

# Questionnaires and Diagnostic Methods for Athlete's Psychological Competitive Abilities and Psychological States Before and During Competition

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— Report —

# Questionnaires and Diagnostic Methods for Athlete's Psychological Competitive Abilities and Psychological States Before and During Competition

Mikio TOKUNAGA

### Abstract

The author had developed the Diagnostic Inventory for Psychological Competitive Ability (DIPCA. 2, for junior high school students – adults) to determine the mental strength of athletes, the Diagnostic Inventory of Psychological State Before Competition (DIPS-B. 1) and the Diagnostic Inventory of Psychological State During Competition (DIPS-D. 2).

Questionnaires and diagnostic methods are as follows:

**Key words:** athletes, psychological competitive ability, trait and state, diagnostic method.

(Journal of Health Science, Kyushu University, 21: 107-117, 1999)

## DIAGNOSTIC INVENTORY OF PSYCHOLOGICAL COMPETITIVE ABILITY FOR ATHLETES (DIPCA. 2)

by Mikio Tokunaga and Kimio Hashimoto

Name :	Date of answer : year ( ) month ( ) day ( ), day of the week ( )		
	(1) Gender : 1. male 2. female	(2) Age : ( )	
(3) Age category :	Junior high --- 1 st, 2nd, 3rd Senior high --- 1 st, 2nd, 3rd	College/university --- 1 st, 2nd, 3rd, 4th year Non-student --- younger than 30, 30 or older	
(4) Name of the club you belong to : ( )	(6) Length of experience in this sport :		
(5) Are you a regular member? 1. Regular 2. Semi-regular 3. Not regular	1. 1 to 2 years    2. 3 to 4 years 3. 5 to 9 years    4. 10 years or more		
(7) Participation experience in prefectural-level or regional-level competition :			
1. None    2. 1 or 2 times    3. 3 or 4 times    4. 5 or more times			
(8) Participation experience in national-level competitions :			
1. None    2. 1 or 2 times    3. 3 or 4 times    4. 5 or more times			

**Test purpose and method:**

This test is designed to determine an athlete's psychological abilities. Those abilities necessary for an athlete to fully display his/her athletic skill and talent in competition are divided into 12 categories.

The following questions relate to psychology in competition. Read each question in the order it is given and answer as honestly as you can by circling the number for the most appropriate answer from 1 to 5 in the right-hand column. Every question from 1 to 52 needs to be answered.

	1. Not at all so (0-10%)	2. Seldom so (25%)	3. Occasionally so (50%)	4. Frequently so (70%)	5. Always so (90-100%)
Example: My hands and feet tremble before competition. ---	1	2	3	4	5
1. I can perseveringly compete even in difficult situations. ---	1	2	3	4	5
2. The more major games I'm in, the greater fighting spirit I have. -----	1	2	3	4	5
3. I compete with the attitude of going to the limits of my abilities. -----	1	2	3	4	5
4. Before a game, I think "I'm not going to lose." -----	1	2	3	4	5
5. I'm not able to control myself whenever there is a game. ---	1	2	3	4	5
6. I get nervous worrying too much about winning or losing. ---	1	2	3	4	5
7. I'm unable to make calm moves. -----	1	2	3	4	5
8. I have confidence I can display my abilities even under pressure. -----	1	2	3	4	5
9. I can make decisive moves just at the right time. -----	1	2	3	4	5
10. Every strategy of mine proves successful. -----	1	2	3	4	5
11. I am a person of sound judgment. -----	1	2	3	4	5
12. I value teamwork. -----	1	2	3	4	5
13. When I lose, I blame it, on others and bad-mouth those who made errors. -----	1	2	3	4	5
14. I display perseverance. -----	1	2	3	4	5
15. Whenever there is a game, a fighting spirit begins to stir in me. -----	1	2	3	4	5
16. I go into a game with the thought, "I'll try hard for myself." -----	1	2	3	4	5
17. Before a game, I think "I want to win by all means." -----	1	2	3	4	5
18. I'm so nervous I can't make any of the right moves. -----	1	2	3	4	5
19. I get emotionally upset whenever there's a game. -----	1	2	3	4	5
20. I lose my cool at times. -----	1	2	3	4	5
21. I have confidence in my personal abilities. -----	1	2	3	4	5
22. I have determination (resolve) in a game. -----	1	2	3	4	5
23. I can change strategy quickly. -----	1	2	3	4	5
24. I can judge of the game flow quickly. -----	1	2	3	4	5
25. During games I and other teammates or partners encourage each other. -----	1	2	3	4	5
26. I lose a game, I always make a lot of excuses for losing. ---	1	2	3	4	5
27. I can play tough in a game. -----	1	2	3	4	5
28. The tougher the opponent, the greater the fight I have. ---	1	2	3	4	5
29. I compete with a personal objective in mind. -----	1	2	3	4	5
30. Whenever I lose a game, I become a "sore loser." -----	1	2	3	4	5
31. I am slow to change my feelings. -----	1	2	3	4	5
32. I get uneasy before a game. -----	1	2	3	4	5
33. Whenever there's a game, the crowds make me upright and I can't think clearly. -----	1	2	3	4	5
34. I have confidence that I will achieve my personal objectives. -----	1	2	3	4	5
35. I can make decisions without fear of making a mistake. ---	1	2	3	4	5
36. I think of all possible strategies in order to win. -----	1	2	3	4	5

