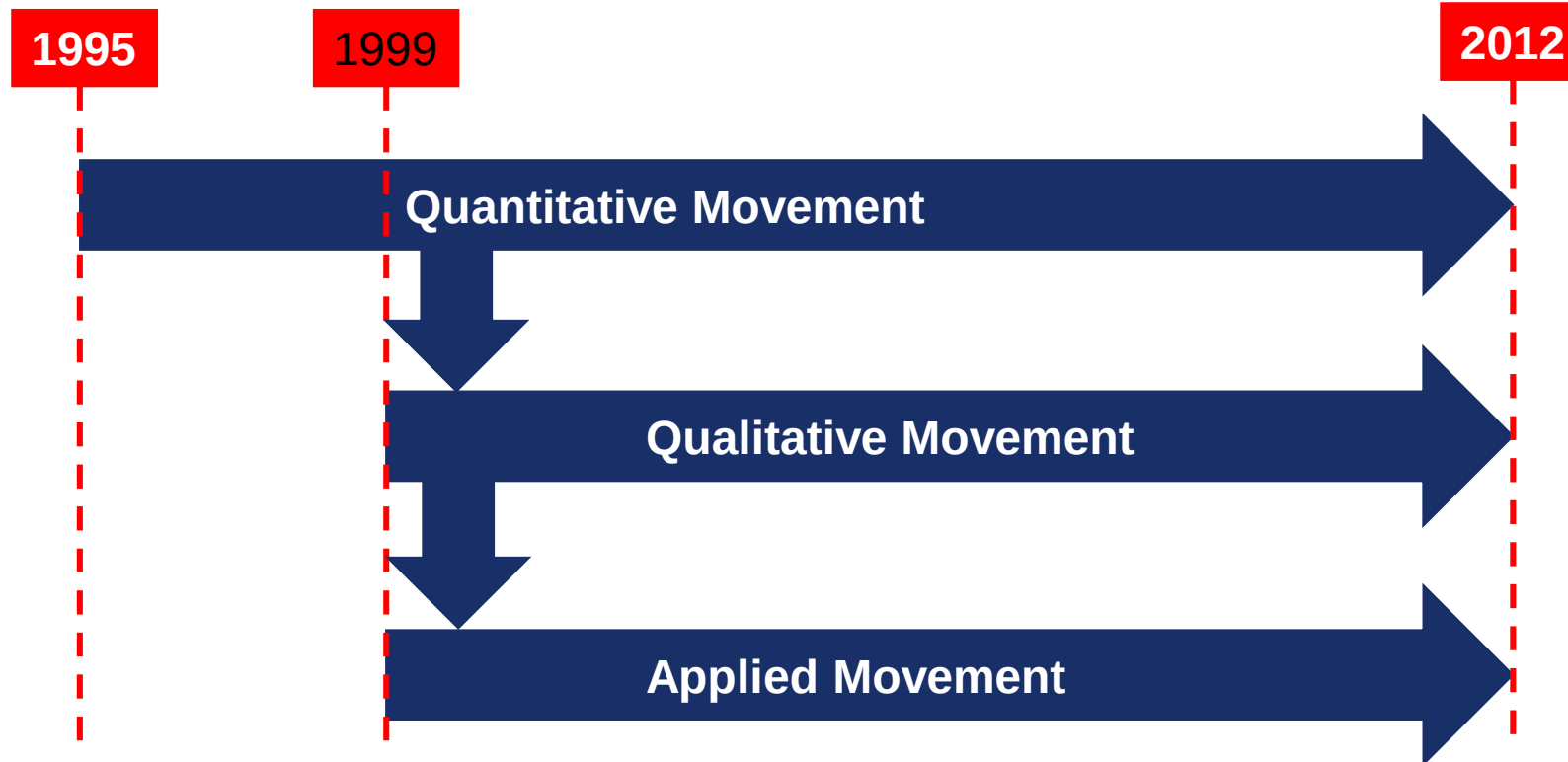


Competitive Anxiety: **Intervention Research & Practical** **implications**

Level 6 Sport and Exercise Psychology

Alison Connaughton



See Wagstaff, Neil, Mellalieu, and Hanton (2011)

