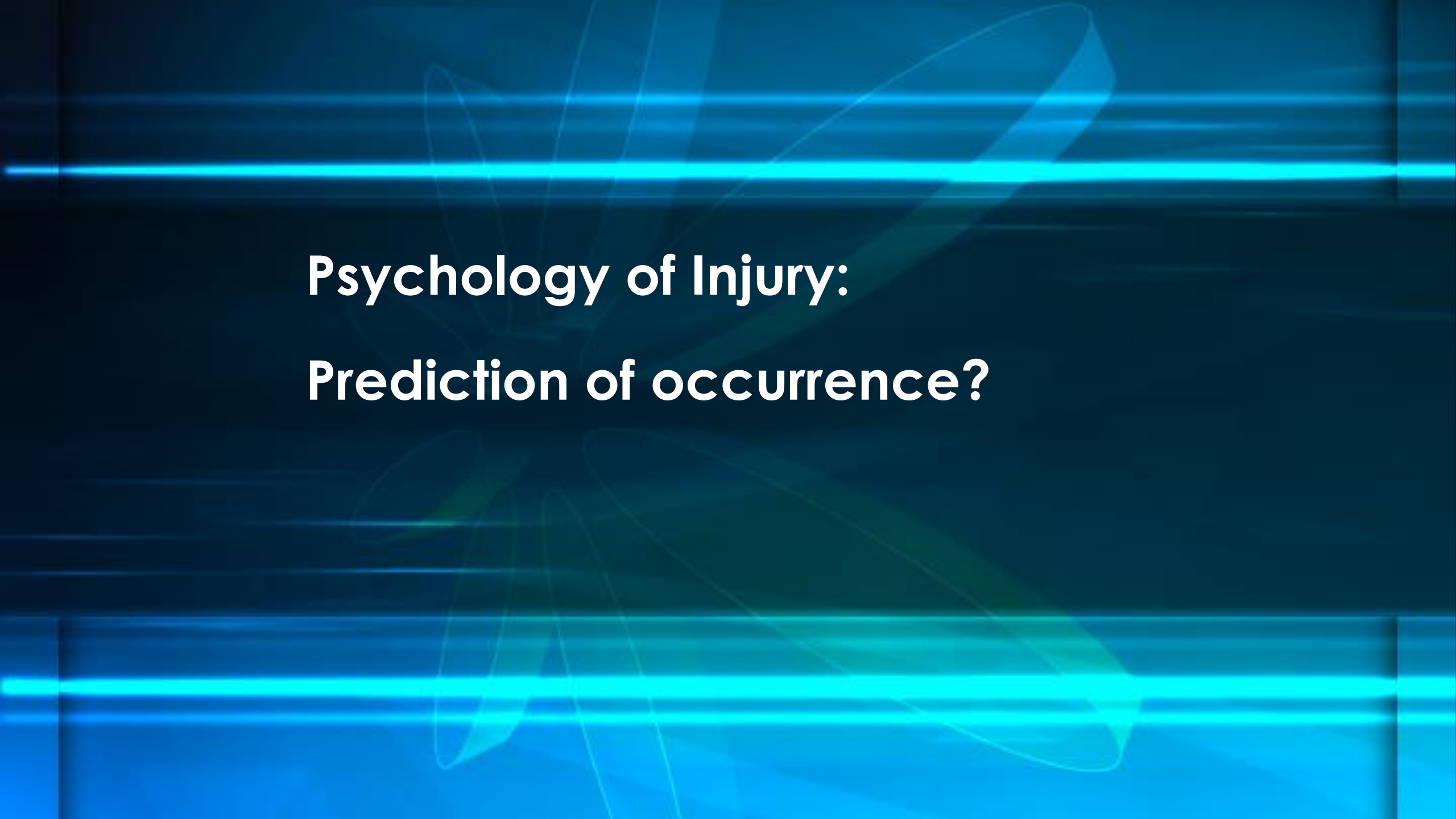


Psychology of Injury

WEEK 2

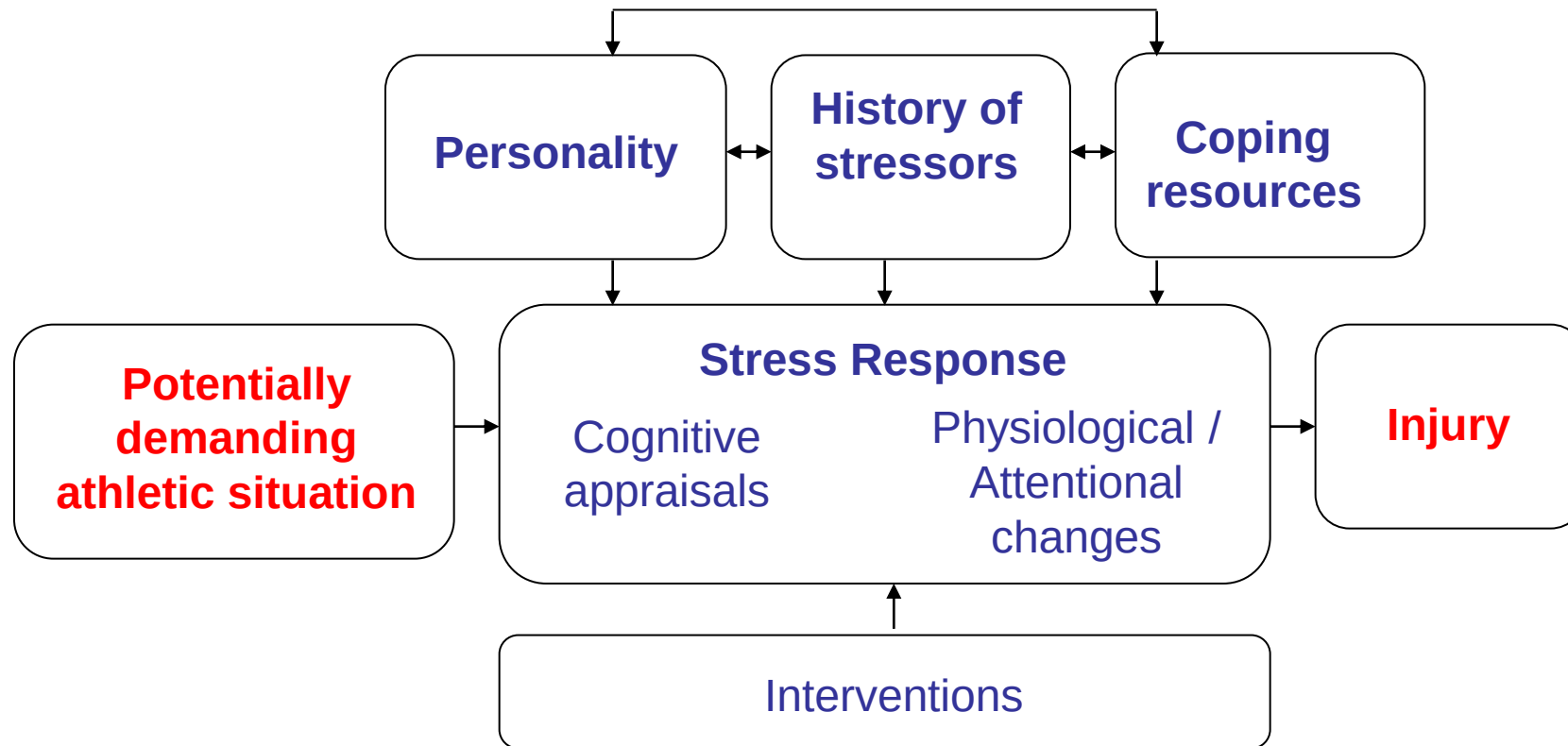
ADVANCED SPORT AND EXERCISE PSYCHOLOGY
SHSS6090

The background is a dark blue gradient with several bright, glowing horizontal lines. Faint, translucent outlines of a human figure are visible, suggesting movement or a specific posture. The overall aesthetic is high-tech and scientific.

