program. **Conclusion.** The researcher concluded that multi-intensity overload training contributed to improving efficiency of offensive performance in terms of accuracy, speed and number of successful holds, as well as improving wrestlers' ability to perform under conditions of varying physical exertion.

**Keywords;** multi-intensity overload training, offensive performance, wrestlers.



## A. INTRODUCTION

Greco-Roman wrestling is a sport that relies on direct interaction between wrestlers and is characterized by its high physical and skill-based nature. It requires wrestlers to possess advanced levels of strength, speed, and endurance, as well as the ability to execute offensive skills with precision and timing. Offensive performance is one of the most important factors determining the outcome of a match, as it is the primary means of scoring points and controlling the flow of the game. With the advancements in sports training science, relying on traditional methods is no longer sufficient to develop wrestlers' skills. It has become essential to use modern training methods that are compatible with the nature of performance in actual competitions, which are characterized by continuous changes in the intensity of the effort exerted (Adriani et al., 2025; Chafidz et al., 2023; Haidar et al., 2024; Haniyyah et al., 2025). Among these methods is Multi -Intensity Overload Training (MIOT), which involves exposing the wrestler to training loads of varying intensity within a single training session, by alternating between high, medium, and low intensity.

This contributes to the development of advanced physical and functional adaptations. This variation in intensity also contributes to improving the wrestler's ability to perform under conditions of physical stress and fatigue, which aligns with the nature of matches in Greco-Roman wrestling. Executing offensive skills efficiently requires high levels of effort. This leads to improved offensive performance in terms of speed, accuracy, and timing, as well as increasing the wrestler's ability to maintain effective performance throughout the match. Hence, the importance of this study lies in identifying the effect of multi-intensity overload training on improving the offensive performance efficiency of Greco-Roman wrestlers (Junior, 2024; Pelamonia & Puriana, 2023; Suniga et al., 2025; Yogi et al., 2023).

Roman wrestlers suffer from a lack of offensive efficiency, especially when executing holds under conditions of high physical exertion and fluctuating intensity during a match. This is due to reliance on traditional training methods that do not consider varying the intensity and workload within training sessions. Furthermore, the nature of wrestling demands a high level of ability to perform fast and precise attacks under constantly changing physical exertion. Although modern training methods have emerged that contribute to performance improvement, their application in wrestling training remains limited, thus perpetuating this weakness in offensive performance (Abdullah & Abdullah, 2025; Ali et al., 2026). Therefore, the research problem is defined as the lack of offensive efficiency during matches among Greco-Roman wrestlers.

The need to use a multi-intensity overload training method to address this weakness. Research Objectives to determining the effectiveness of the training program in developing the speed and accuracy of executing offensive holds. Identifying the effect of multi-intensity overload training on improving offensive performance efficiency in Greco-Roman wrestlers. Research hypotheses there are statistically significant differences between the pre-tests and post-tests, in favor of the post-tests, in the offensive performance efficiency of Greco-Roman wrestlers.

**Multi -Intensity Overload Training:** A training method that involves exposing the wrestler to training loads of varying intensity within a single training session with the aim of improving physical adaptation and skill performance (Bompa & Buzzichelli, 2015). **Offensive performance efficiency:** The wrestler's ability to execute offensive holds quickly, accurately, and at the right time to achieve the best result during the match (Al-Khouli and Abdel Fattah, 2004).

Offensive holds: The set of technical skills a wrestler uses to control an opponent and score points.

## B. METHOD

The researcher used the experimental method because it suited the nature of the research problem, by designing a single group with pre-tests and post-tests. The researcher identified the research population in the purposive method as the wrestlers of Damouk Sports Club, youth category, aged (18-20) years in Greco-Roman wrestling, numbering (12) wrestlers and weighing (61) kg. The research sample was chosen in the random method and was represented by (8) wrestlers, with a percentage of (66.6%) of the research population.

### *Homogeneity of sample*

The researcher extracted the homogeneity for each of the variables (height, weight, chronological age and training age) of the research sample under study, as shown in Table (1).

