

Part VII: Test of Performance Strategies

Directions: Each of the following items describes a specific situation that you may have encountered in your training and competition. **Think back to the prime of your career**, read each statement, and circle the appropriate number to the right of the statement to indicate how you usually felt.

	Never	Rarely	Sometimes	Often	Always
1. I set realistic but challenging goals for practice.....	1	2	3	4	5
2. I say things to myself to help my practice performance.....	1	2	3	4	5
3. During practice, I visualize successful past performances.....	1	2	3	4	5
4. My attention wanders while I am training.....	1	2	3	4	5
5. I practice using relaxation techniques at workouts.....	1	2	3	4	5
6. I practice a way to relax.....	1	2	3	4	5
7. During competition, I set specific result goals for myself.....	1	2	3	4	5
8. When the pressure is on at competitions, I know how to relax.....	1	2	3	4	5
9. My self-talk during competition is negative.....	1	2	3	4	5
10. During practice, I don't think about performing much – I just let it happen.....	1	2	3	4	5
11. I perform at competitions without consciously thinking about it.....	1	2	3	4	5
12. I rehearse my performance in my mind before practice.....	1	2	3	4	5
13. I can raise my energy level at competitions when necessary.....	1	2	3	4	5
14. During competition, I have thoughts of failure.....	1	2	3	4	5
15. I use practice time to work on my relaxation technique.....	1	2	3	4	5
16. I manage my self-talk effectively during practice.....	1	2	3	4	5
17. I am able to relax if I get too nervous at a competition.....	1	2	3	4	5
18. I visualize my competition going exactly the way I want it to go.....	1	2	3	4	5
19. I am able to control distracting thoughts when I am training.....	1	2	3	4	5
20. I get frustrated and emotionally upset when practice does not go well.....	1	2	3	4	5
21. I have specific cue words or phrases that I say to myself to help my performance during competition.....	1	2	3	4	5
22. I evaluate whether I achieve MY competition goals.....	1	2	3	4	5
23. During practice, MY movements and skills just seem to flow naturally from one to another.....	1	2	3	4	5
24. When I make a mistake in competition, I have trouble getting my concentration back on track.....	1	2	3	4	5

	Never	Rarely	Sometimes	Often	Always
25. When I need to, I can relax myself at competitions to get ready to perform.	1	2	3	4	5
26. I set very specific goals for competition.	1	2	3	4	5
27. I relax myself at practice to get ready.	1	2	3	4	5
28. I psych myself up at competitions to get ready to perform.	1	2	3	4	5
29. At practice, I can allow the whole skill or movement to happen naturally without concentrating on each part of the skill.	1	2	3	4	5
30. During competition, I perform on 'automatic pilot'.	1	2	3	4	5
31. When something upsets me during a competition, my performance suffers.	1	2	3	4	5
32. I keep my thoughts positive during competitions.	1	2	3	4	5
33. I say things to myself to help my competitive performance.	1	2	3	4	5
34. At competitions, I rehearse the feel of my performance in my imagination.	1	2	3	4	5
35. I practice a way to energize myself.	1	2	3	4	5
36. I manage my self-talk effectively during competition.	1	2	3	4	5
37. I set goals to help me use practice time effectively.	1	2	3	4	5
38. I have trouble energizing myself if I feel sluggish during practice.	1	2	3	4	5
39. When things are going poorly in practice, I stay in control of myself emotionally.	1	2	3	4	5
40. I do what needs to be done to get psyched up for competitions.	1	2	3	4	5
41. During competition, I don't think about performing much - I just let it happen.	1	2	3	4	5
42. At practice, when I visualize my performance, I imagine what it will feel like.	1	2	3	4	5
43. I find it difficult to relax when I am too tense at competitions.	1	2	3	4	5
44. I have difficulty increasing my energy level during workouts.	1	2	3	4	5
45. During practice, I focus my attention effectively.	1	2	3	4	5
46. I set personal performance goals for a competition.	1	2	3	4	5
47. I motivate myself to train through positive self-talk.	1	2	3	4	5
48. During practice, sessions I just seem to be in a flow.	1	2	3	4	5
49. I practice energizing myself during training sessions.	1	2	3	4	5

