

The Attentional and Interpersonal Style (TAIS) Inventory

The Attentional and Interpersonal Style (TAIS) Inventory

Technical Manual

Robert M. Nideffer, Ph.D.



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About the Author

The author of sixteen books, Dr. Nideffer is the developer of both the theory and the Test of Attentional and Interpersonal Style (TAIS) Inventory. As a researcher and practitioner, he has spent the past 35 years exploring the relationship between individuals' concentration skills, their level of emotional arousal, and their ability to perform in high-pressure situations. He is recognized as an expert in research in the medical sciences, and his writings and theoretical formulations have had a profound impact on the field of Sport Psychology and on the way high performance athletes around the world prepare for competition. Descriptions of his research and work with high level performers have appeared in *Business Week*, *Dun's Review*, *Fast Company*, *New York Times*, *National Observer*, *Sports Illustrated*, *Psychology Today*, and many other national and international publications.

Author's Preface

The Attentional and Interpersonal Style (TAIS) Technical Manual describes the development and the latest research on a psychometric instrument that was designed to provide highly specific performance relevant feedback to individuals who must be able to perform at high levels of pressure. This manual represents one of the latest developments in work I began over three decades ago with the University of Rochester's psycho-educational and biofeedback laboratory.

The construct of attentional styles is important because it lends itself to the behavioral definition of the various types of concentration required by vastly different performance arenas. Whether a person is performing in business, sales, sport, or in an education environment, the attentional constructs measured by TAIS lead to the identification of an individual's concentration strengths and weaknesses within that person's particular performance environment. It is those attentional constructs, in combination with other personal and interpersonal attributes, that allow certified professionals to get at the root cause of various performance issues, and then to design interventions to help the individual improve performance.

I would like to thank the staff at MHS for their support, encouragement, and assistance in helping me put this technical manual together.

Robert M. Nideffer, Ph.D.

November, 2007

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Peter Papadogiannis, Ph.D.

November, 2007

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The Attentional and Interpersonal Style (TAIS) Inventory

Chapter 1: Introduction

The Attentional and Interpersonal Style (TAIS) inventory is an easily administered self-report instrument designed to measure those concentration skills and interpersonal characteristics that are the building blocks of performance. TAIS is used to identify the types of situations and conditions under which individuals are more or less likely to perform at their potential. The instrument is used for both selection and development purposes with groups of individuals who are expected to perform at high levels under dangerous, stressful, and highly competitive conditions. It is used with elite athletes, military and paramilitary units, and with individuals in business environments where pressure and change are constants.

According to Nideffer (1976a) and Nideffer, Farrell, and O'Hara (2002), successful performance in any situation depends upon an individual's ability to shift his/her focus of concentration along a dimension of width (broad to narrow), and a dimension of direction (external to internal), in response to the changing demands of the performance situation. The ability to make those shifts is affected by the individual's preferred or dominant style of attending and by his/her level of emotional arousal. TAIS measures the individual's relative concentration strengths and weaknesses, and helps to identify the environmental and interpersonal situations that will increase and decrease emotional arousal. This conceptual model is described in more detail in chapter 4.

Main Features of TAIS

TAIS integrates concentration skills with personal and interpersonal attributes in a way which allows the user to get at the root cause of performance issues, and to develop behavioral prescriptions for managing those issues. The instrument offers the user a number of important features. Specifically, TAIS

- is supported by more than 25 years of research and application
- has twenty scales measuring six different concentration skills and fourteen different personal and interpersonal behavioral attributes
- has normative data on a large number of elite level performers in a wide variety of performance environments (see the Description of TAIS section for a description of norm groups)
- includes age- and gender-specific norms, where applicable
- is easy to administer, score, and profile via the web
- has computerized reports targeted to business, sales, military, and sports applications

- can be administered in English, French, Italian, or German (all narrative reports are in English)
- is endorsed by world-changing business leaders across North America, Europe, and Asia, who participated in the norming
- has excellent reliability and validity

Description of TAIS

TAIS consists of 144 items distributed across twenty scales. The four broad areas measured by TAIS are: Concentration and Information Processing, Prognostic Indicators, Interpersonal Characteristics, and Scales in Development. Table 1.1 lists the specific scales included in each area.

