

Stress & Optimal Performance in top-level Sport

Juri Hanin,

KIHU, Jyväskylä

First Beat Stressi Seminaari:

”Tavoittena hyvinvoiva ja jaksava työyhteisö”

19.05.2009 Jyväskylä

Sport as a *high-achievement* setting:

- Highly significant personally & socially
- Aims at consistent excellence
- Extremely demanding physically & mentally
- Requires highly developed resources
- A need to develop/maintain own resources
- Requires careful preparation & training
- Involves stressful environment
- High social visibility

Two Focuses in Psychology



Enhancing strengths

- Excellence
- Peak performance
- Well-being
- Mental health
- Optimism
- Growth, Development

Healing weaknesses

- Deficiencies, errors
- Limitations, barriers
- Overtraining
- Burn-out
- Pessimism
- Distress, Depression

Subjective Well-being

1. Life satisfaction,
2. Positive affect (PA)
3. Negative affect (NA) ?

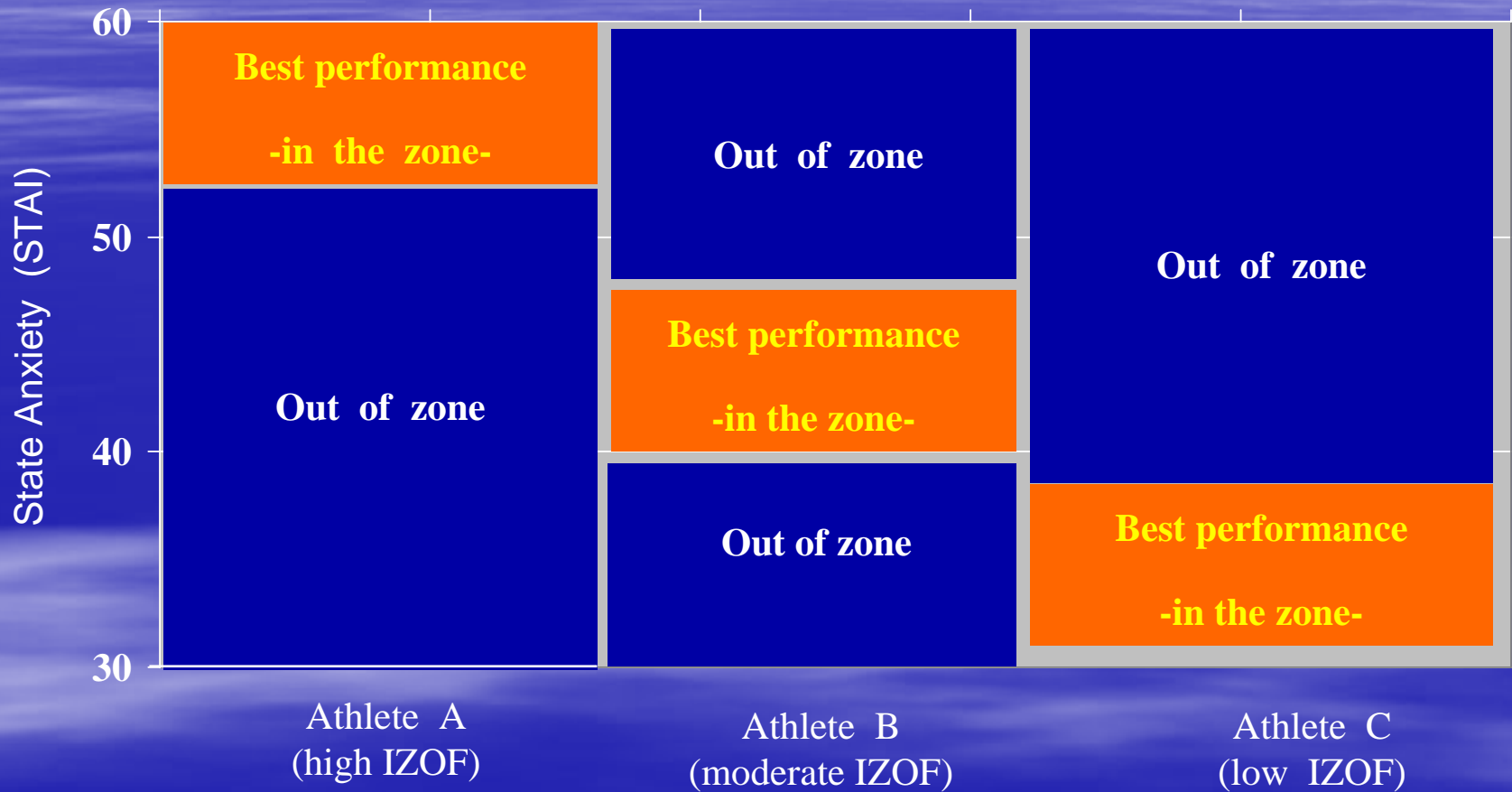
Context / setting ?