	1. Not at all so (0-10%)	2. Seldom so (25%)	3. Occasionally so (50%)	4. Frequently so (70%)	5. Always so (90-100%)
37. I can make accurate decisions at crucial moments. ----- 1	2	3	4	5	
38. There is a spirit of unity with other teammates. ----- 1	2	3	4	5	
39. I make any foul plays, I obey the referee's decisions. ----- 1	2	3	4	5	
40. I can sufficiently endure physical pain and exhaustion. ----- 1	2	3	4	5	
41. Whenever there is an important game, I get all hyped up. --- 1	2	3	4	5	
42. I have plenty of personal drive. ----- 1	2	3	4	5	
43. Winning the game, not the essence of the game, is most important to me. ----- 1	2	3	4	5	
44. My face gets stiff and my hands and legs start shaking. --- 1	2	3	4	5	
45. I feel pressure whenever there's a game. ----- 1	2	3	4	5	
46. Thinking about winning or losing makes me uptight and I can't think clearly. ----- 1	2	3	4	5	
47. I have confidence I can make my own moves anytime. --- 1	2	3	4	5	
48. I can make quick decisions even in difficult situations. --- 1	2	3	4	5	
49. My predictions are pretty accurate. ----- 1	2	3	4	5	
50. I can make cool decisions even in difficult situations. --- 1	2	3	4	5	
51. During games I and my teammates or partners cooperate well with each other. ----- 1	2	3	4	5	
52. I applaud excellent moves, whether they be by one's own teammate or by the opponent. ----- 1	2	3	4	5	

Marking of DIPCA. 2

1. Conversion of responses into scores

For 14 questions (No. 5, 6, 7, 13, 18, 19, 20, 26, 31, 32, 33, 44, 45, 46), the circled numbers are respectively converted into scores as follows:

1 → 5, 2 → 4, 3 → 3, 4 → 2, 5 → 1

For the remaining questions, each circled number itself is counted as the score.

2. Scoring by scale

Scores for questions are added in their corresponding scales.

Scale 1 Patience = Questions 1 + 14 + 27 + 40

Scale 2 Aggressiveness = Questions 2 + 15 + 28 + 41

Scale 3 Volition for self-realization = Questions 3 + 16 + 29 + 42

Scale 4 Volition for winning = Questions 4 + 17 + 30 + 43

Scale 5 Self-control = Questions 5 + 18 + 31 + 44

Scale 6 Ability to relax = Questions 6 + 19 + 32 + 45

Scale 7 Concentration = Questions 7 + 20 + 33 + 46

Scale 8 Confidence = Questions 8 + 21 + 34 + 47

Scale 9 Decision = Questions 9 + 22 + 35 + 48

Scale 10 Predictive ability = Questions 10 + 23 + 36 + 49

Scale 11 Judgement = Questions 11 + 24 + 37 + 50

Scale 12 Cooperation = Questions 12 + 25 + 38 + 51

Scale 13 Lie Scale = Questions 13 + 26 + 39 + 52

3. Scoring by factor

Scores for scales are totaled in their corresponding factor.

- Factor 1    Volition for competition        = Scale 1 + Scale 2 + Scale 3 + Scale 4
- Factor 2    Mental stability and concentration    = Scale 5 + Scale 6 + Scale 7
- Factor 3    Confidence                                = Scale 8 + Scale 9
- Factor 4    Strategic ability                         = Scale 10 + Scale 11
- Factor 5    Cooperation                                = Scale 12

4. Total score

Scores for 5 factors are added as given below.

