



# Athletic Insight

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## Personnel Selection in Athletic Programs

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### ABSTRACT

Whether it be at a collegiate or professional level, organizations have been faced with public pressure to be successful. The selection of appropriate personnel is one means for doing this. Although coaches are experts in identifying the physical characteristics needed for success in their field; they lack the skills necessary to assess the psychological factors that have been proven to have a significant impact on athletic performance. The identification, quantification and implementation of these psychological attributes in selection decisions can therefore have a significant impact on a program's success. This paper reviews the factors that have been associated with athletic success, measures of these factors, and use of these factors in making selection decisions.

### Introduction

Over the course of the past twenty years an increasing amount of attention has been devoted to the field of athletics. Whether it be at a collegiate or professional level, organizations have been faced with public pressure to be successful. As a result, athletic directors and general managers have been faced with the question of how to improve their teams' success. One obvious way of doing this is to select qualified personnel for the tasks at hand. The method by which athletes are selected for a team can have a significant impact on that team's success. In the past, decisions have been made based largely on judgments of an individual's physical characteristics with little attention given to the psychological factors that contribute to athletic success. Coaches are experts in identifying the physical characteristics needed for success in their field; however, they lack the skills necessary to assess the psychological factors that have been proven to have a significant impact on athletic performance. Coaches have relied on informal judgments of constructs such as an athlete's motivation and level of aggression to determine their potential to succeed. Everyone has heard stories of athletes that were told they lacked the

physical skill to perform but due to the psychological resources of drive and determination, these individuals have overcome their physical limitations and gone on to be highly productive individuals. The identification, quantification and implementation of these psychological attributes in selection decisions can therefore have a significant impact on a program's success. This paper will review the factors that have been associated with athletic success, measures of these factors, and use of these factors in making selection decisions.

For the most part, athletes can be characterized as being psychologically sound, effectively functioning people. However, some studies have shown that athletes have a tendency to be less anxious, more independent and aggressive, more extroverted, and more achievement oriented than the population in general (Peterson, Weber & Trousdale, 1967). A large proportion of the research that has been conducted in the field of sport psychology has been descriptive and is therefore well suited for the identification of the psychological skills necessary for success. Descriptive information involves comparisons of highly skilled athletes with lesser-skilled athletes for the purpose of identifying differences. This information is useful in the hypothesis generation phase of selection programs. By identifying the presence of certain characteristics that are uniquely associated with the success of certain groups, we are able to identify those factors that are most likely to be correlated with the success of future athletes. In many ways this descriptive research can be thought of as a job analysis. That is to say, the knowledge, skills, and activities that are important to the job of an athlete are identified in this way.

### **Knowledge, Skills and Abilities Related to Success**

Morris (1975) attempted to identify factors that were associated with selection for the Canadian National Field Hockey team by combining a psychological approach with biographical data. The instruments used were the Athletic Motivation Inventory (AMI) and a biographical questionnaire which was constructed specifically for this study. The AMI is self administered and consists of 190 questions written with a sports frame of reference such that the respondent is asked what actions they would take or how they would feel about situations that occur in the field of sports. It purports to measure the following constructs: drive, self-confidence, aggressiveness, coachability, emotional control, conscience development, trust, responsibility, leadership and mental toughness. Validity scales are included that are used to determine faking or a pattern of random answering. Results indicated that athletes selected to the team showed a significantly higher level of aggression, were more desiring and had a greater capacity for leadership, and were more mentally tough (not easily upset by losing or criticism of their play). Analysis of the differences between offensive and defensive players only showed significant differences on the dimension of coachability such that offensive players were more coachable than defensive players. However, this may reflect the tendency of many coaches to be overly concerned with offensive production and thus to spend more time working with those players thereby facilitating their coachability. No statistical analysis was conducted for the biographical data however some important differences were noted. Athletes selected to the team were older (Mean age = 32 years, 9 months) than those not selected (Mean age = 24 years, 1 month). Another interesting finding was that seventeen

of the twenty players selected came from homes in which both parents were present. Morris states that perhaps opportunities for children to be involved in activities outside the home are more likely to occur in situations where home life has a more "settled" quality and that the drive to achieve is fostered by the reinforcement of both parents. Finally, of those selected to the team, only one was an only child. This suggests that high achievement in competitive situations is more likely to occur among girls who have siblings than those who don't. Morgan's study of biographical data is the only instance in the literature. Although they were not examined statistically to see if significant differences existed, the results suggest that it may be an important component when developing a selection method for the field of athletics. One should note that this study was conducted with subjects who participated in a team sport. Because many athletes' performances suffer as a result of a poor relationship with a coach or team member, it is important to consider this factor when making selection decisions. Athletes who possess non-conformist or non-affiliation tendencies may tend to exhibit the greatest turmoil with autocratic or inflexible coaches. The Test of Attentional and Interpersonal Style (TAIS) is a test that was formulated to predict athletic performance based on the constructs of affiliation and conformity (Nideffer & Sharpe, 1978). The test was normed using a population of elite athletes and can provide valuable information about an individual's coachability and role within the team dynamic. However, the psychological factors identified as being associated with success in individual sports are somewhat different.