Research evidence in elite sports

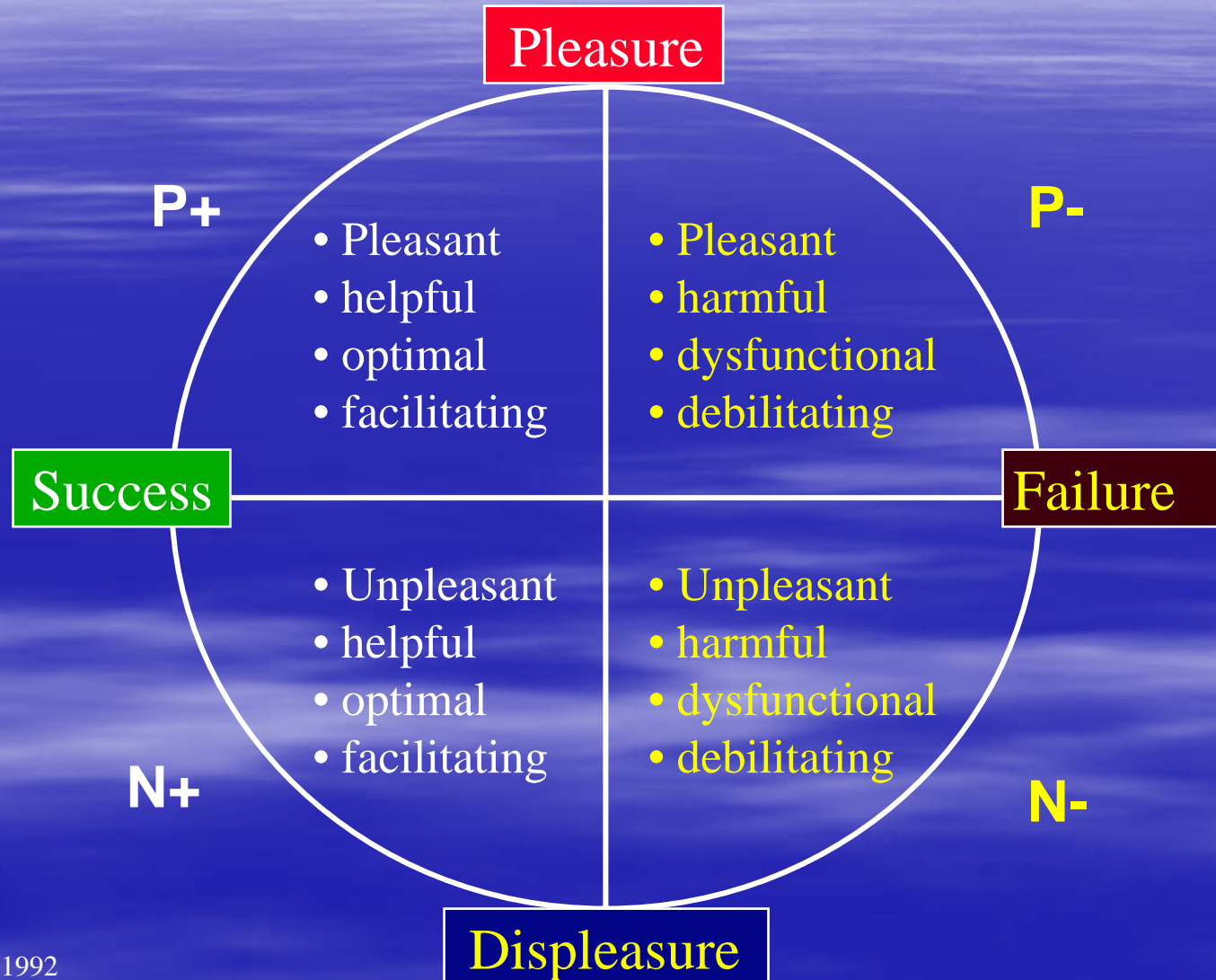
- Unpleasant emotions are **NOT** always functionally bad
- Pleasant emotions are **NOT** always functionally good
- A more performance related focus is warranted:
 - Idiosyncratic rather than normative experiences
 - A constellation of pleasant & unpleasant experiences
 - Interactive effects of pleasant & unpleasant experiences
 - Emotion & non-emotion experiences