Total score = Factor 1 + Factor 2 + Factor 3 + Factor 4 + Factor 5

5. Evaluation

The total score is evaluated in 5 levels in accordance with the table below.

Evaluation table of total score

Gender \ Evaluation	1 (quite low)	2 (below average)	3 (average)	4 (superior)	5 (excellent)
Male	141 or less	42 to 164	165 to 186	187 to 209	210 or more
Female	131 or less	132 to 154	155 to 178	179 to 202	203 or more

6. Psychological ability profiles

Psychological ability profile by scale and factor are produced in the charts below.

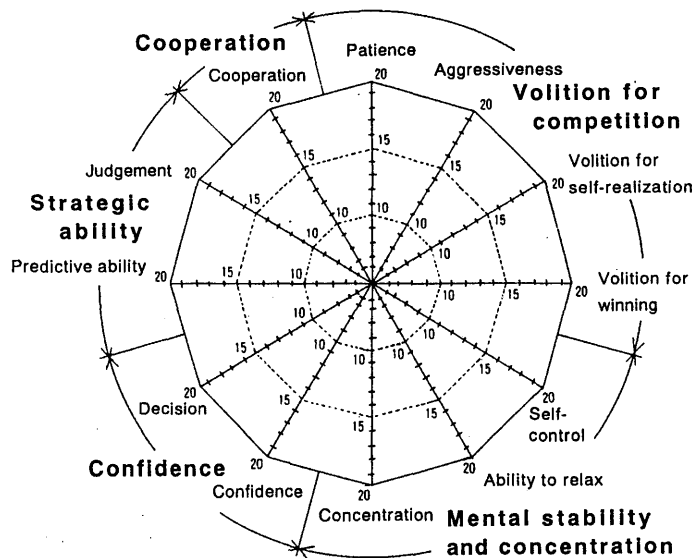


Fig.1 Psychological competitive ability profile by scale

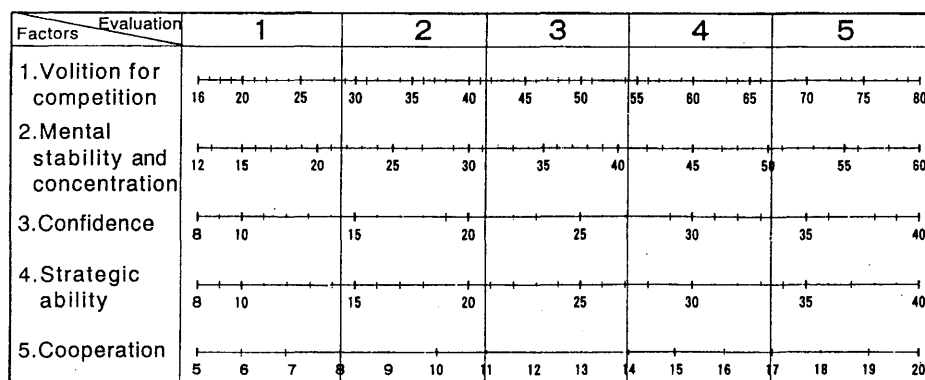


Fig.2 Psychological competitive ability profile by factor

For each category, the higher the score is, the stronger the following tendencies are.

- |                                  |   |
|----------------------------------|---|
| 1. Patience                      | Perseverance. Tenacity. Pain endurance.   |
| 2. Aggressiveness                | Fight, combativeness, and a burning enthusiasm in big or important matches.                                 |
| 3. Volition for self-realization | Challenge for development of one's potential. Autonomous. Independent.                                      |
| 4. Volition for winning          | Eagerness to win. Emphasis on winning. Hates to lose.   |
| 5. Self-control                  | Self management. Can play as usual. No physical tension. Not discouraged by setbacks.                       |
| 6. Ability to relax              | Psychological relaxation free of anxiety, pressure and tension.   |
| 7. Concentration                 | Self-possession. Calmness. Focused attention.   |
| 8. Confidence                    | Confidence in own ability. Confidence in fully displaying skills and talents. Confidence in achieving goal. |
| 9. Decision                      | Decisiveness. Quickness in making decisions. Decisions made with no fear of failure.                        |
| 10. Predictive ability           | Successful strategic planning. Strategic flexibility. Strategy leading to victory.                          |
| 11. Judgement                    | Precise judgement. Cool judgement. Quick judgement.   |
| 12. Cooperation                  | Teamwork. Spirit of unity. Collaboration. Encouragement.  |
| 13. Lie Scale                    | Reliability of test results   |

7. Guidance is given to the athlete or athletes on the importance of strengthening psychological aspects, based on the test results.

