RESEARCH REPORT

PHYSICAL FITNESS AND EXERCISE PROGRAMMES FOR ADULT WOMEN

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INTRODUCTION

The plethora of evening exercise classes for adult women leads one to assume that a reasonable proportion of our female population is motivated toward improving its physical well-being. Whether this is so, or whether the classes are more "social" gatherings, is debatable, as indeed is the question concerning the actual physiological effects of such programmes. The lack of relevant research and the paucity of programme evaluations leads one to enquire about the physical benefits adult women derive from conscientious attendance. Do voluntary exercise programmes actually improve the physiological functioning of the adult female body?

METHOD

The question previously posed is relevant to the participants in any fitness programme and so it was with a group of 17 adult women (average age 32 years) from Crewe and Nantwich. The women had been involved in a keep fit movement class for from five weeks to one year (18 weeks average) and they were interested in knowing whether the programme was having any effect.

As it was impossible to assess the individual progress of each member of the class without knowing her physiological state at the beginning of the programme and as there are no national norms available for evaluating the fitness of British adult women, the only comparison that could be made was with a group of women who were not involved in any organised fitness class. The comparison group comprised 11 volunteers from the Alsager Womens' Guild (average age 32 years). The two groups were each tested separately on two 2½ hour sessions, one week apart. Each subject's age, height, weight, flexibility, agility, lung capacity, cardiovascular endurance, body fat, muscular strength, endurance and power was measured using a variety of tests* which the majority of fitness group leaders could administer with a minimum of equipment and training (e.g. Fleishman, 1964 and Cooper, 1968).

*Information about the specific tests and results may be obtained from Dr. L. Burwitz, Crewe and Alsager College, Alsager, Stoke-On-Trent.

RESULTS AND DISCUSSION

The inherent limitations of the present experimental design, particularly the lack of a pre-test, preclude any definite conclusions about the effectiveness of womens' voluntary exercise programmes. The possible lack of internal validity (Campbell and Stanley, 1969) does not, however, prevent a general discussion that is designed to stimulate additional research in this much neglected area.

The two groups were no different on any of the tests designed to measure muscular strength, muscular power, agility and cardiovascular endurance. It was particularly disturbing to note a slightly superior score on the latter test (Cooper's 12 Minute Run-Walk) for the women who were *not* involved in any organised exercise programme. The Guilders recorded a mean score of 1.27 miles in 12 minutes while the exercise class covered on average 1.20 miles. These distances may be described as "good" and "fair" respectively, according to Cooper and Cooper (1973). It would appear that this particular voluntary fitness class did not have a pronounced effect on the cardiovascular condition of its participants and one wonders how many other similar programmes also fail to concentrate on this fundamental aspect of fitness.

The organised fitness group were superior on tests which measured flexibility, abdominal muscular endurance (leg lifts, Fleishman) and body fat. These findings raise a second question concerning the effectiveness of womens' voluntary exercise programmes. How often are such classes influenced by the opinions and attitudes of the group leader?

The leader of the programme under investigation in the present study was a yoga enthusiast. Consequently, a large proportion of each class was devoted to static and dynamic stretching exercises and it was no surprise to find increased flexibility. Similarly, it was predictable that the exercise group would score better on the leg lift test as each session involved a number of abdominal exercises. The reduction of body fat was of prime concern to the exercising women and they were heartened to learn that their mean skin fold measurements were considerably lower than those of the Guilders. Whether

this finding was a direct result of the exercise programme is unknown. More research, of a pre-post test nature, is required to determine the relationship between exercise, diet and reduction in body fat.

The importance of the group leader is obvious. She must understand how to organise and run a balanced programme. She must know how to evaluate and, if necessary, modify her approach in order to achieve the desired aims. In short, she must be aware of and fully appreciate how to control those factors which influence the development of fitness in adult women. One

wonders how many leaders have had sufficient training to be able to do this and how many are, therefore, unable to make the most effective use of a limited amount of valuable time.

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REFERENCES

- CAMPBELL, D. T. and STANLEY, J. C. 1969. *Experimental and Quasi-Experimental Design for Research*. Rand McNally, Chicago.
- COOPER, K. H. 1968. *Aerobics*. Bantam Books Inc., New York.
- COOPER, M. and COOPER, K. H. 1973. *Aerobics for Women*. Bantam Books Inc., New York.
- FLEISHMAN, E. A. 1964. *The Structure and Measurement of Physical Fitness*. Prentice-Hall Inc., Englewood Cliffs, New Jersey.
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