* Hanin, 1997, 2000, 2004, 2007; Harmisson, 2006; Lazarus, 2000; Robazza et al. 2006

Individual Zones of Optimal Functioning



Emotion content



* Hanin, 1992

Idiosyncratic emotion labels

Poor

Success

Poor

N-

N+

P+

P-

Athlete # 1

- Scared
- Panicky
- Discouraged
- Sluggish

- Aggressive
- Concerned
- Anxious
- Intense

- Motivated
- Confident
- Energetic
- Excited

- Comfortable
- Calm
- Happy
- Satisfied

Athlete # 2

- Anxious
- Tired
- Depressed
- Sad

- Angry
- Worried
- Irritated
- Tense

- Willing
- Relaxed
- Sure
- Focused

- Nice
- Calm
- Pleased
- Content

Emotions in hockey (N=97)

Positive

Negative

Helpful (P+)

- Energetic
- Confident
- Charged
- Certain
- Motivated
- Purposeful
- Willing
- Cheerful
- Enthusiastic
- Alert

Harmful (P-)

- Easy-doing
- Tranquil
- Satisfied
- Overjoyed
- Excited
- Pleasant
- Comfortable
- Calm
- Exalted
- Nice

Helpful (N+)

- Tense
- Dissatisfied
- Vehement
- Attacking
- Intense
- Angry
- Irritated
- Nervous
- Provoked
- Restless

Harmful: (N-)

- Tired
- Sluggish
- Unwilling
- Uncertain
- Downhearted
- Depressed
- Distressed
- Sorrowful
- Afraid
- Strained

Emotion State Profile (ESP- 40)

- Tired
- Sluggish
- Reluctant
- Doubtful
- Sad
- Unhappy
- Upset
- Distressed
- Fearful
- Worried
- Tense
- Dissatisfied
- Furious
- Attacking
- Intense
- Angry
- Irritated
- Nervous
- Annoyed
- Restless
- Energetic
- Confident
- Charged
- Willing
- Motivated
- Purposeful
- Certain
- Cheerful
- Enthusiastic
- Alert
- Easy-going
- Tranquil
- Satisfied
- Joyful
- Happy
- Pleased
- Comfortable
- Calm
- Content
- Relaxed

N- = 10-40

N+ = 10-40

P+ = 10-40

P- = 10-40

Tunnetilaprofiili (ESP - 40)

- Väsynyt
- Laiska
- Haluton
- Epävarma
- Veltto
- Masentunut
- Allapäin
- Ahdistunut
- Huolestunut
- Järkyttynyt
- Tyytymätön
- Jännitynyt
- Hyökkävä
- Kiihkeä
- Kiivas
- Ärtynyt
- Ärsyyntynyt
- Hermostunut
- Vihainen
- Suuttunut
- Energinen
- Motivoitunut
- Latautunut
- Halukas
- Luottavainen
- Määrätietoinen
- Varma
- Innostunut
- Levännyt
- Sähkökä
- Mukava
- Huoleton
- Tyytyväinen
- Tyyni
- Ylimielinen
- Huojentunut
- Miellyttävä
- Iki-ihastunut
- Hurmioitunut
- Peloton

