

# The Effect of Arm Resistors Training on the Accuracy of Shooting with Light Weapons

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**Abstract---***The study aimed to identify the effect of strength training on the accuracy of shooting with light weapons, and to identify the preference of the impact of strength training in the accuracy of shooting with light weapons for employees of the Personal Protection Police. Experimental and control, and there are significant statistical differences between the experimental and control groups in the results of the dimensional tests for the level of accuracy of shooting with light weapons, so the experimental research method is designed by designing the experimental and control groups E, on a sample of (20) member chosen by intentional (71.428%) of the Internal Security Forces participating in the training session development for the year (2019-2020) in the protection of Baghdad Directorate figures the tasks and duties section, they were randomly divided into two groups of equal number, experimental and controlling for each group (10) associates, and resistance training for the arms was applied, which are modern methods that were codified to suit the effectiveness of the sample and their application and applied for a period of (8) training weeks at a rate of (3) per week, and was measured By testing the light weapons of the handgun and the rifle from the standing and brook positions approved in their cycle for shooting accuracy and the results handling system (SPSS-V26) to be the conclusions and applications that the application of resistance training helps members of the protection force characters improve the accuracy of their shooting with light weapons in the two weapons (item The position of the pistol) is from the positions (standing and brook), and their superiority over the improvement in the level of this accuracy with shooting with light weapons among their peers who are trained without it, and it is necessary for training means to suit the type of strength training in light weapons and the privacy of members of the personal protection force, and it is necessary to codify the load training for strength training according to the capabilities of the associates themselves, by adopting experimentation when training them.*

**Keywords---** *Effect of Arm Resistors, Arm Muscles, Physical Capabilities, Ali Trainers Build.*

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## I. INTRODUCTION

### *The Research Problem and its Importance*

The peculiarity of the study in shooting training for members of the Personal Protection Force depends on the physical capabilities and mobility capabilities that assist the associates in tightening control of the handle or brooder of the weapon with appropriate muscle strength to support stability and balance and achieve compatibility in different shooting situations using a pistol and a rifle as described earlier, Consequently, strength training can help in developing other related abilities, and this strength still depends on the resistance. There must be different means of resistance to achieve this purpose. Sharkey also indicates that "the concept of exercises is intended to use specialized exercises for Physical activity, movement or skill more generally and more generally than the exercises themselves because the latter represents the unit of building the training dose, while the training includes methods, means, means, exercises and everything that aims to develop the player

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within the training unit and the following weekly planning until the long term (23). The exercises must be closely related to the movements in the skill, so the development of the physical capabilities must be linked to the basic skills through special training programs for each sports activity design, and this means that the training program focuses on the working muscles in the same performance" (22) Muhammad and Mahdi believed that "Ali Trainers build multi-faceted training curricula in a manner that focuses on comprehensive exercises in different training stages, especially physical capabilities similar to the future requirements of the type of sports activity practiced in order to facilitate the ability of athletes to acquire and perform technical skills for effectiveness. (14) Adel and Ihab assert that it is "useful to divide the strength training according to the methods of obtaining the maximum muscle strain, and this division according to the type of exercise used." (10) What he adds to what Samir said to this is that "tools and devices are a group of physical capabilities that It takes different shapes and sizes and serves different goals, and its contribution to learning motor skills ranges from simple to complex and includes parts of motor skills, their minutes and details, in form and content. "(12) Secretary al-Khawli and Dhia al-Din state that" means good training that should distinguish Bogda fit and the nature of training duties at the same time to develop the p Physical data for Klqoh, endurance, expansion, and flexibility"(5).

The researchers believe that the effectiveness of the archery, its physical capabilities and its ability to move, it cannot be overstated to train resistance fighters with free weights when training shooting, but by adopting specialized devices and tools for muscle work in them, which can achieve a degree of impact on the muscle strength and carry it in a way that reflects positively on the kinetic abilities to serve the full performance skills of shooting in various light weapons conditions. Based on the foregoing, the concepts of employment regarding specialized exercises for muscle strength and their effectiveness in shooting, in particular, the exercises should be rapid is the muscle work responsible for Specialized performance by identifying the muscles of work in this event and knowing how to develop the appropriate ingredients without exaggeration, with the aim of improving the muscular nerve control that helps raise and improve the capabilities necessary for the shooter s to enable them to raise the level of performance in this event, as is known by the strength of Ahmed Nasr Religion "is like being able to overcome or face external resistance, as it is known with the maximum amount of strength that a muscle can perform in one muscle contraction, and there are three types of muscle strength represented by the maximum strength, strength characterized by speed, and durability." (4) Atheer Muhammad defines the maximum forces from the concept of training as "the maximum muscle force that an athlete can generate as a result of voluntary muscle cramps and used to overcome various forms of external resistance." (2) Athir Muhammad is also known as the Maximum Force from the concept of testing and measurement as "the maximum muscle force that can be recorded using a dynamometer for muscle groups chosen by parasitism". (3) (Michael et al.) Stresses that "muscle strength plays the main role in improving performance and preventing sports injuries since the information available not so long ago that muscle strength is the primary rule and important requirement for almost all sports." (20) As Hayward (Heyard) likewise explained, Pitchell Earl (Baechle& Earle) states that "the arrival of an athletic individual is influenced by the development of muscle strength (muscle strength) which is one of the most important physical elements (19) and (17) Abdul Rahman says Zaher: "In strength training, many studies indicate that the way exercises should be performed is similar to the methods of performing the skill. As much as possible."(11) Sadaqah and Muhammad are seen as" when performing exercises for specific muscle groups, resulting in adaptations in specific muscle areas. (8) Knowing