DIAGNOSTIC INVENTORY OF PSYCHOLOGICAL COMPETITIVE ABILITY  
FOR ATHLETES (DIPCA.2)

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DIAGNOSTIC INVENTORY OF PSYCHOLOGICAL STATE BEFORE COMPETITION  
(DIPS-B. 1)

by Mikio Tokunaga

Name :		Date of answer : year ( ) month ( ) day ( ), day of the week ( )	
(1) How many days before competition? ( ) days	(2) Gender: 1. male 2. female	(3) Age : ( )	
(4) Age category : Junior high --- 1 st, 2nd, 3rd Senior high --- 1 st, 2nd, 3rd		College/university --- 1 st, 2nd, 3rd, 4th year Non-student --- younger than 30, 30 or older	
(5) Name of the club you belong to : ( )		(7) Length of experience in this sport :	
(6) Are you a regular member? 1. Regular 2. Semi-regular 3. Not regular		1. 1 to 2 years 2. 3 to 4 years 3. 5 to 9 years 4. 10 years or more	
(8) Participation experience in prefectural-level or regional-level competition : 1. None 2. 1 or 2 times 3. 3 or 4 times 4. 5 or more times			
(9) Participation experience in national-level competitions : 1. None 2. 1 or 2 times 3. 3 or 4 times 4. 5 or more times			

Test purpose and method:

This test determines an athlete's psychological condition before competition. It is important for athletes to be psychologically prepared for the day of competition to achieve the best results and to bring their skills and talents fully into play. Honestly answer how you feel (your mental condition).

Read each question in the order it is given and circle the number for the most appropriate answer from 1 to 5 in the right-hand column. Every question from 1 to 22 needs to be answered.

	1. Not at all so	2. Seldom so	3. Occasionally so	4. Frequently so	5. Always so
Example: I am edgy as competition approaches-----	1	2	3	④	5
1. I can endure hard practice. -----	1	2	3	4	5
2. I get all hyped up. -----	1	2	3	4	5
3. I practice with the attitude of going to the limits of my abilities. -----	1	2	3	4	5
4. I want to win the next game by all means. -----	1	2	3	4	5
5. Before a game, I can't live as I normally do. -----	1	2	3	4	5
6. I get nervous about winning or losing. -----	1	2	3	4	5
7. Before a game, I can't concentrate on practicing. -----	1	2	3	4	5
8. I have confidence I can display my abilities. -----	1	2	3	4	5
9. I get various information to prepare for the game. -----	1	2	3	4	5
10. During practice my teammates and I cooperate well with each other. -----	1	2	3	4	5
11. I patiently do everything necessary to achieve good game results. -----	1	2	3	4	5
12. I have a fighting spirit for a game. -----	1	2	3	4	5
13. I practice with the thought, " I'll do my best. " -----	1	2	3	4	5
14. Winning the next game is more important than performance to me. -----	1	2	3	4	5
15. My physical condition ( sleeping well, having a good appetite, bowel movement ) is not as good. -----	1	2	3	4	5
16. I feel anxious about the next game. -----	1	2	3	4	5
17. I feel restless, as I do before a game. -----	1	2	3	4	5
18. I have confidence that I'll achieve my goals in the next game. -----	1	2	3	4	5
19. I make an accurate strategy for a game and I confirm it by visualizing it. -----	1	2	3	4	5
20. I value teamwork. -----	1	2	3	4	5

## Marking of DIPS-B. 1

### 1. Conversion of responses into scores

For 8 question items (No. 5, 6, 7, 11, 16, 17, 18, 22), the circled numbers are respectively converted into scores as follows:

1 → 5, 2 → 4, 3 → 3, 4 → 2, 5 → 1

For the remaining questions, each circled number itself is counted as the score.

### 2. Scoring by scale

Scores for questions are added in the corresponding scale.

Scale 1          Patience = Questions 1 + 12

Scale 2          Aggressiveness = Questions 2 + 13

Scale 3          Volition for self-realization = Questions 3 + 14

Scale 4          Volition for winning = Questions 4 + 15

Scale 5          Level of relaxation = Questions 6 + 17 + 18

Scale 6          Concentration = Questions 5 + 7 + 16

Scale 7          Confidence = Questions 8 + 19

Scale 8          Strategic planning = Questions 9 + 20

Scale 9          Cooperation = Questions 10 + 21

Scale 10        Lie Scale = Questions 11 + 22

### 3. Total score

To find the total score, scores for scales 1 to 9 are added, excluding scale 10.