What do we know so far

Implications of Qualitative research;

- Facilitative interpretation developed throughout career
- Perception of control
- Use of Psych skills
- (imagery, goal setting, thought stopping, relaxation techniques)
- Pre-competition and Pre-race routines
- Intensity & frequency change over time towards event
- Control here is key & effective use of psych skills
- Facilitation is linked with SC
- Specific Somatic & Cognitive Symptoms can be viewed + or –
- Individual preference, perception of control, and rationalisation of symptom effect

What's Next

Interventions:

- Can we change / re–structure performers' interpretation?
- Can we influence perception of control in performers that may lead to positive interpretation?
- What role does Self-Confidence play in interpretation?
- **Practical implications for Interventions with Performers**

Is it possible to restructure negative anxiety interpretations that performers experience prior to stressful competitions?

Part Two: Reduction Vs. Re-structuring

Intervention: 'Traditional'

Intensity Reduction

'The Matching Hypothesis'

(Match the cure to the problem)

Morris, Davis and Hutchings (1981) - 'Test anxiety literature: compatible treatments = increased improvements in performance

Sport Psychology:

Conclusions

1. Maynard et al. (1995) Somatic Intervention
2. Maynard et al. (1995) Cognitive Intervention

Maynard et al. (1995) Somatic Intervention

'The Matching Hypothesis'

Applied over an 8 Week period

► Applied Relaxation

1. Progressive Muscular Relaxation
2. Release only
3. Cue controlled
4. Differential relaxation
5. Rapid relaxation
6. Application Training