UD = 10-40

UO = 10-40

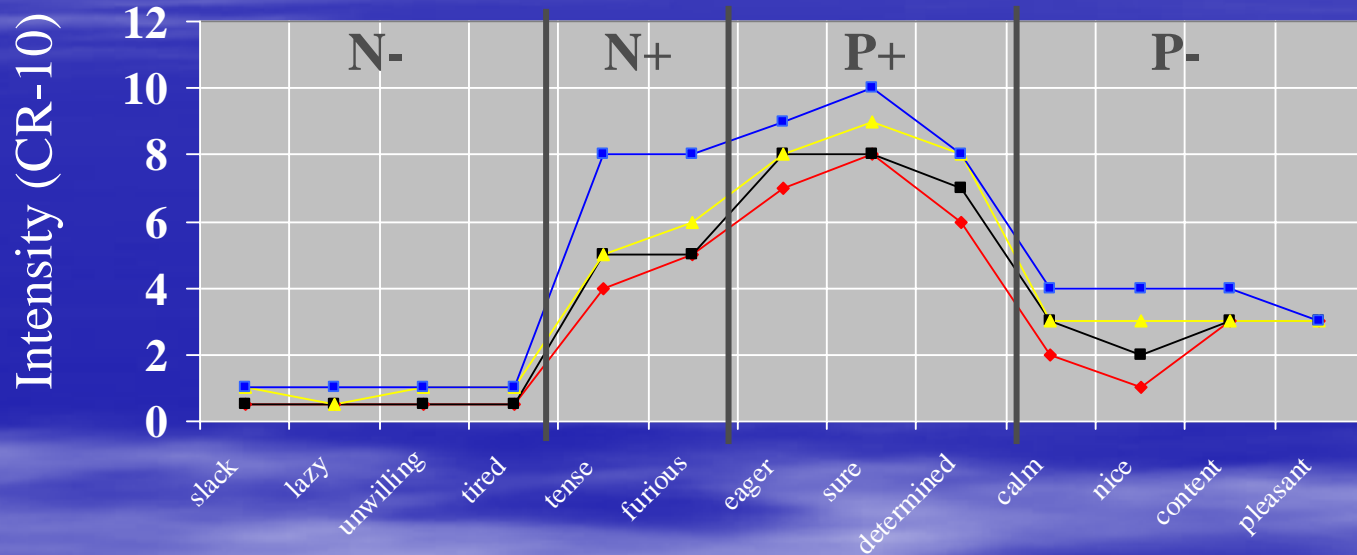
PO = 10-40

PD = 10-40

The IZOF “iceberg” emotional profile

Emotions prior to good performance

Dysfunctional Optimal emotions Dysfunctional

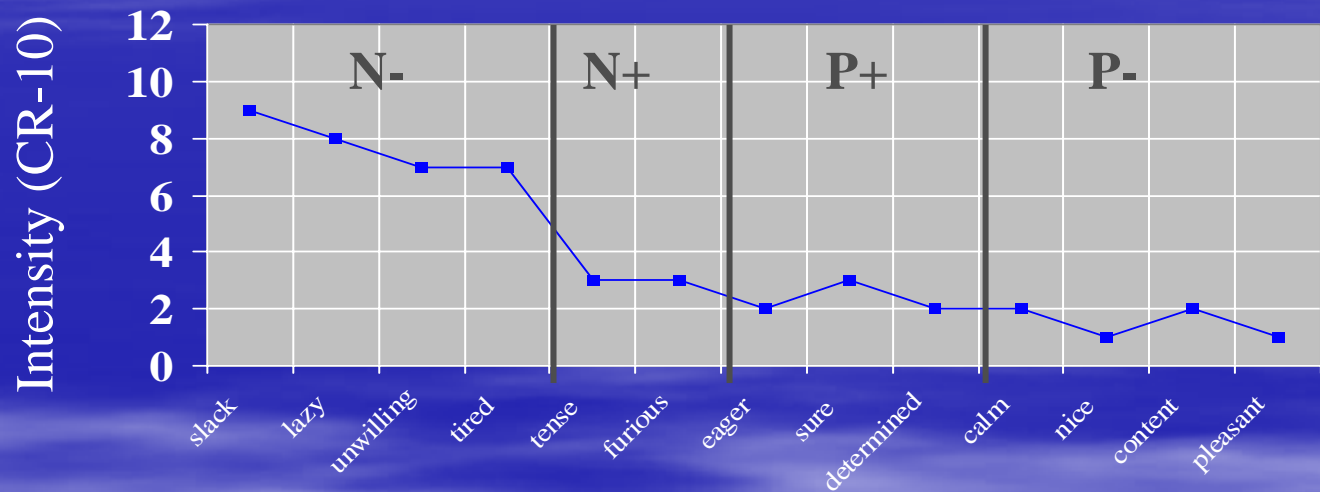


Performance related emotions

The “cavity”- shaped IZOF emotion profile

Prediction of average & poor performance

Dysfunctional Optimal emotions Dysfunctional

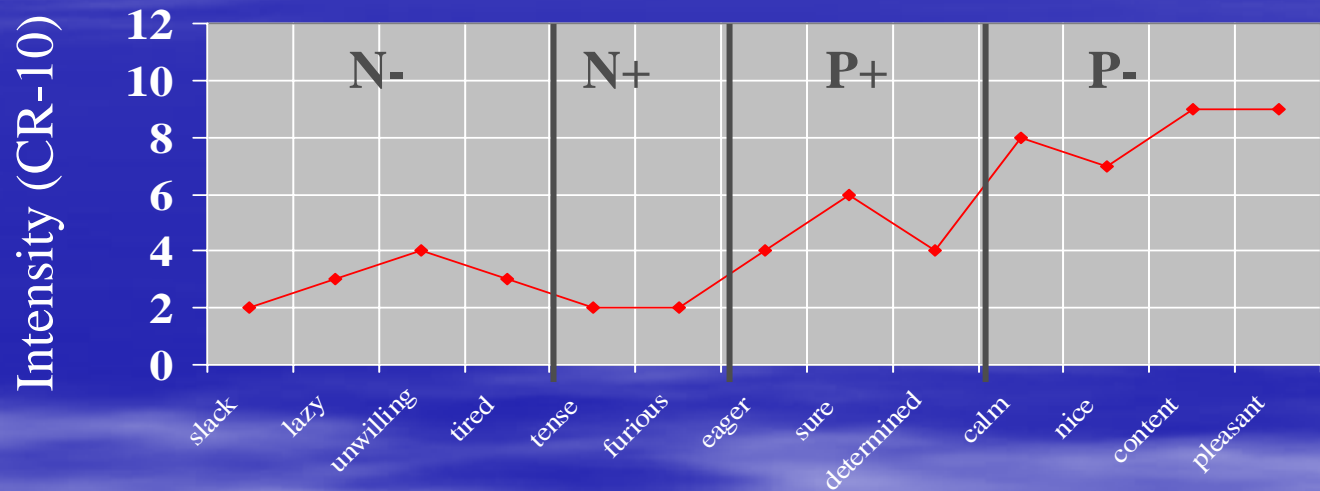


Performance related emotions

The “cavity”- shaped IZOF emotion profile