	Never	Rarely	Sometimes	Often	Always
50. I have trouble maintaining my concentration during long practices.....	1	2	3	4	5
51. I talk positively to myself to get the most out of practice.....	1	2	3	4	5
52. I can increase my energy to just the right level for competitions.....	1	2	3	4	5
53. I have very specific goals for practice.....	1	2	3	4	5
54. During competition, I play/perform instinctively with little conscious effort.....	1	2	3	4	5
55. I imagine my competitive routine before I do it at a competition.....	1	2	3	4	5
56. I imagine screwing up during a competition.....	1	2	3	4	5
57. I talk positively to myself to get the most out of competitions.....	1	2	3	4	5
58. I don't set goals for practices, I just go out and do it.....	1	2	3	4	5
59. I rehearse my performance in my mind and at competitions.....	1	2	3	4	5
60. I have trouble controlling my emotions when things are not going well at practice.....	1	2	3	4	5
61. When I perform poorly in practice, I lose my focus.....	1	2	3	4	5
62. My emotions keep me from performing my best at competitions.....	1	2	3	4	5
63. My emotions get out of control under the pressure of competition.....	1	2	3	4	5
64. At practice, when I visualize my performance, I imagine watching myself as if on a video replay.....	1	2	3	4	5

Table 3. Factor loadings for competition items by subscale

Subscale	Item	Factor loading	Error
Goal-setting	I set very specific goals for competition	0.752	0.659
	I set personal performance goals for a competition	0.751	0.661
	During competition I set specific result goals for myself	0.730	0.683
	I evaluate whether I achieve my competition goals	0.595	0.804
Automaticity	During competition, I don't think about performing much – I just let it happen	0.732	0.682
	During competition I perform on 'automatic pilot'	0.660	0.751
	During competition, I play/perform instinctively with little conscious effort	0.650	0.760
	I perform at competitions without consciously thinking about it	0.549	0.836
	My emotions keep me from performing my best at competitions	0.811	0.585
Emotional control	My emotions get out of control under the pressure of competition	0.776	0.631
	When something upsets me during a competition, my performance suffers	0.469	0.883
	When I make a mistake in competition, I have trouble getting my concentration back on track	0.412	0.911
Imagery	I rehearse my performance in my mind at competitions	0.845	0.535
	I imagine my competitive routine before I do it at a competition	0.815	0.579
	At competitions, I rehearse the feel of my performance in my imagination	0.710	0.704
	I visualize my competition going exactly the way I want	0.559	0.829
Activation	I do what needs to be done to get psyched up for competitions	0.740	0.672
	I psych myself up at competitions to get ready to perform	0.599	0.801
	I can increase my energy to just the right level for competitions	0.573	0.819
	I can raise my energy level at competitions when necessary	0.490	0.872
Self-talk	I say things to myself to help my competitive performance	0.736	0.677
	I manage my self-talk effectively during competition	0.716	0.698
	I have specific cue words or phrases that I say to myself to help my performance during competition	0.541	0.841
	I talk positively to myself to get the most out of competitions	0.759	0.651
Relaxation	I am able to relax if I get too nervous at a competition	0.815	0.580
	When I need to, I can relax myself at competitions to get ready to perform	0.745	0.667
	When pressure is on at competitions, I know how to relax	0.708	0.706
	I find it difficult to relax when I am too tense at competitions	0.571	0.821
Negative thinking	My self-talk during competition is negative	0.688	0.725
	I keep my thoughts positive during competitions	0.648	0.761
	During competition I have thoughts of failure	0.644	0.765
	I imagine screwing up during a competition	0.634	0.773

et al. (1999) provided some evidence to support the factorial validity of the TOPS among a heterogeneous sample of adults and adolescents, researchers should test the generalizability of measures for different populations of interest (Schutz and Gessaroli, 1993; Schutz, 1994; Anastasi and Urbina, 1997). Researchers should also use the most stringent methods to assess validity (Schutz, 1994). The present study was designed to address both objectives by testing the measurement models for competition and practice presented by Thomas and associates, using confirmatory techniques.