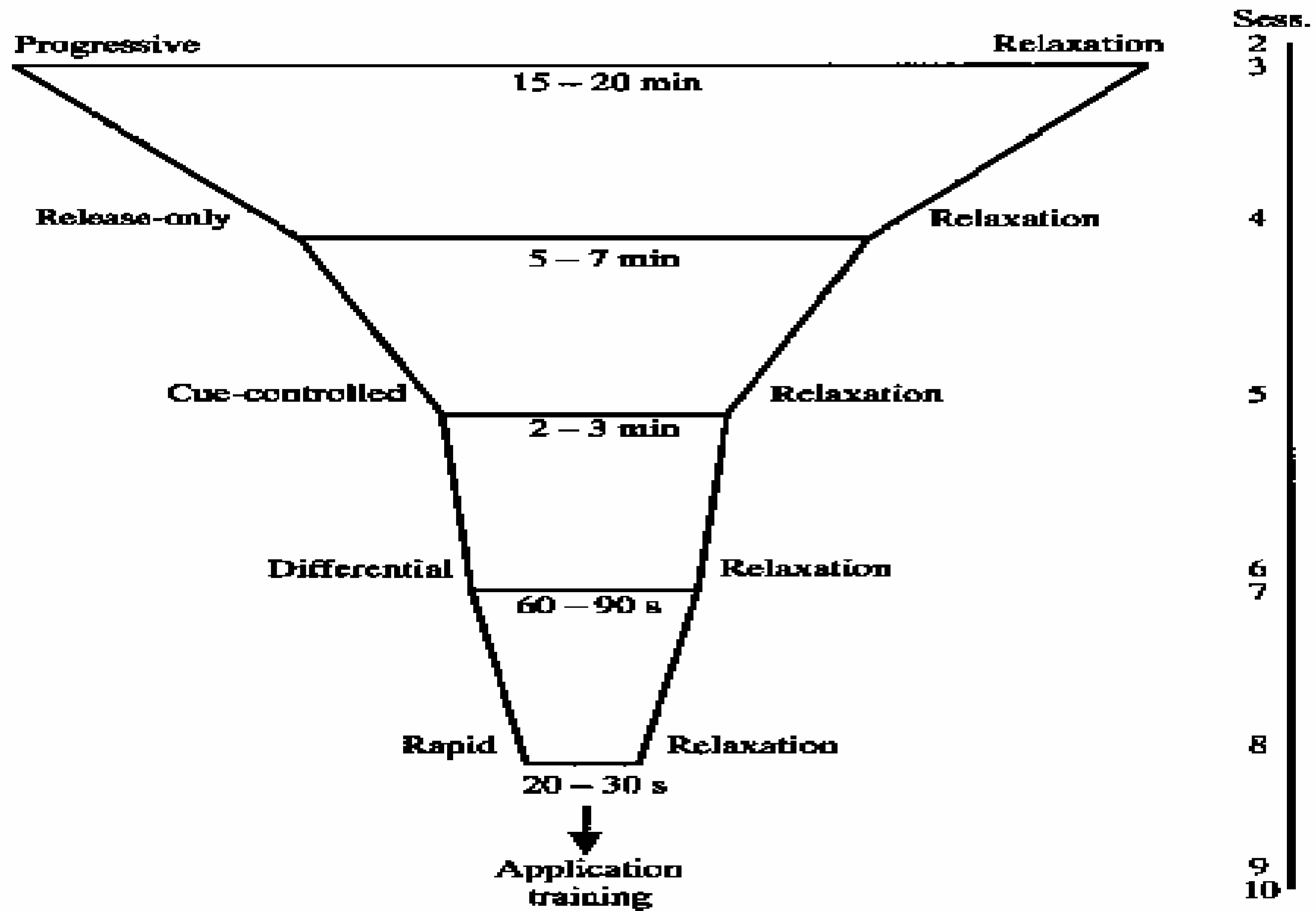


Figure 2.1: Different components of applied relaxation (modified from Ost, 1988 with permission)

Maynard et al. (1995) Cognitive Intervention

'The Matching Hypothesis'

Applied over a 12 Week period

- ▶ Positive thought control
 1. Thought stopping
 2. Negative counterstatement replacement
 3. Positive affirmation skills

Issues with matching

- ▶ Cross over effects (somatic technique affects cognitive responses and vice-versa).
- ▶ Techniques = Anxiety reduction
 - ▶ Positive effects of anxiety symptoms
- ▶ At odds with the Restructuring argument
 - ▶ Hanton and Jones (1999a)

Intervention:

Direction Re-structuring

- ▶ Hanton & Jones (1999b)
- ▶ Can debilitating interpretations be restructured?
 - ▶ Intervention paper
- ▶ 4 male, non-elite swimmers debilitating on somatic & cognitive scales.
- ▶ Participant 1 acted as a control
- ▶ Intervention Treatment based on restructuring rather than reducing anxiety related symptoms
- ▶ Intervention staggered for the 3 other participants.

Part 1:

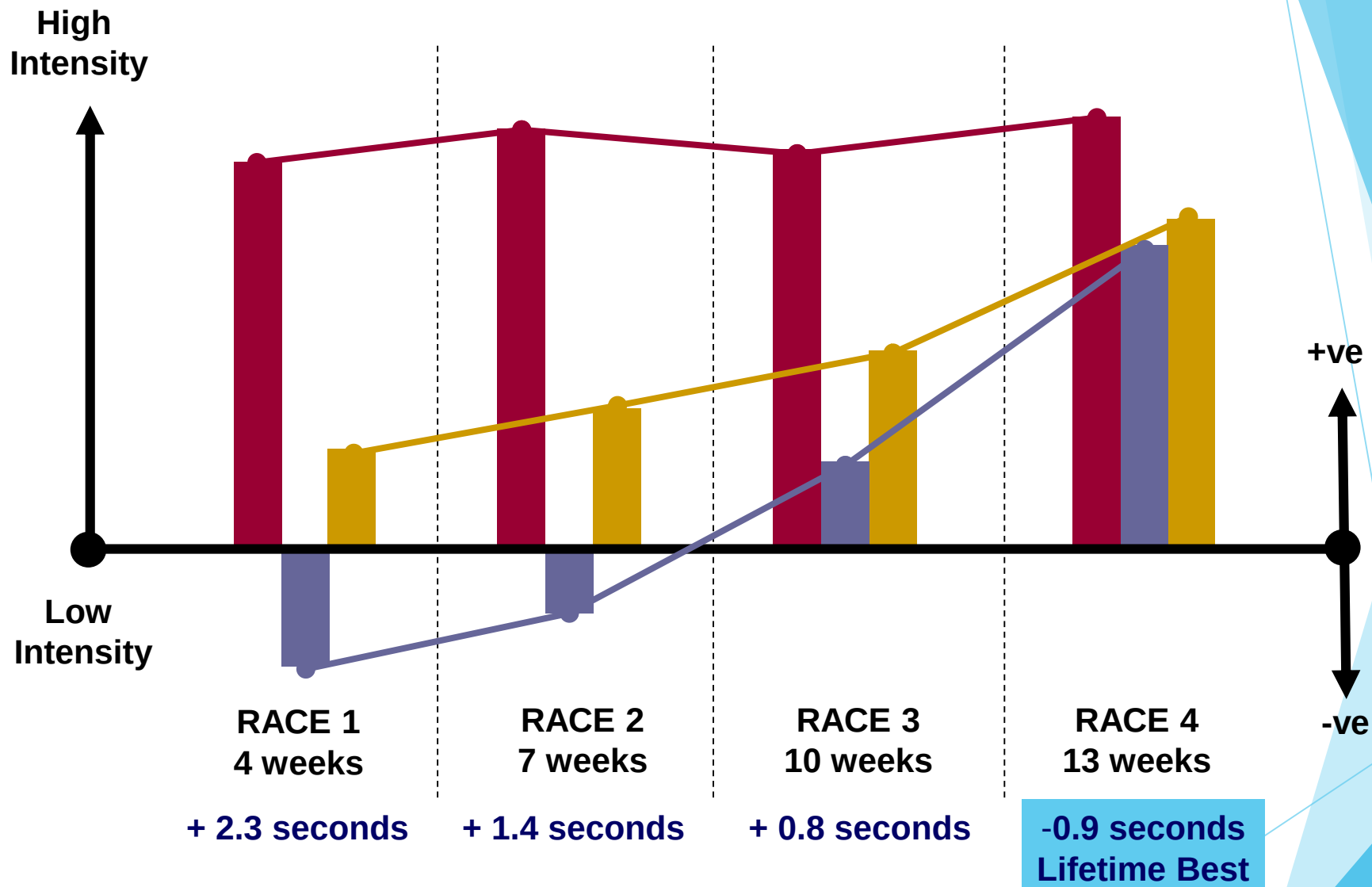
Pre-Competition Routine

- ▶ Goal Setting (performance & process goals)
 - ▶ Focus on goals within personal control
- ▶ Imagery
 - ▶ Restructure negative thoughts & feelings

Part 2:

Pre-Race Routine

- ▶ Positive Thinking & Self Talk
 - ▶ Recalling previous good performances
- ▶ Imagery (Positive)
- ▶ Self-Talk & Cue cards
 - ▶ Accept & enjoy symptoms = ↑ performance
- ▶ Physical warm-up



Intensity Direction Confidence

Results

- ▶ **Participant 1: Intensity & direction scores did not significantly change (control).**
- ▶ Participant 2: Intervention began at race 3
 - ▶ Intensity scores = no real change
 - ▶ Direction scores = CA (-10 to +8 to +10)
SA (-4 to +6 to +8)
- ▶ Participant 3: Intervention began at race 4
 - ▶ Intensity scores = CA no real change; SA erratic
 - ▶ Direction scores = CA (-6 to +12 to +14)
SA (-6 to +8 to +12)
- ▶ Participant 4: Intervention began at race 5
 - ▶ Intensity scores = no real change
 - ▶ Direction scores = CA (-2 to +3 to +4)
SA (-4 to +4 to +6)

Results

Follow up

- ▶ After 5 months - still facilitative
- ▶ Treatment resulted in improvement in swimming times
- ▶ Increased confidence

STUDY CONCLUSION

- ▶ Restructuring is possible

Restructuring Intervention: Temporal & Frequency

- ▶ **Thomas et al. (2007b)**
- ▶ Temporal anxiety responses and the use of psychological skills during the time preceding competition within elite level sport.
- ▶ Based of Thomas et al. (2007a) findings
 - ▶ **Debilitators: unable to effectively use psychological skills to 'control' intensity & frequency**

Method

3 Field Hockey players (international/national)

- ▶ Temporal application of psychological skills

- ▶ **imagery, rationalization and restructuring, goal-setting, and self-talk skills**

- ▶ Sensitive intra-individual measure of performance

- ▶ Notational analysis: Correct/incorrect performance option choice and positive/negative performance outcome.