Prediction of average & poor performance

Dysfunctional Optimal emotions Dysfunctional



Performance related emotions

Emotion profile: prior to a good race (2008)

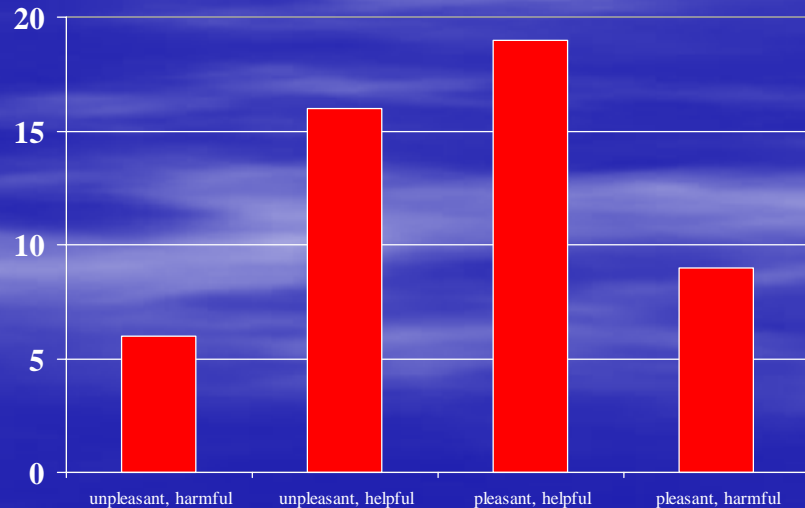
| | | | |
|--|---|--|--|
| [1] Sluggish [1] Reluctant [1] Sad [1] Upset [2] Worried | [3] Tense [4] Attacking [3] Intense [3] Nervous [3] Annoyed | [4] Energetic [3] Confident [4] Motivated [4] Enthusiastic [4] Alert | [2] Easy-going [2] Joyful [2] Comfortable [2] Calm [1] Relaxed |
| N- = 6 | N+ = 16 | P+ = 19 | P- = 9 |

Why?