Researchers focusing on the psychological attributes of successful athletes whose sport is individual in nature have identified several characteristics not identified by researchers focusing on sport in a team frame of reference. For example, Mahoney and Avenier (1977) focus on the field of gymnastics. They compared the psychological profiles of members selected for the 1972 United States Olympic gymnasts. Their results indicated that those selected to the team had a higher rate of positive self verbalizations and better methods for coping with competitive stress than those not selected. These findings were supported when comparisons were made between qualifiers and non-qualifiers for elite Canadian wrestling teams (Highlen & Bennett, 1979). Qualifiers had a significantly better ability to block anxiety 1 hour prior to competition and had fewer negative self-thoughts 1 hour prior to competition. In addition, qualifiers were significantly higher on ratings of self-confidence and believing themselves closer to achieving their athletic potential. Most importantly for the purposes of selection, the researchers were able to correctly identify qualifiers based on their psychological profiles 85% of the time (Highlen & Bennett, 1979).

Other researchers have attempted to use psychological data in conjunction with other information to predict individuals selection to athletic teams. Morgan (1980) makes use of the Profile of Mood States (POMS) and data about an individual's prior performance and physiological characteristics to achieve a 90% success rate in the identification of who will make the team or who will be cut from the team. The POMS is a sixty-five item adjective checklist which measures six facets of emotion: tension, depression, fatigue, confusion, anger, and vigor. Morgan has identified what he calls an Iceberg Profile which is typical of Olympic caliber distance runners, wrestlers and oars men. The Iceberg Profile is characterized by low ratings on tension, depression, fatigue, confusion, and

anger and high scores on vigor. The POMS was developed originally for use in the clinical field and despite the adaptations made to utilize it in the sports arena, the sense of measuring psychological disturbance still prevails. This has a tendency to reduce its effectiveness as a selection instrument.

Much of the research in the field has been anecdotal in nature, gathered primarily through the analysis of unstructured interviews. However, the information that has been acquired in this fashion is quite compelling and useful in identifying the psychological skills necessary for success in sport. It can be thought of as asking subject matter experts the qualities that are most important for successful on the job performance. By analyzing the statements of present champions (SME's) as to their psychological abilities, characteristics, opportunities and family role we can differentiate between successful and unsuccessful performers. Meyers, Cooke, Cullen, and Liles (1979) reported that successful athletes were self-confident and had thoughts of their sport throughout their daily thoughts and dreams. Garfield and Bennett's (1984) study of anecdotal reports supported earlier research. They stated that elite athletes do have predictable feelings during peak performances including: confident and optimistic, in control, mentally relaxed, physically relaxed, extraordinarily aware, and in the "cocoon" (intense sustained concentration). Bloom (1985) also used an anecdotal approach with both successful swimmers and wrestlers. Almost all of his subjects reported that they were determined to excel, were willing to work hard and had families that were supportive of their endeavors. Bloom suggested that parents helped to generate enthusiasm, motivation and created the opportunities for the children to develop their skills. Some of the other personal factors that have been identified as being related to the potential to accomplish include perceptions of locus of control, attributional style, self-efficacy, goal-setting ability, and achievement motivation (Singer, 1988). The type of attribution that an athlete makes, the level of self-efficacy that the individual feels and other perceptions have been associated with the motivation to persevere and to achieve. That is to say, the way that an individual explains their performance influences whether they will quit, continue half-heartedly, or persist and achieve.

The measurement of psychological variables provides us with important information. However, as we have seen the data is of limited value for prediction purposes if other factors such as physiological variables and prior behavior are not included in the selection decision. Morgan (1980) was the first to consider prior athletic performance in the design of his research. As was mentioned earlier, the inclusion of prior performance and physiological characteristics led to a 90% success rate in correctly identifying those individuals selected for a team. Gould, Weiss, and Weinberg (1981) made use of prior athletic performance in the design of their research. They created two groups of wrestlers based on their prior performance in competition: above-average and below-average. Significant differences were found such that the above-average group believed they were closer to achieving their athletic potential, used greater attentional focusing, and had greater self-confidence than the below average group. Heyman's 1982 research supports the need for inclusion of prior performance in selection decisions as well. His research with wrestler's prior to a Big Ten Wrestling Championship suggests that there is a very important relationship between the history of athletes and their later performance.