Table 1.1: TAIS Scales

Scale Name	Description
Concentration & Information Processing	
Awareness (BET)	Sensitivity to non-verbal and environmental cues
External Distractibility (OET)	Responsivity to task irrelevant external cues
Analytical/Conceptual (BIT)	Ability to think strategically, analyze, and plan
Internal Distractibility (OIT)	Distraction by feelings or thoughts
Action/Focused (NAR)	Attention to detail, concern with quality
Reduced Flexibility (RED)	Failure to shift attention to relevant cues
Prognostic Indicators	
Information Processing (INFP)	Multitasking, need for change
Orientation Towards Rules and Risk (BCON)	Control over emotions and adherence to rules
Self-Confidence (SES)	Belief in abilities and value as a person
Self-Critical (DEP)	Tendency to focus on the negative
Interpersonal Characteristics	
Control (CON)	Willingness to assume responsibility and leadership
Physically Competitive (PO)	Enjoyment of competitive physical activity
Decision-Making Style (OBS)	The speed with which analysis and conscious decision making take place
Extroversion (EXT)	Enjoyment of other people, initiate social contact
Introversion (INT)	Enjoyment of personal space, ability to work alone
Expression of Ideas/Intellectually Competitive (IEX)	Expression of thoughts and ideas to others
Expression of Criticism and Anger (NAE)	Expression of anger, confront, set limits
Expression of Support and Affection (PAE)	Expression of support and encouragement
Scales in Development	
Focus Over Time (FOT)	Making short term sacrifices for long term goals
Performance Under Pressure (PUP)	Performance in a crisis situation

TAIS is suitable for use with adults of all ages. Norms have also been developed for adolescents, and TAIS has been used to assess elite level athletes as young as eleven, in sports like swimming, gymnastics, and figure skating (Bond & Nideffer, 1992).

TAIS uses a five point Likert-style response format in which respondents are asked to indicate the frequency with which a particular item describes their behavior. The response options are “never,” “rarely,” “sometimes,” “frequently,” and “always.” TAIS scales were designed in such a way that extreme scores at either end of the continuum indicate the behavior measured by that scale tends to be more or less transituational or trait-like.

The respondents’ raw scores on TAIS are standardized and converted to percentiles based on the means and standard deviations of 151 male and 151 female undergraduate students at the University of Rochester (Nideffer, 1976a). Those percentile scores are then compared to the normative population selected by the test administrator.

Collecting normative data is a crucial part of test development. Norms establish a baseline against which all subsequent results are compared, enabling the test developer to capture the characteristics of an “average” respondent. Norms indicate the average performance on a test, and the frequency of deviation above and below the average (Anastasi, 1988).

TAIS Normative Populations

Student Norms	A total of 151 male and 151 female students at the University of Rochester, with a mean age of 19.4 years. These are the standard norms.
Adolescent Norms	A total of 133 males and 129 females in public school in Southern California, with a minimum GPA of 2.0. Grades 7, 8, and 9, ages 12–15 years.
Catholic Priests	A total of 239 Catholic priests from 93 dioceses across the U.S. Mean age 40.34 years, mean length of service 13.92 years.
Business Norms	<ul style="list-style-type: none">• CEOs: A total of 940 males and 95 females with a mean age of 43.9 years. Ninety percent of the CEOs reside in the US or Canada with the remainder working in Europe or Asia.• Business Executives: This group consists of 91 males and 89 females with a mean age of 43 years. The group consists of senior managers including GMs and VPs but does not include presidents and CEOs. These managers work in financial institutions, the oil and gas industry, transportation, manufacturing, and high technology companies. The companies are headquartered in North America, but approximately 5% of the senior managers work in offices overseas.• Managers: This group consists of 274 males and 277 females with a mean age of 41.5 years. This group includes managers up to the level of director. These managers work in financial institutions, the oil and gas industry, transportation, manufacturing, and high technology companies. The companies are

headquartered in North America, but approximately 5% of the senior managers work in offices overseas.