- It was about the half way point in the season
- I needed a solid result
- It was a better weekend.

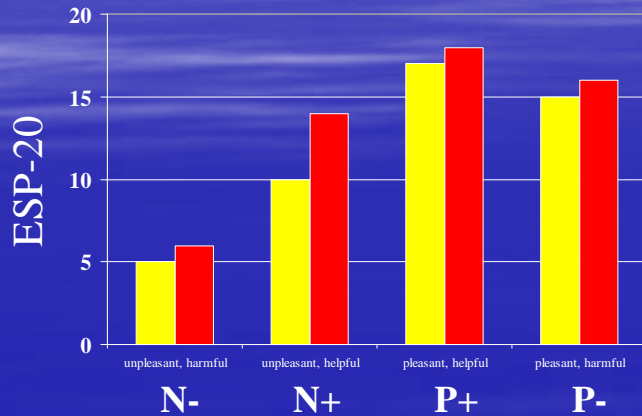
It was helpful

- “I seemed to be more alert”
- “I seemed to be more attacking”
- “This kept me from making mistakes”.

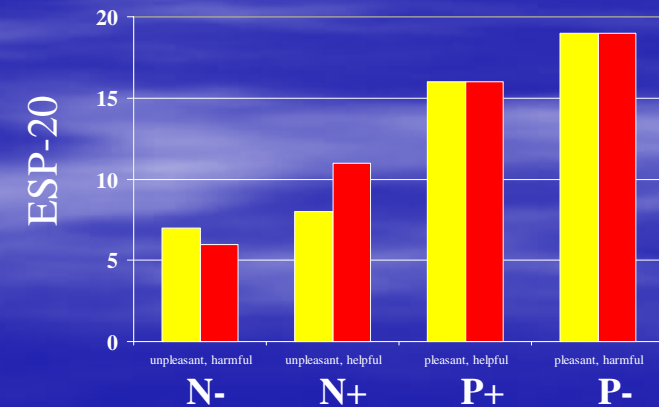
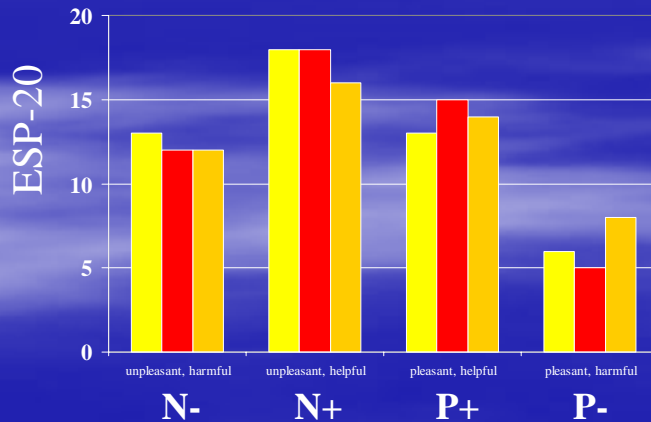
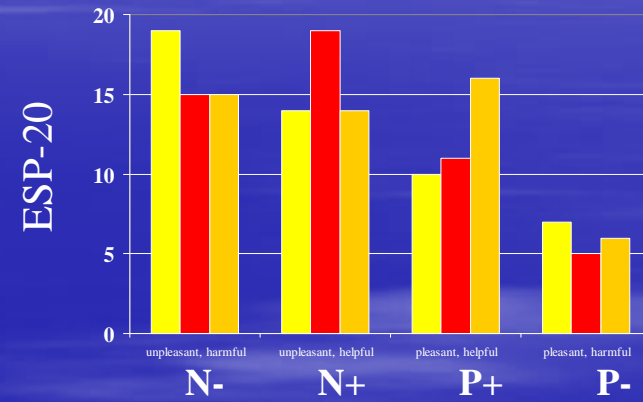


Emotions in 5 good & 5 bad races

Good races



Bad races



N - Dejection Zone

Unpleasant and dysfunctional emotions

Tired; Sluggish; Reluctant; Doubtful; Sad;
Unhappy; Upset; Distressed; Fearful; Worried

“I can’t do it” > “I don’t want to do it” > “Do I have to do it?”

