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CONNOLLY, MAUREEN LUCILLE. A Comparison of the Effect of Body Build on Selected Tests of Arm Strength Among College Women. (1972) Directed by: Dr. Gail M. Hennis. Pp. 167

It was the purpose of this study to examine the performance of college women of three different body builds on selected tests of arm strength. Fourteen cable tensiometer arm and shoulder girdle strength tests served as the criterion measure. The three arm strength measures investigated were the flexed arm hang, modified pull-ups, and modified push-ups.

Three null hypotheses were tested: (1) there would be no significant difference in performance of subjects of three different body builds on the cable tensiometer tests, the flexed arm hang, the modified pull-ups, and the modified push-ups; (2) there would be no significant difference between the performance on the three selected arm strength tests within each body build group; and (3) there would be no significant difference in the relationship between the criterion of the cable tensiometer tests and the three other selected arm strength measures.

The subjects were forty-three women students, aged 18-20 years, who were enrolled in eleven recreational sports classes at The University of North Carolina at Greensboro during the 1970 spring semester. The subjects were chosen from 105 volunteers. Their height ranged from 62.5 to 65.5 inches. They were divided into three body build groups--slender, average, and heavy--determined by their weight and ponderal index.

The data were collected from measures of height, weight, ponderal index, fourteen cable tensiometer tests, total cable

tensiometer strength, the flexed arm hang, modified pull-ups, and modified push-ups. The three selected arm strength measures were ordered in a Latin square design and administered at two-day intervals. The data were treated statistically by the analysis of variance design, the Latin square analysis of variance design, the Pearson product-moment coefficient of correlation, and the Scheffe test of source of difference between group means. The means and standard deviations of the scores for all variables were computed. The .05 level of significance was chosen to test the null hypotheses formulated.

The three null hypotheses were rejected at the .05 level of confidence. In relation to these rejections, three general conclusions were drawn: (1) Persons of different body builds perform differently on four selected measures of arm strength--total cable tensiometer strength, the flexed arm hang, modified pull-ups, and modified push-ups; (2) The performance of the flexed arm hang, modified pull-ups, and modified push-ups does not differ within the average or the heavy build, however, performance on the flexed arm hang and the modified push-ups differ within the slender build; and (3) The only arm strength measure significantly related to the criterion measure of total cable tensiometer strength is the flexed arm hang for the average build.

A COMPARISON OF THE EFFECT OF BODY BUILD
ON SELECTED TESTS OF ARM STRENGTH
AMONG COLLEGE WOMEN

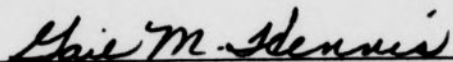
by

Maureen Lucille Connolly

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"Because of your strong faith, we kept the track
Whose sharp-set stones our feet had well nigh spent.
We could not meet your eyes if we turned back,
So on we went."

Unknown

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