**Table 1.** Homogeneity of sample shows in skewness test of variables in pre-test

Variables	Measurement Unit	Mean	St.D	Torsion Coefficient
Height	Cm.	164.9	0.175	0.712
Weight	Kg.	62.485	0.837	0.692
Chronological Age	Year	19.467	1.248	0.289
Training Age	Year	4.634	1.349	0.159

### *Tests used*

1. Test Name: Test of Accuracy in Executing Offensive Grips (Al-Khouli and Abdel Fattah, 2004). The aim of the test: To measure the accuracy of the technical performance of offensive holds by Greco-Roman wrestlers. Equipment used: wrestling mat, evaluation form, pens, whistle, stopwatch, camera, expert panel, fellow player. Performance description: The wrestler performs a number of predetermined offensive holds in front of an evaluation committee, and is given two attempts for each hold. The attempts are then evaluated according to specific technical criteria. Scoring: The expert panel awards a score out of 10 for each attempt, then the average is calculated or the best score is adopted.
2. Test Name: Test of the speed of execution of the offensive grip. The purpose of the test: to measure the time taken to execute an offensive hold in Greco-Roman wrestlers. Equipment used: Wrestling mat, stopwatch, whistle, registration form, fellow player, camera (optional). Performance description: The wrestler stands in a ready position with his partner, and upon the signal, he begins to execute a specific offensive hold. The time is measured from the beginning of the movement to the end of the hold, and three attempts are given, with only correct attempts being counted. Score recording: The time of each attempt is recorded in seconds, and the best attempt (lowest time) is adopted as the final score.

3. Test Name: Test of the Number of Successful Offensive Grips (Abdul Rahman Zaidan, 2010). The purpose of the test: To measure the efficiency of offensive performance through the number of successful holds within a specific time period among Greco-Roman wrestlers. Equipment used: wrestling mat, timer, whistle, registration form, fellow player, evaluation committee. Performance description: The wrestler performs as many offensive holds as possible within a specific time (30 seconds) on a fellow wrestler, with only correct holds being counted according to the technical evaluation. Scoring: The number of successful offensive catches executed within the specified time is calculated, and the total number represents the player's final score.

#### *Pilot Experiment*

Pilot study was conducted on Saturday, January 17, 2026, on a sample of 3 young players outside the research sample but within the research population. Its objective was to testing the suitability of the skills tests for the sample. Knowing the time taken when performing the test. Training the support team on how to conduct the tests.

#### *Pre-tests*

Pre-tests were conducted on the research sample on Thursday, January 22, 2026. Before implementing the training program, with the aim of determining the initial level of offensive performance efficiency of Greco-Roman wrestling players, these tests included (test of accuracy of execution of offensive holds, test of speed of execution of the hold, and test of the number of successful offensive holds), taking into account the uniformity of all conditions related to the test in terms of place, equipment, time of performance and method of execution. The method of performing each test was explained to the players clearly before implementation, to ensure the accuracy of the results, and the results for each player were recorded according to special forms prepared for this purpose, in preparation for comparing them with the results of the post-tests after the application of the training program.

#### *Main experiment*

The researcher developed a training program based on the Multi -Intensity Overload Training method, aiming to improve the offensive performance of Greco-Roman wrestlers. This was achieved by employing exercises with varying load intensity within each training session to suit the performance demands of a match. The training program was then implemented. Starting on 24/1/2026, which was a Saturday, and ending on 21/3/2026, which was a Saturday, for a period of (8 weeks), with (3 training units per week), The total number of units is (24 training units), with the duration of each training unit ranging between (80–90 minutes). Appendix (3), with the aim of improving the wrestlers' ability to adapt to the demands of the fight and developing the efficiency of offensive performance.

#### *Post-tests*

Post-tests were conducted on Wednesday, March 25, 2026, after application of training program to measure the efficiency of offensive performance, and included accuracy, speed, and number of catches, with the same conditions as the pre-tests to ensure the accuracy of the comparison.

