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Psychological Problems and Training Solutions in Competitive Skiing

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Psychological Problems in Competitive Skiing I.

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Introduction

One important prerequisite already exists: the relationship between sports and education, previously rather tense and hampered by misunderstandings, is changing to one of unprejudiced co-operation.
Skiing sport with medical and psychological factors have to be considered in close relationship Cannot exist without each other

What is called "academic studies" is no longer contrasted with sports; each discipline has to fulfil its particular task within the framework of the individual and social education of the athlete.
All skiing disciplines have different way of approach

An important duty of research in sport education is to describe these tasks exactly, to define them in detail, to test them in teaching and learning situations, and to determine their long term effects beyond schooling and the momentary satisfaction of the interest and desire of the skiers.

Without having a clear vision and understanding of each discipline it is not possible for any psychologist to "help" and to "advise" athletes. Downhill is completely different from Slalom; 50 km X-C skiing is different than Sprint competition; Moguls are different than Boarder Cross; Ski Jumping is different than Aerials

This implies fundamental considerations of the individual needs of the skiers. It further implies that the problems of sports for physically handicapped or for those who are disturbed in behaviour or development should be included, as well as the question of the therapeutic role of sport, and of its usefulness within the framework of social-pedagogical establishments.

Skiing sports

Handicapped skiing sports

Sport psychology plays an important part in this connection; many important questions cannot be answered without the help of sport psychology and the methods and procedures developed by it. So far, however, sport psychology has focussed its interest more on problems of individual and social psychology than on educationally oriented problems.

A top athlete is more easily able to "qualify" in its profession, learning, studying and will also acquire out-side of his/her sport activity continuously new perceptions, collect know-how and experience, like in sport, successes and failures

Sport psychology has benefited from the well qualified methodical armoury of general psychology, the application of which to specific areas of sports had to be tailored to the special conditions of this fields. This application has produced considerable information regarding the personality of athletes, especially top-ranking athletes, the intra-individual conditions of attitudes, interests, and motives, the development of performance, and behaviour in competitive sports. Further important knowledge has been obtained from learning-psychology regarding problems of sensory-motor learning, and general aspects of learning theory were thus modified.

Top athletes are often, after several years of sport activity experience, able to cover key positions in normal life

The problems of sport psychology range the preparation of top-ranking athletes for competitive sports to sports as a therapeutically educational measure. These problems are not focussed on individuals alone, but equally on groups and teams.

Athletes constantly have to, beside recovering and relaxing, gain competitions, produce "results", undergo different tests, adopt various performance controls and competition formats

The coping with such performing situations schools and develops hardness, endurance and capability to readiness of operation, strengthen personal confidence and places new and higher goals

Every time when such situations occur it is normal to say that a "positive" progress has been reached

Sport Psychology

After a long period of individual and uncoordinated, rather pre-scientific beginnings, sport psychology has increasingly developed into an important branch of sports research within sport theory and sports practice that has to be taken seriously.
Not every day a skier is in the same emotional, psychological and adaptable situation.
Training conditions are different than competition situations
Repetition of tests can create a psychological obstacle

The most important impetus for this development came from those sports associations, where an effort was made to carry out medical and psychological investigations and supervision of their athletes.
Medical care has priority
Healthy conditions guarantee a complete readiness to operate

This led at first to a close relationship between sport psychology and sport medicine. I remember quite well how Italian sport psychology became active in examine top athletes from all important medical and psychological points of view with regard to their selection for Olympic Games. Our national team, in order to be "qualified and eligible" to participate in OWG, had to undergo several of these tests. Each athlete had to pass the tests, not only by medical confirmation, but also by getting a certification that, depending on his/her discipline it was possible to get a positive evaluation. If not complete and satisfaction it was not possible to be included into the Olympic team.
Before making psychological tests and researches on a skier, medical tests have to be conducted
Verification of: pulse frequency, heart beating, breathing conditions etc give a sort of basic factor to "understand" an athlete
Medical tests show the capability of endurance, of work support, of strength, of power, of coordination, of reaction, of readiness to "operate"

Researches and methods of sport psychology cover chiefly the fields of general, differential and social psychology, psychopathology/psychotherapy and educational psychology.
Athletes have to be treated under different circumstances and in single procedures: not every character or physical skills are same.