the locations of the anatomical muscles that work in the efficacy of depicting and understanding the physiological process of the slurred contraction towards establishing the energy needed for this contraction and for the specified period, gives the trainer an idea of how to plan the strength of the ligament. Plus, to describe this exercise as on a scientific basis without a corpse database only, it is planning and implementing these exercises with a little (Sharkey). The researchers have found that loads ranging between (30% to 50%) of the player's maximum weight can be raised and are more effective in Increased mechanical power outputs, while AA recommended Ron that heavy loads ranging from (80% to 90%) of the maximum weight you can lift can improve dynamic performance (23).

From the limits of the shooting training experience, the researchers noted that the training followed for the participants enrolled in the personal protection course in Baghdad needs to pay attention to the specialized strength training for the effectiveness of the shooting due to the observed weakness in their stability, balance, and control of the weapon that needs to a better level of muscle strength for Completion of the performance of their shooting skills, so that the problem of research lies in this noticeable weakness in their abilities that need to be reviewed. Attention to updating the methods of shooting training in these courses is limited to old curricula that exhaust the trainees trained with the momentum of the tasks required of them and whose burdens constitute negative impacts on them and the performance level of shooting with light weapons (gun, pistol) and different modes, on the grounds that the field shooting specialist in these courses draws its concepts and applications performing different mathematical sciences , especially sports , including training , to aim this study was to identify strength training in precision shooting with light weapons , and to identify the priority of the effect of strength training in the accuracy of performance in shooting with light weapons to employees of the VIP Protection Police, Wa assumed the researchers that there are statistically significant differences between the results of tribal and dimensionality tests for the level of precision shooting with light weapons for the two sets of search Experimental and control, and there are significant statistical differences between the experimental and control groups in the results of dimensional tests for the level of accuracy of shooting with light weapons .

## II. RESEARCH METHODOLOGY

A Ntahj researchers approach experimental research design groups equal experimental and control of setting the arbitrator, known method pilot as " objective observation of the phenomenon of a particular occur in a position characterized by exactly the arbitrator and includes a variable (factor) or more diverse while proving the variables (factors) Other (13).

The study community and appointed: is the community Bmnzbe Internal Security Forces participating in the training session of the VIP Protection No. (5) Annual their curriculum for the year (2019-2020) development in the Protection Directorate of Baghdad figures/department tasks and duties included in the Platform for their courses training Shooting 's (28) A security associate, the study sample of (20) was chosen intentionally to represent the main total sample at a rate of (71.428%) of this parent community. They were randomly divided into two groups of equal number, experimental and controlling for each group (10).

Procedures and measuring tools: The content of the exercises for the experimental group included the use of specialized resistors and training methods for weapons that have the effect of their resistance on the various arms, rubber ropes, medical balls, a specialized fixed arm scale, the rowing device and the fixed pull of different body muscles, and the appendix (1), The exercises with light weapons for both the Kalashnikov and the Glockin

the effectiveness of firing from the standing and mass positions within the muscle strength exercises are similar to the performance that directs the work of the muscle groups from this similarity in terms of direction, which is characterized by the principle of rotation by biting a varied through the application type exercises, take the intensity of the exercises in strength training was according to the law known (intensity ratio required  $\times$  maximum achievement in the resistance type) (18), the implementation period amounted to exercise (8) consecutive weeks.

The number of training units per week Training for each (3) units in days (one, Tuesday, Thursday) weekday schedule, with a total number of training units (24) hours and this time for strength training, one period The duration of the training unit (120) d, does not overlap with The researcher stated that in the details of warming up and closing its departments, but part of the main section of mind n (90) d, applying exercises in each training unit will be (4) exercises applied in the main section of the training unit and in proportion to the number of training goals to develop the number of capabilities and the number of members The experimental group and the number of exercises in the resistance (40) exercises were re-applied Bite it in some other units, the auxiliary test with the sum of the test scores a light weapons pistol and a rifle from my approved platform and the brook was considered in their trail for a launch accuracy of 200 degrees (15) and the results were treated the level of performance tests for the EMI bag for (SPSS - V 26), After automatically recalculating the percentage values, the central calculation, the deviation standard, and the T-test (for the associated samples, T test) are correlated between the samples.