*Statistical methods*

The researcher used SPSS statistical software package.

**C. RESULTS AND DISCUSSIONS**

**Results**

Presentation of Results: Shows the arithmetic means, standard deviations, calculated t - value, and SIG value for the tests.

**Table 2.** Report shows means, standard deviations, calculated t - value, and SIG value for pre- and post -tests of research group

Tests	Measurement Unit	Pre-Tests		Post-Tests		Calculated (T) Value	Sig
		Mean	St.D	Mean	St.D		
Accuracy In Executing Offensive Holds	Degree	6.181	0.981	7.545	0.82	3.75	0.004
Speed Of Execution Of Offensive Hold	Second	2.478	0.137	2.085	0.042	5.48	0.000
Testing Number Of Successful Offensive Catches	Degree	8.727	1.19	10.636	1.12	3.13	0.011

\*Tabulated (t) value at a freedom degree (7) and a significance level of (0.05) is 1.894

**Discussion**

Pre-test results showed a disparity in the offensive performance of Greco-Roman wrestlers. Their accuracy, speed, and number of offensive holds appeared to be within average limits. This is attributed to the reliance on traditional training methods that do not consider varying the intensity and training load within training sessions (Alawi, 1997). These results also reflect the wrestlers' limited ability to execute offensive skills efficiently under conditions of physical exertion. This indicates the inadequacy of previous training programs in comprehensively developing offensive performance, particularly in terms of speed, accuracy, and persistence. This was confirmed by studies on wrestling training (Al-Khouli & Abdel-Fattah, 2004) . These results underscore the need to use modern training methods that rely on varying intensity and applying the principle of overload, given their role in improving the technical and physical performance of wrestlers (Bompa & Buzzichelli, 2015). The researcher believes that the average level shown in the pre-test results stems from the absence of training programs that simulate real-life match conditions, especially in terms of varying intensity and performance under stress, which led to weakness in the offensive performance efficiency of the wrestlers (Kusmiyati et al., 2024; Saniah et al., 2024; Sinulingga et al., 2024; Suryadi et al., 2023, 2024).

Post-test results showed a marked improvement in the offensive performance efficiency of Greco-Roman wrestlers, as the accuracy of execution of holds increased, the

time taken to perform decreased, and the number of successful offensive holds increased, indicating the effectiveness of the training program used. This improvement is attributed to the use of the multi-intensity overload training method, which contributed to the development of physical and skill capabilities by exposing wrestlers to different levels of intensity within the training session, which led to improved adaptation to the demands of performance under physical pressure (Haff & Triplett, 2016). The variety of intensity in the exercises also helped to improve movement speed and accuracy in performance, as Schmidt & Lee (2011) confirm that the variety of load and repetition contributes to the development of skill performance and improved motor control. Likewise, training wrestlers in conditions close to competition contributes to raising the level of offensive performance (Kraemer & Ratamess, 2004). The researcher believes that the improvement in the results of post-tests is due to the training program's reliance on the principle of overload with varying intensity, which helped develop offensive performance in terms of speed, accuracy, and ability to perform under stress.

#### **D. CONCLUSION AND RECOMMENDATIONS**

Multi-intensity overload training has contributed to improving the offensive performance efficiency of Greco-Roman wrestlers, training program led to improved accuracy in executing offensive holds. training helped reduce the time spent executing offensive skills contributed to increasing the number of successful offensive catches during the performance. Wrestlers demonstrated a better ability to perform under varying conditions of physical exertion. Adopting the multi-intensity overload training method in training Greco-Roman wrestlers, focus is on training wrestlers under conditions similar to a real fight. Focus on developing offensive performance efficiency through exercises of varying intensity. Using skill tests (accuracy, speed, number of holds) to assess the level of wrestlers. Conducting similar studies on different age groups or other combat games.

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#### **F. AUTHOR CONTRIBUTION STATEMENT**

Tawheed Haider Abdul Razzaq is responsible for the manuscript in this study.

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