- Supervisors: This group consists of 50 males and 50 females with a mean age of 37.9 years. These supervisors work in manufacturing environments in North America.
- Engineers: This group consists of 354 male and 36 female engineers with a mean age of 39.1 years. Ninety percent of this group resides in North America, the remainder work in Europe. The group includes all engineering disciplines, and the respondents represent a variety of industries.
- Sales Persons: This group consists of 166 males and 167 females with a mean age of 38.8 years. These individuals are selling high technology products and services, investments and insurance, and other manufactured goods. This group of participants work throughout the U.S. and Canada.
- Sales Managers: This group consists of 70 male and 13 female sales managers with a mean age of 40.7 years. They are responsible for regional and national sales of products and services in the automotive, energy, high technology, biomedical, and financial areas.
- HR Personnel: This group consists of 164 females and 55 males with a mean age of 37.0 years. All these individuals work for companies headquartered in North America, though approximately 10% work in offices overseas. The group includes HR managers.
- Program Managers: This group consists of 112 males and 33 females with a mean age of 37.7 years. These individuals work in manufacturing environments, with approximately 90% residing in North America and the remainder working in Europe or China.
- Finance: This group consists of 85 males and 41 females with a mean age of 37.8 years. These individuals function as controllers, program accountants, CFOs, and VPs of Finance in a wide variety of corporate settings across the U.S. and Canada.
- Purchasing: This group consists of 60 males and 23 females with a mean age of 40.1 years, working in a variety of corporate settings across the U.S. and Canada.
- Law Enforcement: This group consists of 203 males and 31 females working as police officers or special agents across the U.S. The majority are trained in the use of special weapons and tactics (SWAT).
- Marine Recruits: This group consists of 3,274 Marine recruits between the ages of 17 and 28.

Sports Norms

- World Champions: This group consists of 239 respondents who competed in 23 sports in five countries. The group included 68 females with a mean age of 23.1 years, and 171 males with a mean age of 25.2 years. They won 229 Olympic medals, including 112 gold, 44 silver, and 73 bronze and 170 World Championships.
- Male Student Athletes: This group consists of 316 university students with a mean age of 19.3 years. These athletes are competing at the first division level

in hockey, baseball, swimming, rowing, football, tennis, track, golf, and basketball.

- **Female Student Athletes:** This group consists of 125 university students with a mean age of 19.4 years. These athletes are competing at the first division level in softball, tennis, swimming, golf, field hockey, rowing, and track.
- **Professional Athletes:** This group consists of 479 male and 20 female professional athletes, with a mean age of 24.1 years, involved in the sports of golf, tennis, soccer, baseball, basketball, and hockey.

Refer to the Summary Score Profiles section in chapter 3 for a detailed explanation of the rationale behind retaining the original college population on which TAIS was developed as the normative group for comparisons.

Uses of TAIS

TAIS measures what Nideffer refers to as “the building blocks of performance” (2003). These are concentration skills and interpersonal characteristics that have relevance in one combination or another, across virtually any performance situation. Different individuals have different concentration and interpersonal strengths or dominant styles. These styles determine the types of situations in which they will or will not perform well, as well as the types of mistakes they are most likely to make under highly stressful conditions. When performance problems exist (e.g., poor decision making, loss of concentration under pressure, failure to confront issues, loss of emotional control and problems communicating), TAIS score patterns allow the administrator to determine the root cause of the problem, and to develop behavioral interventions designed to improve performance.

TAIS was developed for use in both research and applied settings. As an applied tool, the inventory is used for both performance appraisal and development of healthy individuals who have to be able to perform at high levels under stressful or highly competitive conditions. It is appropriate for use in any performance situation where concentration and interpersonal skills are critical determinants of success.

TAIS is recommended as part of a larger evaluation process together with other assessment methods and collateral information (e.g., interviews, other assessment tools, and behavioral observations) when available. The results obtained by the use of TAIS should be viewed as important focal points, to be further examined using additional methods, thereby providing a balanced and broader picture of the respondent.

Business Settings

Within business environments, TAIS is used for talent identification, performance appraisal, and performance development. When used in this way, information gained from TAIS is supplemented with and consensually validated by data from other sources. These may include, but are not limited to, interviews, scores from other psychological instruments, performance evaluations, and behavioral observations. TAIS can also be used as a coaching, teambuilding, succession planning, and management development tool (Nideffer, Farrell, & O’Hara, 2002).