In the field of general psychology, one of the central targets of research is the analysis of motor behaviour, motor development and acquisition of sensory-motor skills, viewed from the aspects of learning and performance psychology.
Exercises and test can develop a mental strengthen situation

Analyses of the development and structure of personality, especially of top skiers, has so far been undertaken chiefly from a differential psychological point of view. Social psychological investigations have been concerned mainly with problems of attitudes, prejudices and stereotypes in sport and with the structures and dynamics of sport teams (Relays).

Analyses:
Alpine Skiers behave differently than X-C skiers
The first are more open, free in mind, aggressive, "over" the situation, regardless of getting "punished" or blamed, more superficial, sometimes without respect/anxiousness of who is in front

The second type of athlete keeps more quite, doesn't want to get discovered therefore more introverts, behaves quite and with respect of the environmental ambient, care about detail elements, behaves generally calm, because when exploding could create confusion, contrasts; takes time in thinking and reflecting, has less emotional appearance, but in certain circumstances out of control for great moments and in case of success

Further fields of study are psychomotor diagnostics as the basis of educational sports therapy for beginners, with disturbed behaviour and psychotherapeutic care of top performance athletes.
Psychomotor diagnostics:
Convince, create situations, repeating tests, reconstructing situations

Educational sport psychology tries to utilize the results of psychological research and theories for sport education. The subjects of such investigations have been, for example, motor learning, methods of instruction and style of leadership in sports.

Learning and following technical rules, repeating of critical situation, creating motivation, preparing for different situation, instructing to be a leader of his/her own and the others

Aspects of General Psychology

Sensory-motor learning and developmental processes account for a large amount of sport psychological research. This serves to provide the theoretical foundation of training methods and is applied to physical exercises in schools and to the preparation and care of athletes. Sensory-motor learning is understood in the sense of information theory as a hierarchical process of discrimination of perception and movement coordinating behaviour. A number of training methods, e.g. "imitation" and "guidance", form the necessary connecting links with the practice of sports instruction. The structural aspect of sensory-motor skills as a function of development to the verbal and visual processing of information in sensory-motor learning processes, to the simulation of sensory-motor skills on the data indicator of a computer, to the preparation of audiovisual teaching programmes for sports teaching, and to the analysis of the related technological aspects of teaching, for which the methods of cybernetics are utilized.

Aspects of Personality Psychology

Personality research in sports is characterized by a variety of methodical procedures. These are chiefly group investigations of pupils, university students, and top athletes, dealing with problems of personality structure, the relationship between constitutional and psychical characteristics, the influence of the study of sport and of sports activities on changes of personality structure, and with the question of certain personality structures as variants which, for example, determine the decision to study sports.
Studies of the personalities of top skiers are notable in this regard; personality characteristics, e.g., unconcern, straightforwardness, high resistance sociability, willingness to help, realism. Top athletes differ significantly from non-athletes through neurotic characteristics, such as affective inhibition and repression, sexual complexes and hypochondria.

The concept of "psychological stress" has recently been the subject of special research. Emphasis on the development of a general fatigue and stress theory, to be formulated cybernetically, including problems of motivation psychology and the investigation of personality-specific reactions to stress.
The practical aim is to develop scientifically founded measures for the prevention of fatigue, for adaptation to stress, and for planning recovery. The problem comprise psychical stress and threatening situations in competitions, especially during the stage before the start. The aim is to clarify the differential aspects of performance behaviour in top athletes during stress situations. The methods range from subjective, - for exp.: excitement scales, lists of symptoms, - to psycho-physiological scales, - for exp.: muscular tension, pulse rate, respiratory rate, resistance of skin, - and biochemical variables, adrenaline, nor-adrenaline, vanillic-almond acid. Practical tests of behaviour therapeutic techniques – desensitization, operant conditioning, assertive training – have been carried out with the aim of reducing susceptibility to stress in the care of ski racers.