- ▶ 3-phase temporal intervention

- ▶ Intervention effects were tested over a 10-match cycle in relation to associated anxiety symptoms

- ▶ throughout a 7-day cycle (6 days, 2 days, 1 day, 1 hour pre-competition),

- ▶ competitive field hockey performance

Procedure

▶ Phase 1: post-match review period

- ▶ Saturday to Monday (i.e., 7 to 5 days preceding next performance).

▶ Rationalization, restructuring and Imagery skills.

- ▶ Replace negative post-performance symptoms & images (naturally experienced at this phase).
 - ▶ With positive performance situations to counter their negative performance experiences.
 - ▶ **Developed a imagery routine and practice**

Procedure

▶ Phase 2: Two to one day pre-competition

- ▶ Rationalization, restructuring, Imagery & goal-setting skills.

▶ Similar to Phase I:

- ▶ Focus: was to overcome pre-performance negative symptoms.
- ▶ Setting performance & process goals

▶ Phase 3: Match day.

- ▶ Imagery, rationalization, restructuring, goal-setting, and self-talk skills.
 - ▶ positive statements of technical, task, or action-based descriptors.

Results

Anxiety

- ▶ CA Intensity remained similar to pre-intervention
- ▶ SA Intensity remained similar to pre-intervention
- ▶ SC Intensity increased following treatment

- ▶ CA Direction: dramatic impact from debilitating to facilitative for all time phases
- ▶ SA Direction: dramatic impact from debilitating to facilitative for all time phases
- ▶ SC Direction: more positive in nature

- ▶ CA Frequency: decrease in frequency for 3 time phases compared to pre-treatment
- ▶ SA Frequency: decrease in frequency for 3 time phases compared to pre-treatment
- ▶ SC Frequency: Increase in frequency for 3 time phases compared to pre-treatment

Performance

- ▶ Correct option choice increased and incorrect option choice decreased following intervention for all three participants

Further Reading:

- ▶ Hanton, S., Thomas, O., & Mellalieu, S.D. (2009). Management of competitive stress in elite sport. In B. Brewer (ed.), *International Olympic Committee (IOC) Sport Psychology Handbook* (pp. 30-42). Oxford: Wiley-Blackwell Publishing
- ▶ Thomas, O., Mellalieu, & Hanton, S. (2009). Stress management in applied sport psychology. In S.D. Mellalieu and S. Hanton (ed's.), *Advances in Applied Sport Psychology: A Review* (pp. 124-161). London: Routledge.

What about Confidence & Anxiety?

Skill Level Research

- ▶ Same level of anxiety
- ▶ Elite more facilitative
- ▶ Also, Elite are more confident

See Jones et al. (1994), Jones and Swain (1995), Hanton and Jones (1997), and Perry and Williams (1998)

Hanton, Mellalieu, & Hall (2004)

- ▶ Self-confidence *protects* against debilitating interpretations of anxiety
- ▶ Through the use of confidence management strategies
 - ▶ Mental rehearsal
 - ▶ Thought stopping
 - ▶ Positive Self-talk

Mellalieu, Neil and Hanton (2006)

For non-elite athletes

- ▶ Self-confidence has a moderating effect (on intensity)
- ▶ **Moderating Variable: Self-confidence**
 - Affects the relationship between**
 - ▶ **Anxiety Intensity**
 - and**
 - ▶ **Anxiety Direction**

Mellalieu, Neil and Hanton (2006)

For elite athletes

▶ Self-confidence has a **mediating** effect

▶ **Mediating Variable: Self-confidence**

Transforms/changes the meaning of:

▶ **Anxiety Intensity**

to affect the

▶ **Anxiety Direction**

Practical Implications for the Applied Sport Psychologist

- ▶ Same level of anxiety can be interpreted as either positive or negative by different people
- ▶ Attempting to reduce anxiety levels inappropriate if symptoms are perceived as facilitative
 - ▶ Possible Caution:
 - ▶ Activation state of sport
 - ▶ Level of sport Performer
- ▶ Frequency of anxiety related symptoms provides a clearer picture to help justify the timing of interventions prior to performance