### 4. Evaluation

The total score is evaluated in 5 levels in accordance with the table below.

Evaluation table of total score

Evaluation Time of test	1 (quite low)	2 (below average)	3 (average)	4 (superior)	5 (Excellent)
2 or 3 days before competition	70 or less	71 to 77	78 to 85	86 to 92	93 or more
1 or 2 weeks before competition	68 or less	69 to 75	76 to 83	84 to 90	91 or more
1 month before competition	65 or less	66 to 72	73 to 80	81 to 87	88 or more

(Evaluation must consider the time of the test.)



## 5. Psychological condition profile by scale

A psychological condition profile before competition is produced with scores by scale in the chart below

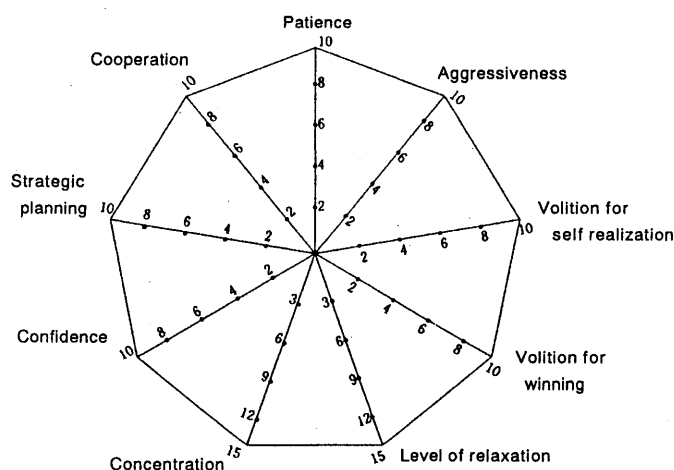


Fig.1 Psychological condition profile before competition

For each category, the higher the score is, the stronger the following tendencies are.

- |                                  |  |
|----------------------------------|--|
| 1. Patience                      | Endures hard training. Patience in achieving desired results.  |
| 2. Aggressiveness                | Burning with enthusiasm. Has a fighting spirit.  |
| 3. Volition for self realization | Willing to take challenges to develop potential. Ready to do ones best for one's own sake.   |
| 4. Volition for winning          | Eager to win.  |
| 5. Level of relaxation           | No anxiety. Calm. Not concerned about winning or losing.   |
| 6. Concentration                 | Concentrates on practice. Leads a well-ordered life. Satisfactory physical condition.  |
| 7. Confidence                    | Confident in fully displaying one's skills and talents and achieving a goal.   |
| 8. Strategic planning            | Has been collecting information on the competition. Has formulated a strategy and has been checking it with image training or other methods. |
| 9. Cooperation                   | Has been practicing in cooperation with other players on the team. Places importance on team work.   |
| 10. Lie Scale                    | Reliability of the test results  |

6. Guidance is given to the athlete or athletes in mental conditioning before competition, based on the test results.

DIAGNOSTIC INVENTORY OF PSYCHOLOGICAL STATE BEFORE COMPETITION (DIPS-B.1)

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## DIAGNOSTIC INVENTORY OF PSYCHOLOGICAL STATE DURING GOMPETITION (DIPS-D. 2)

by Mikio Tokunaga

Date of answer : year ( ) month ( ) day ( )

Name :	(1) Date of competition : year ( ) month ( ) day ( )	
(3) Appearance : 1. played throughout the event 2. Started the event, but pulled-out in the middle 3. Entered in the middle of the event	(2) Name of competition : ( )	
	(4) Competition form: 1. Singles 2. doubles 3. team 4. other( )	(5) Event: 1. ( ) match of the tournament, 2. Preliminary, main match
(6) Result : (record, score, ranking, win, loss, batting average, etc.)		

1. Test purpose and method:

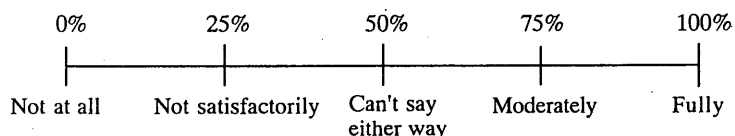
This test determines whether or not you were in a desirable psychological state during competition. Remember how you behaved and how you felt during competition and answer each of the following questions, 1 to 10, by circling the number for the most appropriate answer from 1 to 5 in the right-hand column. Only those who actually participated in the competition should respond.