Aspects of Psychopathology and Psychotherapy

In the field of psychopathology, especially of the psychotherapy of sport have been made therapeutically to assist high-performance skiers to overcoming their own problems. In particular of athletes with more or less pronounced psychasthenic disposition, with experiences of failure, and of those suffering from neurotic introversion; but also to elucidate psychological problems that arise when athletes retire from competitive sport. The applicability of autogeneous training has in particular been utilized in special circumstances.

Points of Emphasis of Sport-Psychological Research

Sport psychologists have tried to work on following problems in skiers:

1. Forms and methods of the physical preparation of athletes for competition. Very often a distinction is made between a general psychological training and a special form which is entirely directed towards preparing the athlete for participation in races. Prominence is given to the problem of individualization in the psychological preparation of the athletes, and also to the necessity of modelling his/her psychic activity under varying conditions in laboratory and field experiments. Examinations and tests were also conducted with problems of psycho hygiene and psycho prophylaxis in conjunction with the psychological preparation of the athletes for competition.

2. Psychological analysis of the basic aspects of athletic activity. The object is to establish a scientific foundation for methods of athletic training, taking into consideration psychological canons and the characteristics of the sport concerned which determine the athletic activity of the individual, especially concentration processes, attention, orientation ability, problems of processing, the information imparted during training and in the course of contest, particularities of thinking and emotional processes and states, etc.
3. Psychological aspects of the readiness of the athlete to perform sports in contests. Basic factors of psychic readiness were determined for many branches of sport and methods were developed for assisting the athlete to overcome undesired disturbing factors in carrying out his activities.
4. Questions of the perceptual-motor system and the development of perfected motor skills. The procedures of selecting and processing relevant information and the establishment of an effective connection between this information and the actions to be performed has been in the foreground of scientific interest, together with the mechanism for the voluntary control of motor action, especially under the extreme conditions of competitive sport. “Ideo-motor training has also been carried out.
5. Sport and Personality. The importance of sport as a factor in the formation of personality has been demonstrated. Systematic sport is regarded as an educational tool.
6. Psychological problems in training the will power of athletes. As a result of a number of investigations the psychological laws relating to an effort of will and the character and part played by motives in athletic activity were determined, as well as the significance of subjective and objective difficulties encountered by an athlete in the formation and perfection of his/her ability to control his/her efforts of will consciously.

The importance of the problems concerned is variously assessed and considerable differences also exist in the scientific conception of sport psychology problems.

It has become clear to most sport psychologists and trainers that the “ psychological factor” of success in sport does not alone depend on certain moral and volitive characteristics of the athlete, but represents a considerably more complex process which includes a large number of psychological factors and that an effective psychological preparation can only be guaranteed if all the psychological and moral aspects of the athlete are taken into consideration. The modelling of training practices and the control of the athlete’s level of activity are looked upon as the main principles of psychological preparation.

Training Solutions
in
Competitive Skiing II.

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Psychological preparation of Athletes

The general psychological preparation is directed principally towards developing and perfecting those psychic functions which are indispensable for the athlete.
Athletic training makes high and manifold demands on the psyche of an athlete. The improvement of movement technique is a number of different sports therefore requires a high level of intellectual activity. Technical master ship is closely bound up with orientation functions. Extreme physical stress demands not only the corresponding adaptive abilities, but also a painstaking preparation of the will and the capability to control emotional states.

The special, immediate preparation of the athlete for a contest is concentrated particularly on problems of mobilization of attention and concentration immediately before the start.
In spite of an athlete's relatively short duration of the immediate preparation for the start, it can be divided into three different stages:

1. Stage of control-orientating activity, e.g.: intake of detailed information about the concrete circumstances of start conditions.
2. Stage of concentration. This is subdivided into two phases: Phase A in which the athlete in his imagination distinctly pictures the most important parts of the forthcoming exercise; phase B is the determination of the factor of readiness to carry out the activity in question.
3. Stage of critical examination or assessment. It applies only to those sports in which the same activity is repeated. Assessment is regarded as an indispensable operation in the transition to repeated control-orientating activity.