Psychology of Injury:

Prediction of occurrence?

Stress-Response Model of Athletic Injury: Prediction



Williams & Andersen (1998)

Central Hypothesis

When athletes experience stressful situations (e.g., important competition), their history of stressors, personality characteristics and coping resources contribute in isolation or interactively to the stress response.

History of Stressors: Major Life Events – Health Psychology

- Infrequent, high intensity, require adjustment of some sort
 - (e.g., bereavement, divorce, new job, starting university).
- Received most research attention
- Of approx. 40 studies. 85% have shown a sig relationship between MLE and injury (Williams & Andersen, 2007).
- Stronger support for negative than positive MLE

Scale.



History of Stressors: Daily Hassles – Health Psychology

- Infrequent demand - low intensity (Pratt & Barling, 1988).
- Contribute to injury risk through major life event change but also independently
- Inconsistent findings - increase in daily hassles prior to injury occurrence (e.g., Fawcner et al., 1999; Ivarsson & Johnson, 2010).

Scale



History of Stressors: Previous Injury

- Based on notion that if injured athletes return to sport before fully recovered (physically/ psychologically) ↑ probability of re-injury.
- Majority of studies - athletes with previous injuries more vulnerable to injury (e.g., Maddison & Prapavessis, 2005; Steffan et al., 2009; Wadey et al., 2012).
- Limitation – distinction between new injuries and re-injury

Personality

- **Competitive Trait Anxiety:** Disposition to perceive competitive situations as threatening. Most research attention. Initial research suggested a **direct relationship with injury** (e.g., Lavalley & Flint, 1996) **but results are inconsistent**.
- **Dispositional optimism:** Generalised expectation of successful outcomes – **Direct and moderating relationship** (Ford et al., 2000; Wadey et al., 2013).
- **Optimism research in other areas:**

- **Hardiness:** Ability to remain healthy in the face of stressful life events - **Direct and moderating relationship** (Ford et al., 2000; Wadey et al., 2012).
- **Locus Of Control:** degree to which individuals view their lives and environment as under their control. External LOC and Internal LOC (Kolt & Kirkby, 1996; Pargman & Lunt, 1989) – **results equivocal.**

Coping Resources

“A wide variety of behaviours and social networks that help the individual deal with the problems, joys, disappointments, and stresses of life”
(Andersen & Williams, 1988, p. 302)

Includes:

1. General coping behaviours
 2. Psychological skills
 3. Social support
- MCOPE: Complete.

Coping resources

- **General Coping Behaviours:** e.g., nutritional habits, sleep patterns, time management – some support for a **direct relationship, but findings inconsistent.**
- **Psychological Coping Skills:** **Inconsistent findings for both direct and moderating effect** (e.g., Rogers & Landers, 2005; Smith et al., 1990).

- **Social Support:**
- Generally SS has **direct and moderating effect** on injury (Williams, 2001) – i.e., directly reduces vulnerability to injury and moderates life-event – injury relationship; but some inconsistencies in the findings (e.g., (Maddison & Prapavessis, 2005)).

Social Support:

The background of the slide is a deep blue gradient. Overlaid on this are several translucent, wavy lines in shades of teal and light blue, creating a sense of movement and depth. A faint, stylized silhouette of a plant with long, pointed leaves is visible in the center, serving as a subtle graphic element.

Re-cap so far...

- History of Stressors, Personality and Coping resources influence susceptibility to injury via effect on stress response.
- Each may effect stress response singularly or in combination with other factors.
- Individual differences in these factors may help explain why and when injuries occur.
- Methodology - use of appropriate measures in prospective repeated measures studies key to future research.



Response to Injury & Rehabilitation

Psychological Responses to Injury

Injured athletes experience elevated levels of ...

Shock, Devastation, Tension, Depression, Helplessness,
Confusion, Hostility, Anger, Anxiety, Frustration, Worry,
Isolation, Restlessness

and decreased levels of ...