Practical Implications (2)

- ▶ Before “Direction” consultants attempted to aid coping by reducing anxiety:
 - ▶ Mental
 - ▶ (Transcendental Meditation; Benson, 1976)
 - ▶ Physical
 - ▶ (Progressive Muscular Relaxation; Jacobson, 1930)
 - ▶ Multimodal Stress Management
 - ▶ (Stress Inoculation Training; Meichenbaum, 1975)

Practical Implications (3)

- ▶ **Exceptions**

- ▶ Fine neuromuscular control sports may benefit from relaxation (pistol shooting - c.f., Hanton, Jones & Mullen, 2000)

- ▶ **But**

- ▶ Sports requiring high physiological arousal adversely affected by relaxation

- ▶ **Requirement**

- ▶ Analyze nature of each sport and prerequisites for optimal performance

Practical Implications (4)

▶ Restructuring

- ▶ Advisable to restructure negative perceptions as opposed to relaxation in certain sports
- ▶ Learn range of psychological skills to restructure negative cognitions
- ▶ Restructuring process requires time to take effect (Psych skills not innate & require practice)
- ▶ Value of simple education in this process
 - ▶ (Interviews - external persuasion)

Practical Implications (5)

- ▶ **Antecedents**

- ▶ Preventing debilitating anxiety symptoms occurring in the first place (c.f., Hanton & Jones, 1997)
- ▶ E.g. Goals that performers feel are beyond attainment lead to debilitating interpretations (c.f., Jones & Hanton, 1996)

Practical Implications (6)

- ▶ **General Level Recommendation**

- ▶ Psychologists alerted to dangers of misinterpreting data from traditional questionnaires that assume anxiety is negative. Examine each individual precisely.

Critique

Conceptual issues

- **Some suggest that Facilitative interpretations unlikely to represent anxiety**

Burton and Naylor (2007)

- **Possibly more representative of:**
 - Excitement / psyched up / motivated
- **Critics misinterpreted concept of direction**

See Neil, Fletcher, Hanton, & Mellalieu (2007)

Method issues

- **Considers how individuals interpret anxiety with regards to upcoming performance**
- **Doesn't consider anxiety and actual performance!**
 - Neil, Wilson, Mellalieu, Hanton, and Taylor (2012)

Method issues

- **What's the major issue with focusing solely on anxiety?**
- **Does not consider other emotions:**
 - Anger
 - Frustration
 - Disappointment
 - Sadness
 - Happiness
 - Shame
 - Excitement

(Hardiness & Mental Toughness)

Intervention Considerations

- Many factors to consider before introducing an intervention
 - Evidence based!!!!
 - Reduction vs. restructure
 - Perception of control
 - Role of Self-Confidence
 - Stable vs. unstable sources (robust SC)
 - Sport Type
 - Rugby vs. pistol shooting
 - Level of Performer (elite / non-elite)
 - Temporal as well as pre-competition/game
 - Psychological skill usage

References:

- ▶ Hanton, S. and Jones, G. (1999a). The acquisition and development of cognitive skills and strategies. I: Making the butterflies fly in formation. *The Sport Psychologist*, 13, 1-21.
- ▶ Hanton, S. and Jones, G. (1999b). The effects of a multimodal intervention program on performers. II: Training the butterflies to fly in formation. *The Sport Psychologist*, 13, 22-41.
- ▶ Hanton, S., Thomas, O., & Mellalieu, S.D. (2009). Management of competitive stress in elite sport. In B. Brewer (ed.), *International Olympic Committee (IOC) Sport Psychology Handbook* (pp. 30-42). Oxford: Wiley-Blackwell Publishing
- ▶ Maynard, I.W., Hemmings, B., & Warwick-Evans, L. (1995). The effects of a somatic intervention strategy on competition state anxiety and performance in semi-professional soccer players. *The Sport Psychologist*, 9, 51-64.
- ▶ Maynard, I.W., Smith, M.J., & Warwick-Evans, L. (1995). The effects of a cognitive intervention strategy on competition state anxiety and performance in semi-professional soccer players. *Journal of Sport and Exercise Psychology*, 17, 428-446.
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