International Symposium
on
Sport for all !

FOLLOW-UP OF THE PHYSICAL PERFORMANCE OF FINNISH RESERVISTS

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Besides military training, the Finnish Defence Forces have as their statutory task the promotion of activities that aim at improving the citizens' physical fitness, activity and health.

The objective of physical training is to strengthen permanent physical activity among conscripts, regular personnel and reservists. Because the Finnish Defence Forces' physical education affects a large number of the Finns, it has a great impact on the physical performance and quality of life of the whole population.

We should also note that from 1995 it has been possible for Finnish women to do voluntary military service in the Defence Forces - so it can be said that the Defence Forces are a big fitness school for all Finns.

Compared to most Finnish professions, the Defence Forces have had for many years their own testing system and well maintained follow-up of the physical condition.

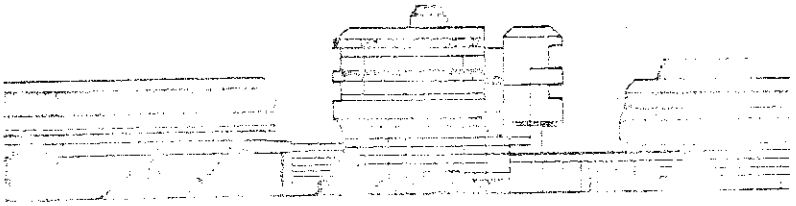
The follow-up and testing are, however, inadequate among reservists and that is one of the reasons why this study has been done. In this study the results are compared with the same kind of research done in 1983.

The study was made **(appendix 1)** in co-operation with the Defence Staff, Urho Kaleva Kekkonen (UKK) Institute, Finnish Sport for All Association and Finnish Reservists' Sports Federation - so the study was wide as to scope and knowledge; both military and civilian.

The general objective **(appendix 2)** of the research was to collect data for the development of the follow-up system of the physical performance among reservists and to support the physical activity of reservists and adults by determining the level of their physical condition and testing the continuous follow-up system.

Among personnel and conscripts the norms, tests, selection and follow-up are in order, but the weakest link is the reserve (over half a million people). That is why the research is justified. We can also look at the descending curve **(appendix 3)** of the 12-minute running test among conscripts (the first test is done in the beginning of service). It may show lack of interest in endurance training among young people.

More exact objectives of the research **(appendix 4)** were to examine



An assessment approach that ventures to address this topic from an exclusively scientific perspective would certainly be inadequate. Although scientific investigations may primarily be aimed at creating a better understanding of facts, they must never be confused with the facts themselves.

Particularly in today's „scientific-oriented world" - and this is posed as a hypothesis - one tends to overrate partial findings or even use them as a basis for the whole. In the world of sports, it also leads to the fact that only findings which can be utilised to maintain and secure previous action are put to the fore. This occurs primarily in organised structures such as schools, sports federations, the armed forces, as well as with commercial sports providers and health insurance companies.

Sports and health can be used as an example to easily demonstrate such a phenomenon: Sports physicians had hardly re-emphasised the beneficial effects of regular running exercises on the cardiovascular system (particularly their positive effects on the cholesterol level) when many „sports worlds" started to use this finding as a confirmation of their offers and supply as well. The following phenomena are well known:

Soccer players with „the lungs of a horse" temporarily were in great demand, the combat readiness of soldiers was judged by their physical endurance and even the morning jogging by politicians was regarded as an expression of their vigour and vitality

Although such an example certainly means painting something in black-and-white, the following is a key statement: Correct and important partial findings can never be used as a substitute for the whole!
When proceeding in one's approach to a higher level and analysing partial findings not only in terms of their physical effects but with regard to the physical performance of the person in his job and daily life, such findings must be assessed even more discriminatingly.

Regarding physical performance capacity, one statement, however, is indisputable: All body movements - with or without a change of place - be it in sports, on the job or in daily life will only be possible, if one succeeds in temporarily „cheating" the earth's gravitation by the use of muscle strength. The farther, higher and faster this is to be achieved, the more muscular power is to be expended. Only when it becomes necessary to repeat such movements several times in a row and - if necessary - for several hours, the demand for the „endurance" component will increase as well. Being aware that such a simple explanation, of course, does not reach far enough, one point has to be emphasised: **Endurance must not be equated with running endurance alone, but has to be regarded as an expression of the functional capability of the body's energy supply system.**

Furthermore, independent from any type of sports, professional activity and everyday circumstances, it must be considered - apart from a body-oriented approach - that „physical performance cannot be ordered" but that such an approach is only little promising in the long run. One must also abandon the idea that an increase in physical performance must be directly competition-oriented (see leisure sports, compensatory sports, health maintenance etc.). From the training-methodical point of view, a one-sided competition-oriented increase in physical performance may even restrict performance in certain phases and would then become a „boomerang".

Although our world of today is marked by rationalisation measures and a dedicated increase in efficiency, we can still observe that an Olympic victory today still means much more to many athletes than a world record (which may have even been achieved under „laboratory conditions" - keyword: pace-setter etc.).

This means that the motivation to achieve something, to make progress or to change things is an essential criterion for the implementation of objectives.

Since it does not make any difference to the development of overall physical performance what types of sports (or even by disregarding the „rules" of these types of sport) are used to achieve the respective training-effective stimulus (all they have to be is effective), the following should be kept in mind: Artificial overrating (i.e. like a hundredth of a second in running and swimming, a thousandth of a point in shooting, or the „yellow card" for excessive cheering about a goal in soccer) must be avoided at the level of general sports training just as too frequent tests that allegedly provide information about the current state of affairs.