Self-esteem, Self-confidence

Over Time - Temporal Pattern

- Injury Onset:
 - shock, anger, anxiety, depression, confusion, frustration, worry, self-esteem decreases
- Mid phase (rehabilitation): anger, depression, frustration, rationalization, apathy
- Late phase (return): impatience, anticipation, fear (re-injury, returning to sport), increased confidence

Bianco, 2001; Granito, 2001; Johnston & Carroll, 1998; Tracey, 2003

Loss, Attachment & Grief

Loss: A state of deprivation, or being without something one has had

Attachment: The tendency to make strong affectional bonds and respond with intense emotional reactions when these bonds are threatened (Bowlby, 1991)

Grief: “an intense emotional suffering set off by a loss”
(Simos, 1977, p. 337)

Characteristics of Grief

- Denial ⇒ Anger ⇒ Bargaining ⇒ Depression ⇒ Acceptance (Kübler-Ross, 1969)
- Shock ⇒ Coping ⇒ Adaptation (Karl, 1987)
- Denial ⇒ Anger ⇒ Depression ⇒ Acceptance (McDonald & Hardy, 1990)

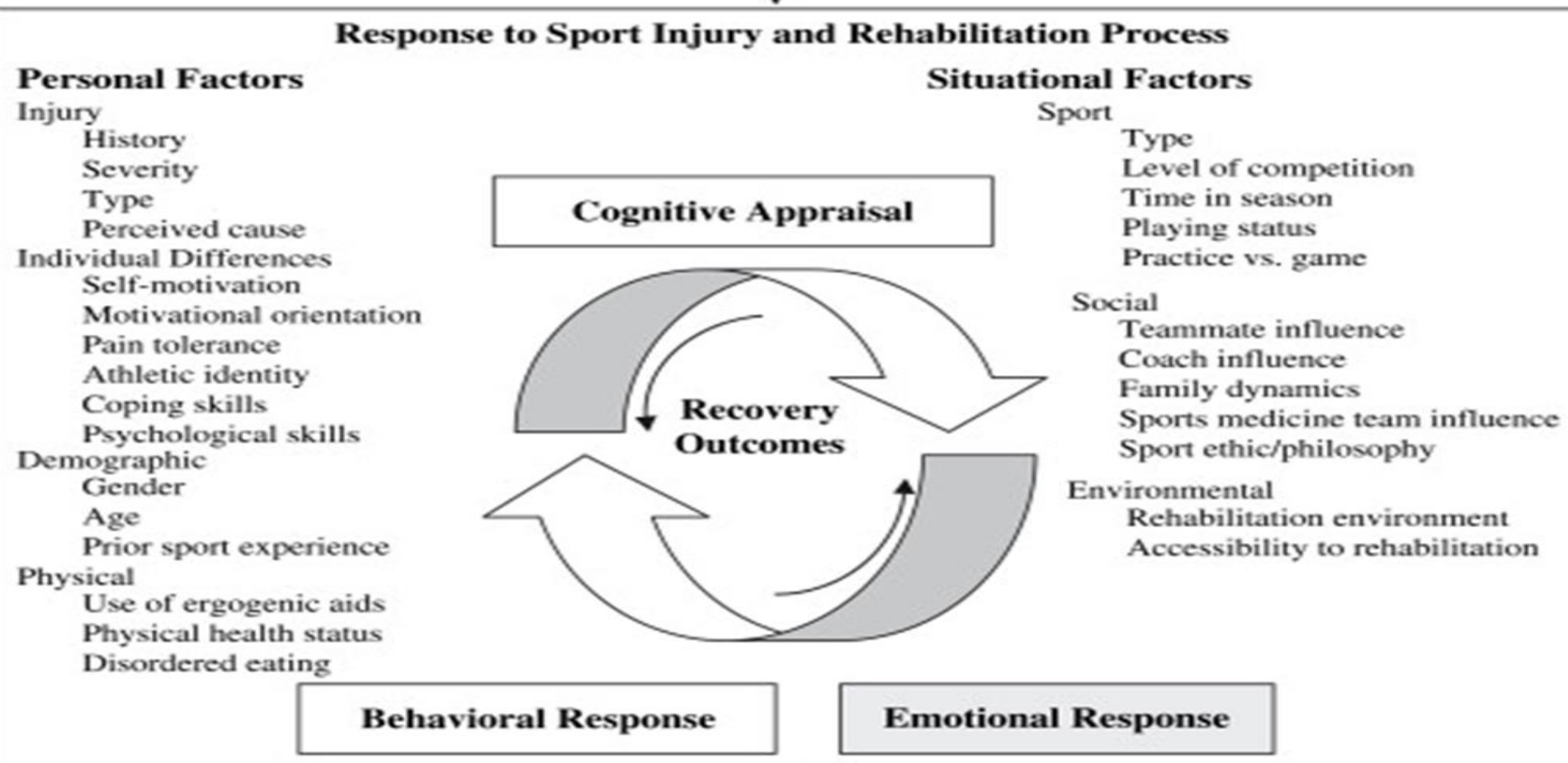
Cognitive Appraisal

“an evaluative process that determines why and to what extent a particular transaction or series of transactions between the person and the environment is perceived as stressful”

Lazarus & Folkman, 1984, p. 19

Appraisal

- Primary Appraisal – what is the potential for the following?
 - harm/loss
 - threat
 - challenge
- Secondary Appraisal – what coping options are available?
- Reappraisal





What factors are proposed to affect athletes' psychological responses to injury?

Factors Affecting Psychological Responses and Adjustment

- **Injury severity**
 - Timing
 - Previous injury history
 - Relationship with physio.
-
- **Social support**
 - Coping resources
 - Rehabilitation progress
 - Importance of sport

Factors related to Adherence

Personal Factors

- **Self-motivation**
- Coping / use of mental skills
- Pain tolerance
- **Task vs. ego involvement / attribution for recovery**
- Tough mindedness / trait anxiety
- Injury duration

Situational Factors

- **Treatment/rehab efficacy**