N+ “Emergency zone”

Unpleasant but functionally optimal emotions

Tense; Dissatisfied; Furious; Attacking; Intense;
Angry; Irritated; Nervous; Annoyed; Restless

“I have to do it” > “I want to do it” > I “can do it”

P+ Challenge zone

Pleasant and functionally optimal emotions

Energetic; Confident; Charged; Willing; Motivated;
Purposeful; Certain; Cheerful; Enthusiastic; Alert.

“I want to do it” > “I can do it” > “I have to do it”

P- “Comfort, complacency” zone

Pleasant and dysfunctional emotions

Easy-going; Tranquil; Satisfied; Joyful; Happy;
Pleased; Comfortable; Calm; Content; Relaxed

“I have done it already” > “I was so good” >
“I enjoyed doing it”

- overconfidence
- switched off
- satisfaction
- complacency

- ready
- excited
- confident
- in control

- complacency
- overconfidence
- trying too much
- trying too little

PAST

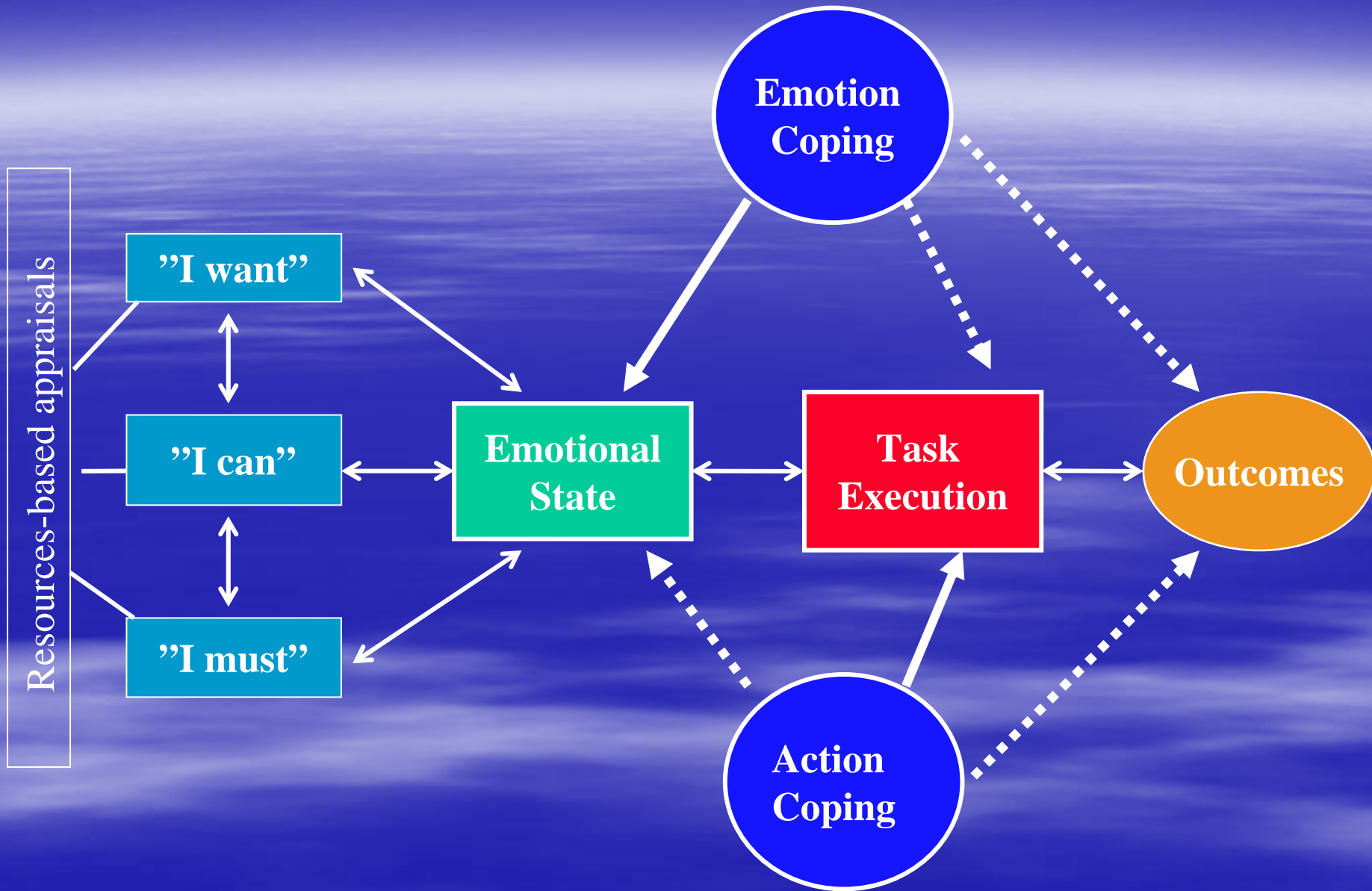
PRESENT

FUTURE

- regret
- disappointment
- depressed
- dejected

- action-oriented
- emergency
- fighting spirit