In other words, sports activities lend themselves to meet training-methodical requirements, live up to the preference of the participants and permit spontaneity, self-initiative, team spirit and solidarity. If one succeeds in doing this, it may serve as a solid basis of performance for developing a job and sports related or everyday life-oriented specialisation.

SUMMARY:

- Sports as such and also the different types of sport are characterised by achievement concentration; they are result-oriented (goals, points, times, distance) and are suited to convey a positive attitude towards physical performances;
- Although a general increase in physical performance cannot be applied to other fields of activity (types of sport) directly, it is - from the training-methodical point of view - the necessary basis for specific training measures;
- An open concept of methods, in other words „The Way of Teaching", makes it possible to develop a general and application-oriented competence of action;
- The predominant criterion of general sports is therefore not to increase one's ability but to further develop the capability to be able to also face other performance requirements and to be willing to do that.

ASSESSMENT:

a. Methodical measures are of quite decisive importance to successful sports training (particularly in view of the competence of action objective). **The recommendation given by the Sports Guidelines of the Bundeswehr (the ZDv 3/10) to carry out sports training in so-called preference groups, whenever possible, is a measure pointing in the right direction**, since the most important starting point for all sports activities is thus largely shifted to the performer's area of responsibility.

   Thus, he can influence his own sports activities, look after his interests and, so to speak, act on his own initiative (competence of action)!

   Such a form of sports training may render „proven pedagogical measures" (i.e. forced action by evaluation and/or tests) unnecessary.

b. All common physical performance factors (such as strength, speed, endurance and movement co-ordination) can be improved by different types of sports activities!

   Endurance shall serve as an example: Using the „Cooper Test" (12-minute run),no significant differences in performance can be observed between soccer players, handball players, basketball players and track and field athletes (the test persons were soldiers who were engaged in these types of sport on a popular sports basis).

   In view of the fact that all people are first of all more interested in not having special weaknesses than to live with the difference - i.e. to be very strong but have very little endurance - the meaning of the second important change approach is: **Types of sport with**

versatile performance requirements should be given priority (e.g. sports games). In addition, this could help avoid that sportsmen will see no sense in being directed to put a shot in a sand-filled pit now and then, thereby observing extensive safety regulations.

c. The fact must be taken into account that „errors" occurring in the sports technique often are a matter of definition only.

   - Therefore, no matter whether right or wrong, it is important that the participants are „willing to learn" the technique. Consequently, sports instructors/trainers should keep the following in mind:
   - **Physical movements related to a given sport must never be an end in themselves but shall serve as a means to an end (the whole is what counts)**
   - **The unrefined form is sufficient for the person engaged in popular sports and progress (i.e. progress in learning through experience) is achieved by repetition (application in games/competition).**

   In other words, the objective-oriented efforts of sports activities neither depend on the quality of the sports skills alone nor on the intensity of sweating!

These considerations are designed to induce the persons responsible for sports training to re-examine their training objectives and the didactic/methodical justifications for sports practice in particular. It will be easier if we ask ourselves the following questions objectively:

- how do we actually know what the performance profile of our target audience looks like?
- have we really asked the sportsmen, citizens or fighters for their opening, or have we got an idea of „reality" exclusively through the level of responsibility?

Perhaps, we are not sufficiently informed! But our current state of knowledge is as follows:
- the performance profile of top athletes is normally clearly defined and constantly updated,
- the performance profile of the ordinary person, however, and also that of soldiers has so far not been defined at all or not sufficiently as yet. Is that not necessary for this area, or does the following apply: Just let them slog away at physical fitness exercises and sweat a lot?

Is this the difference between sports being not purpose-bound on the one hand and purpose-bound on the other?

CONCLUSIONS:

- Condition as a Side Effect -

The fact that sports games are one of the major means to develop speed, instantaneous strength, endurance and movement co-ordination has already been pointed out by Filin and Gorschkov[1] back in 1969. In this respect, the ideas presented are not new but are merely an attempt to establish an overall context and provide a different approach.

Sports games were primarily assessed, offered and organised under general methodical aspects.

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[1] Filin: In Training Aids 6/1996 - also see Allmann: In Lehrhilfen 9/1996

We now proceed from the assumption that games and their various forms in particular can also be organised and carried out under training-methodical aspects, without losing the characteristic features of the game as such.

Since, according to common teachings, the non-stop and possibly the interval methods should be primarily used for basic training (and thus also for people engaged in popular sports), these load patterns also lend themselves to be applied to the organisation and execution of sports games.

In this connection, two imperative sentences to clarify the changed approach:

1. Non-stop play with the respective load intensity
2. Interval play with the beneficial break

In the first case, it has to be ensured that, apart from general methodical aspects, the following principles of the non-stop method are taken into account as well:

- the duration of the game must be training-effective e.g. between 30 and 90 minutes, depending on the level of performance

- the load intensity must be training-effective e.g. a heart rate between 120 and 160 bpm, depending on the level of performance,

NOTE:

- extensive playing also teaches to control the load oneself!

In the second case, the task is to take into account the principles of the interval method:

- the duration of the game must be training-effective
  + e.g. about 10-12 times for 3-5 minutes with approx. 90-120-second breaks (substitution principle as in ice hockey), depending on the level of performance;
    + load variations are possible, depending on the training objective, and

- the load intensity must be training-effective
  + e.g. a heart rate between 140-180 bpm, depending on the level of performance

NOTE:

- extensive playing also teaches that „excessive loads" are not possible without any breaks!

Organisational exemplars are not given in this connection, since experienced coaches and sports instructors will certainly be able to develop many organisational variants from this concept.

Ladies and gentlemen, together with you we would now like to deepen these ideas by carrying out a practical exercise.

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