### III. RESULTS AND DISCUSSION OF THE RESEARCH

Table 1: Pre-test Results for Study and Monitoring Groups

The tests	Leven	Sig	Experimental Group			Control Group			(t)	Sig	Ass.
			N	Mean	+SD	N	Mean	+SD			
Performance	0.022	0.883	10	108.6	7.214	10	104.4	8.356	1.203	0.245	NS

df (N-2) = 18 Significance level = 0.05; t-test value is significant at p-value  $\leq$  0.05

Table 2: Results of the Study and Control Groups in the Pretest and Posttest

The tests	Group	Pretest		Posttest		Mean Differences	+SD Differences	(t)	Sig	Ass.
		Mean	+SD	Mean	+SD					
Performance	Ex	108.6	7.214	142.7	3.368	34.1	9.061	11.901	0.000	S
	Co	104.4	8.356	125.1	9.351	20.7	10.894	6.009	0.000	S

Significance level = 0.05; t-test value is significant at p-value  $\leq$  (0.05) df N-1 = 9

Table 3: Results of Posttest for the Study and Control Groups

The tests	Experimental Group			Control Group			(t)	Sig	Ass.
	N	Mean	+SD	N	Mean	+SD			
Performance	10	142.7	3.368	10	125.1	9.351	5.6	0.000	S

df (N-2) = 18 Significance level = 0.05; t-test value is significant at p-value  $\leq$  0.05

From reviewing the results, the associates in both the experimental and control groups have improved the level of shooting performance with tribal light weapons by increasing their values in the distance tests from

what they were in the tribal tests, and the members of the experimental group outperformed the members of the control group in further improving this level of skill performance. Determined by spatial accuracy, the researchers attribute this improvement to them and their superiority to the muscular strength improvements that are associated with its training and which are guaranteed by skillful performance to achieve the kinetic duty of spatial accuracy as a final product to improve performance.

For the skill of the desired participant, who helped in that, the resistance exercises were performed with similar muscle work in terms of the direction of the muscle work, and as produced by the specific working muscles of strength, which increases the affiliate's ability to control the direction of the weapon to aim and according to each weapon and each of the two modes of shooting. Included in the skillful performance of shooting with light weapons, as well as the development of specific arm muscles (brachial biceps, and flexor muscle of the forearm) right and left in both shooting modes in the weapons in question, which require here to control the appropriate amount of how much this force to enable the trainee to. The correctness of the fluency in the specified spatial region and how much is required of them to achieve this required accuracy in this skill performance, which is the decisive factor in judging it, which helped to maintain the flow of the integrated form of this performance without intersection of muscle work, and controlling the weapon for what is achieving the required accuracy, since.

The training frequency and stresses gradually in these exercises were the most important role in this skill improvement, and the results proved appropriate for the members of the experimental group and their superiority over the control group, "as muscle strength plays the main role in improving performance and preventing sports injuries? As the information was available not so long ago that muscle strength is of great importance and was considered the basic rule and the important requirement for almost all sports, but in recent years we can notice that muscle strength is definitely important but by merging it with speed to become an explosive force or (ability) it will definitely be important (21). Jamal Sabri notes that "the gradual increase in the training load is the basis for any training planning for the player and must be followed by all players who are interested in the level of their achievement (7). Abu Al-Ella Ahmed Abdel-Fattah states, "It requires motor performance in activities

Highly athletic Kinetic consistency in the sense of the ability to demonstrate appropriate motor actions in specific circumstances based on previous motor experiences or skillful skills, in other words, the athlete's ability to act kinetic in the face of different conditions during the performance. (1) And the success of Mahdi Shalash and Akram Muhammad states that "training is a factor. It is essential in the process of the individual's interaction with the skill, controlling his movements, and achieving consistency between the movements that make up the skill in consecutive sound performance and an appropriate time, which increases the development and selection of the skill (16). Saleh Muhammed points out that the process of assessing the accuracy of the performance level provides information about the response and maintaining this Precision (9). And Baha Ibrahim states that "training leads to physiological changes that include the body's systems, and the level of athletic performance advances whenever these changes are positive in order to achieve the physiological adaptation of the body's systems and then to physical pregnancy (6).



#### IV. CONCLUSIONS AND APPLICATIONS

1. That the application of resistance training helps the members of the Personal Protection Force improve the accuracy of their shooting with light weapons in the two weapons (gun and pistol) from the two positions (standing and brook), and their superiority over the improvement in the level of this accuracy by shooting with small weapons among their peers who train without them.
2. It is necessary for training facilities to suit the type of strength training in small arms shooting and the privacy of personnel of the Personal Protection Force.
3. It is necessary to codify the training load for strength training according to the capabilities of the associates themselves, by adopting the experiment when training them.

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