Extensive investigations of different kind of sport have resulted in the establishment of certain laws concerning the concentration process prior to engaging in athletic activity, namely: 1. the existence of an optimum period of concentration, 2. the individual stability of the period of concentration, 3. a step-by-step prolongation of the period of concentration with increasing degrees of difficulty of the exercise.
As far as the period of concentration is concerned, athletes can be divided into three groups: those requiring a relatively short, medium, and long period of concentration before engaging in athletic activity.
Every athlete has a "comfort zone" where his motor impulses are most successful.
Changes in the individual stability of the concentration period – particularly in the direction of reducing it – have a negative effect on the outcome of the athletic activity concerned.

The psychic readiness for competition.

The psychic readiness for competitions is one of the most important aspects in the psychological preparation of the athlete for competitive sports. Psychic readiness appears as the result of the activation of the psychic preparedness that exists for the performance of a certain activity. The psychic readiness for competition includes three aspects of the psychic activity of an athlete: the perceptual, emotional, and volitive aspects.
The self-control of actions, thoughts, feelings, and the entire behaviour appears as the most important property of the factor "optimization of he condition of psychic readiness" in relation to the varying circumstances of competitive sport. The self controlled changes of one of the factors bring changes of the whole system.
The psychic readiness of the athlete is regarded as the integrated assessment of athletic preparation; it is viewed mostly in connection with the concept of "athletic form" but also in connection with the concept of "training condition".

The state of psychic readiness is temporary and is determined by a large number of psychological factors. The diagnosis of the state of psychic readiness is therefore regarded as one of the most important problems in the preparation of the athlete for competition. In every concrete moment the effectiveness of the intellectual and motor activities controlled by the athlete depends upon his/her psychic condition.
Psychological interrogation and observation, in particular for Ski Jumpers, but also for all other Skiers, with film, video, recorder, are also employed and a great support. The principal requirements demanded of these tests are: simplicity, brevity, and ease of application.

The following indicators of psychic readiness were determined by means of the above-mentioned tests: length and stability of concentration time, emotional stability, high psychic efficiency, accuracy of perception and reproduction of spatial and temporal components and of the force components of movement, attitude towards the result, self-assessment and degree of adoption.

Methods which produce a psycho-regulative, stabilizing, and optimizing effect on the psychic functions of the athlete during training, immediately before the contest and during and after the contest are among the most important means for the general and immediate psychological preparation of the athlete for competition. The autogenous training (AT) evolved by J.H. Schulz is regarded as one of the most important methods. The primary objectives in this connection are:

1. Increasing the effectiveness of recuperation periods in the course of the day, particularly before training;
2. Introduction of practical and natural means of combating sleeplessness;
3. Creation of a possibility of counteracting the negative consequences of long periods of emotional tension;
4. Relieving excessive emotional states in the pre-start condition, immediately before the contest and between contests.

An increase in performance, on the other hand, could be measured by means of the bicycle ergo-meter, the ergo-graph, the tenso-dynamometer and other instruments.
Relaxation and activation methods are intended to take account of the athlete's individual characteristics, the kind of sport and the competitive activity.

Psychological modelling in sport is dealt with under three different headings:

1. Modelling in laboratory experiments;
2. Modelling under the natural conditions of athletic training;
3. The modelling of certain kinds of athletic activity which may possibly serve as models for other kinds of athletic activity.

Athletes psychological attitude

Every sport discipline is finalized to an indispensable competitive motivation, a specific characteristic of sport activity. Since human being it has been always a sort of internal confrontation, to verify his/her attitude, to evaluate the privilege of physical constitution as well as skills compared to others, without any clear intention to "fight". It relates in his/her "in-conscious" to "try" and to "test" towards others the capabilities.
Therefore it is normal and comprehensive that everybody is effecting the dominant characteristic of the personality, but also an indispensable and unless-able way of defence towards continuous frustration of life. Competition does not only mean "fight", but also and overall love for the "fight".
The competitive feeling integrated in each of us, expressed with sport activities, gets its highest explosion in the cathartic means of healthy liberation of the human aggressive tendencies. This does not mean that the athlete should be considered as afflicted by cumbersome senses of inferiority, of insecurity, of in-satisfaction, and of aggressive needs of balance and of self-reliance; it has to be said instead that the athlete does not avoid these characteristics who are typical for each human personality.