Heyman states that the psychological patterns and cognitions found in other research may reflect previous experience rather than cause or facilitate performance in the athletes; but, performance is a relatively consistent behavior pattern. In his research, prior performance was as powerful a predictor of success as psychological testing. Therefore it is important to consider prior performance in any selection decision. However, it is important to quantify prior performance data in order for it to be of any use in selection programs.

## **Personnel Selection**

Now that we have identified the KSA's necessary for success in the field of athletics , it is necessary to design a program that will make use of this information. The following psychological constructs seem to be most relevant to all competitors: vigor, aggression, leadership, ability to cope with stress, coachability, confidence, social support and positive self concept. In addition, the ability to interact with others seem to be an important psychological skill within the team setting. Because prior performance and physiological data have been found to have such a significant impact on predicting those individuals that eventually qualify for a team, it is important to consider these variables as well. In order to develop a valid selection procedure, it is important to find measures of these constructs that are both reliable and valid.

The AMI is one way of assessing the psychological constructs identified above. It is a particularly useful tool since it is designed to measure traits within a sports frame of reference. With 190 questions, the time necessary to complete is one limitation of this instrument. Another limitation is the lack of research about the instrument's predictive validity. Additional research would have to be conducted to assess this. Although Morris (1975) did not examine the predictive power of the AMI, she did recognize the importance of gathering additional information to discriminate between successful and unsuccessful individuals. Perhaps the inclusion of a biographical data questionnaire would be of assistance in making selection decisions. Factors that should be considered include previous experience, presence of siblings, and family dynamics. Such an instrument would have to be developed and validated before it would be of any use in making athletic selection decisions.

The POMS seems to be a good instrument for the identification of some of the constructs related to success in sports . Morgan's (1980) ability to identify those athletes selected to a squad with 90% efficiency indicate that it is a valid and reliable predictor of elite athletes. The identification of the Iceberg Profile is an important step in identifying the KSA's necessary for success in athletics. However, its perception as a clinical instrument may limit its utility. It is important that only the POMS that has been adapted for use in the field of athletics be considered for athletic program selection. In addition, the length of time necessary to complete the questionnaire is not very long and make it more readily acceptable for use with applicants to the athletic program. Finally, it is important to note that Morgan used information from the POMS as well as prior performance and physiological data to make predictions. Considering Heyman's 1982 research, inclusion of prior performance data would improve the reliability and validity of selection decisions.

For team sports, the inclusion of the TAIS might be useful in assessing how an individual will interact with others. After all, a team won't be very successful if the members are unable to get along. Again, the lack of research concerning the instrument's predictive validity limits its use for selection decisions. Because the AMI includes coachability and conscience development scales, it may be more appropriate for use within the field of athletics. Research needs to be conducted to assess the ability of the instrument to differentiate between successful and unsuccessful athletes.

As we have seen, prior athletic performance is a powerful predictor of athletic success. It is important to develop a means for quantification of an individual's prior performance in order to make appropriate selection decisions. Many coaches will have already identified the physical KSA's they consider to be most important in recruits. However, mechanical approaches for selection decisions that make use of quantified data are more effective than judgmental approaches in identifying those individual with the necessary KSA's to succeed. Development of a weighted application blank that measures these abilities would result in an increase in the reliability of selection decisions. Of course, this would need to be empirically validated before it could be used. Reviewing coach's records of prior recruits may provide most of this information thus facilitating the validation process.

In summary, it appears that a selection program that takes into account psychological variables, biographical data and prior performance would be both a valid and reliable predictor of athletic success. Singer (1988) supports this notion recommending that psychological tests not be used as the only basis for determining team membership. This information can be useful in understanding athletes and their potential strength's and limitations. A battery of composite tests is recommended that measures skill level, tactical knowledge, morphology, body composition, physical condition and attributes, and psychological attributes. Quantification of these constructs would be necessary in order to make a decision. Validation of the process would be an important final step in the development of a selection program for the field of athletics.

## **Conclusions**

Because the field of athletics has become so competitive, it has become increasingly important to make appropriate selection decisions in order to be successful. This paper has demonstrated the importance of considering psychological variables, prior performance and physiological data in selection decisions. Although Morgan's 1980 research had short-term prediction as its goal, it demonstrated the power of a program that takes into account all three of these variables. One can only speculate that in the future, the attention that is given to sports will continue to grow. The pressure to succeed will leave many athletic directors and general managers looking for any edge that they can gain over their competition. One way of doing this will be to make accurate selection decisions. Therefore, researchers in the field should attempt to validate a selection process outlines in this paper which include psychological, physiological and prior performance data.

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