- angry

- nervous
- tense
- uncertain
- self-doubts



Coping Ability - *Jaksaminen* -

Yes

No

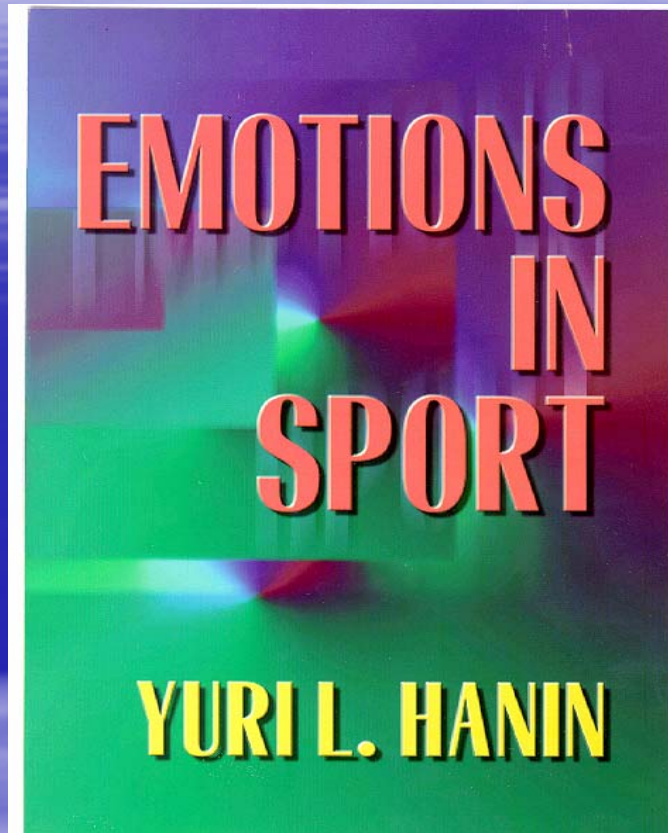
| | | |
|--|--|---|
| | P + Well-being (Hyvinvointi) | P - Pseudo-Well-being |
| | N + Pseudo-Ill-being | N - Ill-being (Huonovointi) |

Pleasure

Displeasure

Take-home messages:

- Both positively-toned & negativel-toned emotions can be optimal or dysfunctional for athletic performance.
- In high-achievement setting, well-being & subjective ill-being are triggered by success and failure in performance.
- Success-related emotions spill-over & enhance well-being; failure-related emotions spill-over & can cause ill-being.
- Emotion-focused & action-focused coping are inter-related effective strategies to enhance well-being & reduce/prevent ill-being.



Hanin, Y, & Hanina, M., (2009). Optimization of performance in top-level athletes: **An Action-Focused Coping.** *International Journal of Sport Sciences & Coaching*, 4 (1), pp. 47-58; 83-92.

<juri.hanin@kihu.fi>