	1. Not at all so	2. Somewhat so	3. Neither	4. Moderately so	5. Very much so
Example: Tension made my hands and feet tremble during competition. ----- ①		2	3	4	5
1. I was able to fight to the end without giving up. ----- 1		2	3	4	5
2. I had a lot of fighting spirit in me. ----- 1		2	3	4	5
3. I competed with the feeling I would achieve my personal objectives. ----- 1		2	3	4	5
4. I had a strong will to win. ----- 1		2	3	4	5
5. I competed as usual without losing my own self-control. --- 1		2	3	4	5
6. I competed without getting too nervous thinking about winning or losing. ----- 1		2	3	4	5
7. I was able to concentrate on the game. ----- 1		2	3	4	5
8. I was confident of myself. ----- 1		2	3	4	5
9. My game strategy and situational decisions went well. ---- 1		2	3	4	5
10. Between and during the game, I encouraged and cooperated with my teammates quite well. ----- 1		2	3	4	5

2. Were your goals achieved ?

- 1) Goals concerning result (win, loss, etc.) ----- (1) achieved (2) unachieved
- 2) Goals concerning performance ----- (1) fully achieved (2) moderately achieved (3) unachieved

3. How well do you think you were able to bring your skill and talents into play ? → ( ) %



4. State whatever you felt after the competition.

## Marking of DIPS-D. 2

### 1. Conversion of responses into score

The circled numbers themselves for questions 1 to 10 are added to find the total score.

### 2. Evaluation

The total score is evaluated in 5 levels in accordance with the table below.

Evaluation	1 (quite low)	2 (below average)	3 (average)	4 (superior)	5 (excellent)
Score	32 or less	33 to 36	37 to 42	43 to 46	47 or more

### 3. Guidance is given to the athlete or athletes in mental aspects to improve their psychological condition during competition and their goal-achievement levels, and to display their skills and talents more fully.

#### DIAGNOSTIC INVENTORY OF PSYCHOLOGICAL STATE DURING COMPETITION (DIPS-D.2)

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## 概 要

### 心理的競技能力診断検査，試合前の心理状態診断検査及び試合中の心理状態診断検査の調査表と診断法

スポーツ選手の心理的特徴を診断するために「特性」をみる「心理的競技能力診断検査」を開発した。また、「状態」をみる「試合前の心理状態診断検査」及び「試合中の心理状態診断検査」も作成した。これらの3つの検査法の調査表と診断法を紹介した。今後、これらの3つの診断検査を状況に応じて有効に利用することにより、スポーツ選手の心理面の強化に役立つものと考えられる。それぞれの特徴は以下のとおりである。

#### 1. 心理的競技能力診断検査(DIPCA.2, Diagnostic Inventory of Psychological Competitive Ability for Athletes)

**特 色**：スポーツ選手の一般的な心理的傾向としての心理的競技能力(通称，精神力)を12の内容(忍耐力，闘争心，自己実現意欲，勝利意欲，リラックス能力，集中力，自己コントロール能力，自信，決断力，予測力，判断力，協調性)に分けて診断する。スポーツ選手としての心理面の長所・短所を診断できる。メンタル強化の第1歩となる。

**検査方法**：スポーツの試合場面について52個の質問を順々に読み，回答欄に答えを記入する。

**検査対象**：中学・高校・大学・社会人のスポーツ選手  
**検査時間**：約15分間

#### 2. 試合前の心理状態診断検査(DIPS-B. 1, Diagnostic Inventory of Psychological State Before Competition)

**特 色**：試合前の心理的な状態を診断することができる。とくに試合に向けて十分な心理的準備(忍耐力，闘争心，勝利意欲，自己実現意欲，リラックス度，集中度，自信，作戦思考度，協調度)が，できているかをチェックし，心理的コンディショニングを指導できる。

**検査方法**：試合前1か月位から1～2日前までの期間に，試合についての気持ちを20個の質問でチェックする。

**検査対象**：中学・高校・大学・社会人のスポーツ選手  
**検査時間**：5～10分

#### 3. 試合中の心理状態診断検査(DIPS-D. 2, Diagnostic Inventory of Psychological State During Competition)

**特 色**：望ましい心理状態で試合ができたかどうかを，試合終了後にチェックする。また，目標の達成度，実力発揮度の自己評価を調査する。常に望ましい心理状態で試合ができ，実力発揮度が高くなり，その確率が安定するように指導できる。

**検査方法**：試合終了後に試合中の心理状態について10個の質問に答える。

**検査対象**：中学・高校・大学・社会人のスポーツ選手  
**検査時間**：約5分間