Results indicated that neither measurement model adequately fitted the data, although the competition model showed better fit than the practice model. At the subscale level, many scales showed very good fit, others less so. More specifically, for the competition items, the automaticity, goal-setting, relaxation and self-talk scales showed good fit, whereas the activation, emotional control, imagery and negative thinking scales could be improved significantly. For the practice items, the attentional control, emotional control, goal-setting, imagery and self-talk scales showed good fit, whereas

Table 1. Sport Motivation Scale subscale scores for this sample and comparison studies

SMS Subscales	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Range</u>
Amotivation	5.7	2.50	6.89	3.00	6.98	3.10	6.15	3.77	4 - 28
Extrinsic Motivation - Extrinsic regulation	9.7	10.82	10.82	3.59	11.56	3.72	12.52	5.43	4 - 28
Extrinsic Motivation - Introjection	12.7	12.46	12.46	4.04	12.29	3.70	20.84	5.22	4 - 28
Extrinsic Motivation - Identified	12.6	13.13	13.13	3.24	12.90	3.15	18.14	4.57	4 - 28
Intrinsic Motivation - To know	18.7	13.05	13.05	3.37	12.42	3.47	18.85	5.78	4 - 28
Intrinsic Motivation - Accomplishment	23.3	14.88	14.88	3.40	14.17	3.30	21.98	4.56	4 - 28
Intrinsic Motivation - Experience simulation	21.5	14.57	14.57	3.49	14.76	2.99	22.51	3.96	4 - 28
	This Sample		Female University Athletes (Pelletier et al.,1995)	Male University Athletes (Pelletier et al.,1995)	Quebec Junior College Athletes (Pelletier et al.,1995)				

Test of Performance Strategies

The TOPS yields sixteen subscale scores, assessing eight psychological skill performance strategies in both practice and competition contexts (See Table 2). Means and standard deviations for all competition subscales are contained in Table 2 and show that the Olympians exhibited the highest scores for goal setting, activation, relaxation and emotional control. For the practice context, highest scores were obtained for goal-setting and attentional control.

Comparisons of the Olympians practice and competition TOPS scores to those of 65 international athletes contained in the original scale development work of Thomas et al. (1999) are also contained in Table 2. An inspection of this table reveals that the Olympic athletes in this study scored substantially higher in the competition context on emotional control, automaticity, and relaxation and lower than the international athletes on negative thinking. Relative to practice strategies the Olympians scored higher on goal setting and attentional control and lower on imagery.

Table 2. Test of Performance Strategies scores for this study and comparison studies

COMPETITION STRATEGIES					
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Range</u>
Self-Talk	3.63	0.67	3.71	0.87	1 - 5
Emotional Control	4.08	0.50	3.77	0.59	1 - 5
Automaticity	3.65	0.65	3.10	0.76	1 - 5
Goal-Setting	4.23	0.84	4.11	0.66	1 - 5
Imagery	3.80	1.32	3.98	0.74	1 - 5
Activation	4.18	0.64	4.11	0.56	1 - 5
Relaxation	4.10	0.21	3.82	0.62	1 - 5
Negative Thinking	1.63	0.56	1.93	0.65	1 - 5
PRACTICE STRATEGIES					
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>Range</u>
Self-Talk	3.53	0.63	3.58	0.70	1 - 5
Emotional Control	3.63	0.60	3.47	0.68	1 - 5
Automaticity	3.30	0.81	3.35	0.52	1 - 5
Goal-Setting	4.15	0.52	3.59	0.77	1 - 5
Imagery	3.20	1.12	3.52	0.71	1 - 5
Activation	3.18	0.44	3.15	0.66	1 - 5
Relaxation	2.78	1.01	2.92	0.66	1 - 5
Attentional Control	4.00	0.46	3.63	0.59	1 - 5
	This Sample		International Athletes (Thomas et al., 1999)		

Athletic Coping Skills Inventory-28

Each of the six subscales of ACSI-28 has a potential range of 0 (low) to 12 (high). Additionally, the average score of the subscales yields an overall personal coping resource score. Table 3 contains the ACSI-28 means and standard deviations for the 10 Olympic champions sampled. The athletes' average scores were highest on concentration, goals setting and mental preparation, peaking under pressure, and freedom from worry. Lowest scores came on the coping with adversity and confidence subscales, although these were both almost 9 on the 12-point scale.