Additional applications of TAIS in corporate settings are possible. MHS is devoted to helping managers develop an effective personnel performance appraisal and development system. Contact MHS at customerservice@mhs.com for more information.

Sport Settings

Sport competitions provide the ideal opportunity to see the importance of effective concentration and decision making in high-pressure situations. The consequences of decision-making errors and performance problems resulting from the ineffective deployment of attention are immediately obvious to everyone.

Because concentration is recognized as such a critical variable in sport, TAIS results can be used to provide an operational or behavioral framework for improving concentration. Instead of simply yelling at athletes to “concentrate” when they have performance problems, coaches and sport psychologists are able to provide them with specific instructions regarding how to concentrate, and on what. TAIS has been used as a part of the preliminary assessment of athletes when they first enter a training center (e.g., the Australian Institute for Sport) or training camp (e.g., spring training in baseball). Results are discussed with the athletes and their coaches with careful consideration of the athletes’ concentration strengths and the demands of their sport, and suggestions are made for improving athletes’ ability to concentrate effectively. Often, after several months, the inventory is re-administered to measure any changes that may have taken place, and to refine the training program (Bond & Sargent, 1995). TAIS has also been used in the certification of Canadian coaches at all levels to educate them about concentration and the role it plays in sport (Coaching Association of Canada, 1981).

Police and Military Applications

TAIS is used both for performance appraisal and for professional leadership development and team building with police forces, SWAT teams, and the military. There is no environment where the consequences of poor decisions are more severe than for police and military tactical units. When lives are on the line, the ability to stay focused on task relevant cues is critical. Knowing the team’s concentration strengths and weaknesses can mean the difference between life and death.

As is the case in business, when TAIS results are used for performance appraisal purposes, they are supplemented with and consensually validated by data from other sources. For more information about the application of TAIS within military and police environments, contact Dr. Mark Lowry at: lowry@thewinningmind.com

Research Settings

At the researcher’s discretion, TAIS can be employed when measures of concentration and attentional skills are needed. TAIS has and continues to be used in educational, clinical, and medical settings, and in industrial and organizational research. The results of a number of these studies are described in chapter 5.

User Qualifications

All users of psychological assessments such as TAIS should have an understanding of the basic principles and limitations of psychological testing, especially test interpretation. Specific issues related to the reliability and validity of TAIS are discussed in chapter 5. Although the inventory is easy to administer and score, which can encourage its use by research and administrative assistants and other support staff, the ultimate responsibility for administration, scoring, and interpretation must be assumed by an individual who has a background in psychometrics and understands the limitations of psychological testing. Moreover, it must be determined whether results obtained from TAIS are consistent with existing collateral information regarding the respondent before any action plans are implemented.

Individuals without formal psychological training and the relevant professional affiliations should be certified by an MHS- or EPS-approved trainer or certifying organization. Visit <http://www.taisdata.com/index.php> for details. Any person whose only exposure to psychometric assessment is gained from this manual is neither appropriate nor qualified as a user of this instrument. It is therefore strongly recommended that psychometrics training be obtained.

All users of TAIS should be familiar with the standards for psychological testing developed by the American Psychological Association and National Council on Measurement (AERA, APA, & NCME, 1999). Qualified users of this instrument should also be members of professional associations that endorse a set of standards for the ethical use of psychological tests, or licensed professionals in the areas of psychology, education, medicine, social work, or an allied field. The administrator should be familiar with procedures for avoiding biases, debriefing respondents, and obtaining informed consent.

Contents of this Manual

The remaining chapters of this manual provide detailed information about the administration and scoring of TAIS as well as interpretation and use of the results. There are also sections on its development and psychometric properties. Chapter 2 describes the administration and scoring of TAIS and the types of reports available. Chapter 3 provides a discussion on interpreting the results and their potential use. Chapter 4 gives information on the theoretical rationale behind the instrument. Chapter 5 presents information on the reliability and validity of the various scales and theoretical constructs.