Reasons for the dynamics of the psychological attitude that can been registered gives the possibility to list up several factors under the performance aspect. In particular I would like to note some of the most important situations:

- the effective impulse resulting from a large range of responses in the performance process and in the subjective consideration of the performing results.
- the importance to consider the emotional dimensions of success or failure
- the results from the overcome of requirements to achieve or not achieve a positive result
- the elaboration of all training and competing conditions under different circumstances such as level, duration, fatigue, stress,
- the climatic conditions, temperature, altitude, snow, humidity, wind, that influence in positive or negative way the performance or the attitude of an athlete to "suffer" or to take advantages towards others
- the coaching assistance, aggressive, sweet, soft, pushing, caressing, can support or destroy the way to obtain a result
- the equipment assistance with adequate competing material, carefully tested and checked, prepared with care, just "handed over", superficial
- the daily physical and conditional feelings, motivated, depressed, stimulated, willingness
- the field of play, the course preparation, difficulties, course profile, danger places, jumps, turns, risks,
- the starting order, participants number, start group, start time, start condition, spectators,

- the perception of results, personal expectation, trainer's or coaches expectation, need to obtain a result, pressure to obtain result,
- the condition of failure, not all elements are favourable, afraid of failure, emotional stress, unconscious failure
- the mental condition to be winning, become first, dream of best result, play all necessary tricks to succeed, leave all problems away, concentrate, keep out influencing obstacles, be confident in the best preparation for the best performance.

Conditions in preparation phase have a great influence in the final result. Depending on the sport, Alpine - X-Country skiing or Ski Jumping, Biathlon and discipline, Downhill – Slalom – Long or Short distance – Individual or Relay – Individual or Pursuit, it is a combination of factors that help each athlete to fulfil his/her aspiration. When all these complex factors are well coordinated and interact in correct order the result cannot fail; the only problem could arise when external factors are completely against the "preparation phase" and expectations.

Evaluation and development of psychological burden

Beside physical involvement of muscles and blood circulation system, the skier is involved in different form, in training as well as in competition, that stamp a strong influence of psychological coincidence and adjustment.
Through adequate training conditions and psychological influence of a "status quo" can or should be obtained in order to better "prepare" for eventual strange unforeseen situations that, if over-gone, make it possible to produce a high result.
It is often the case that during training, symptoms arise, that show a non sufficient preparation for psychical load. This causes quite often a non perfect exposition of good and correct technique with great discrepancies with trainers, so that no efficiency of training effect can be gained.
Considering the importance of such influencing elements it is important to stimulate and create adequate and similar occasions where athels have to train. Only by conducting training and emulate competition conditions in all kind of circumstances it is possible to force and after strengthen the psychological skills.

Methods to evaluate and test psychological burden

- Basic considerations in choosing testing methods
- Choice of attributes
- Choice of evaluation methods for single psychical attitudes
- Repetition of attitudes in training and competition conditions
- Creation and conduction of competitions as a contribution to stimulate psychological attributes and load.
- Change of single and particular psychological attributes/qualities
- Report of psychological conditions on a control list:
  a) Training sessions
  b) Before Training session
  c) After Training session

d) Physical feeling: strong – weak
powerful – powerless
fresh - feeble
irrepressible – exhaust
stabile – labile
anxious – flabby
energy full – debilitate
fit – knocked up

e) Sport Activity indifferent – fighting fit
passive – active
inert – restless
lame – energetic
tired – daredevil
interest less – willing
asleep – explosive

f) Mood happy – depressed
motivated – spiritless
good-humoured – angry
comfortable – uncomfortable
thoughtless – oppressed
delighted – dejected
serene – annoyed

All these elements contribute to evaluate different typical psychological conditions and to find out the weakest area in which concentrate the assistance to strengthen the competing attitudes.

Conclusion

Therapies in Sport

Emotional processes and sport performance

Basic elements for development through autogenous training (AT)

The active therapy (ATP) – a sort of modified autogenous training (AT)

Operating under ATP effects

Analysis psychological performance testing under ATP influence

Based on personal experience I can confirm that the biggest effect in therapies could be reported within our skiers practising them in groups, not with single athlete. If the effect should be only to practice and trying to concentrate before training sessions or competitions, single practise can be adopted, but not in case of therapies to obtain psychological effects on competition performance.