Al – Mustansiriya University
College of Basic Education
Physical Education Department

The Effect of Standardized Training Loads According To Development Percentage and Relative Arm's Weight On The Development Of Muscular Strength and Physically Challenged Power lifter's Achievement

Dissertation submitted by
Aqeel Hameed Oda

To

The council of Basic Education College / Al – Mustansiriya University as part of the requirements for gaining the Doctorate degree in physical education

Advisor

Prof. Dr. Mahir Ahmed Assi

2015

The Effect of Standardized Training Loads According To Development Percentage and Relative Arm's Weight On The Development Of Muscular Strength and Physically Challenged Power lifter's Achievement

The importance of the study lies in developing powerlifting training program for the physically challenged according to development percentage and relative weight of the lifter.

The problem of the study lies in standardizing a training laod and a complete training session according to modern scientific data. Lifts performed by the physically challenged are executed with the upper part of the body (arms) due to a disability in the lower part of the body a matter that lead to variations in body weight distribution. In addition to that, attention must be paid to their weight categories during training and a new formula must be used for the physically disabled.

The aims of the study :

1. Designing a training program using standardized training loads according to development percentage and relative arm weight that suits the subjects' abilities.
2. Identifying the effect of the training program on muscular strength development and powerlifting achievement.

3-Identifying the differences in muscular strength development and lifting achievement in both controlling and experimental groups.

The Hypotheses of the study :

1. There are statistical differences between pre and posttests in muscular strength and powerlifting achievement.
2. There is a variation in development percentage for both groups in muscular strength and powerlifting achievement.
3. There are significant differences in the posttests results for both groups in muscular strength and powerlifting achievement.

The Procedures:

The researcher used the experimental method. The subjects were (10) physically challenged powerlifters from the national youth league. They were divided into two groups; controlling group that followed a training program according to normal athlete weight formula and experimental group. The experimental group followed a training program according to relative arm's weight. The training program consisted of four training sessions per week for four months. Relative strength was used instead of maximum strength to evade powerlifters weight differences to identify development percentage.

The researcher used the following formula:

Arms' Relative Weigh = body weight × arms percentile / 100

Arms Relative Strength = maximum achievement / Arms' relative weight

Through Arms' relative weight, the researcher can calculate development percentage :

Training intensity = maximum achievement × desired intensity + S / 100

S = 50% of desired development

Finally the researcher concluded the following :

1. Training according to desired development percentage and arm weight was effective and fast in developing maximum strength and strength compared to speed and body weight.
2. The proposed training according to disried development percentage and arms weight showed no development in strength laods.

The researcher recommended the following :

1. Using training according to desired development percentage and relative arms weight due its suitability for the physically challenged.
2. Paying attention to specifying the desired development from strength training for different muscle groups.
3. Paying attention to specifying the desired from strength training according to body weight.