- Comfort of clinical environment
- Convenience of rehab. scheduling
- Perceived exertion during rehab.
- **Social support for rehab.**

Brewer et al., 1994; Byerly et al., 1994; Duda et al., 1989; Fields et al., 1995; Fisher et al., 1988; Johnson 1996; 1997; Lampton et al., 1993; Taylor & May, 1996.

Stressors

Onset

- Loss of normal functioning, fear of the unknown/lack of understanding of injury and recovery process, pressure to compete while injured, potential for weight gain/loss, inability to train

Rehab

- Physical incapacitation, isolation, contractual and financial concerns, lack of control and autonomy, slowness of progress and setbacks, monotony of rehabilitation activities, weight gain/loss

Return to competitive sport

- Re-injury anxiety, the decision to return to sport, returning to pre-injury levels of performance, loss of confidence.

Wadey & Evans (2011)

Return to Sport: A SDT Perspective

Ryan & Deci (2000) – 3 basic psychological needs.

Competence (proficiency, effectiveness)

- Fear of re-injury
- Ability to return to pre-injury performance levels
- Concerns about meeting performance expectations
- Self-presentational concerns

Characterised by...

- being hesitant, holding back, not giving 100% particularly in injury provoking situations, taping injured part, images of injury re-occurrence
- concerns about letting self and others down
- negative social, physical and performance comparisons
- decreased self-efficacy
- increased risk of re-injury

Bianco et al., 1999; Evans et al., 2000; Podlog & Eklund, 2006, 2007

Autonomy (internal locus of control)

- Pressures to return prematurely
- Need to prove themselves to others (and self) to re-establish identity

Characterised by...

- focus on injury, inability to focus on task /performance, increased anxiety & fear of re-injury, & decreased confidence & performance

Bianco, 2001; Podlog & Eklund, 2005; Podlog et al., 2010

Relatedness (connectedness, belonging)

- Alienation, isolation
- Social identity concerns

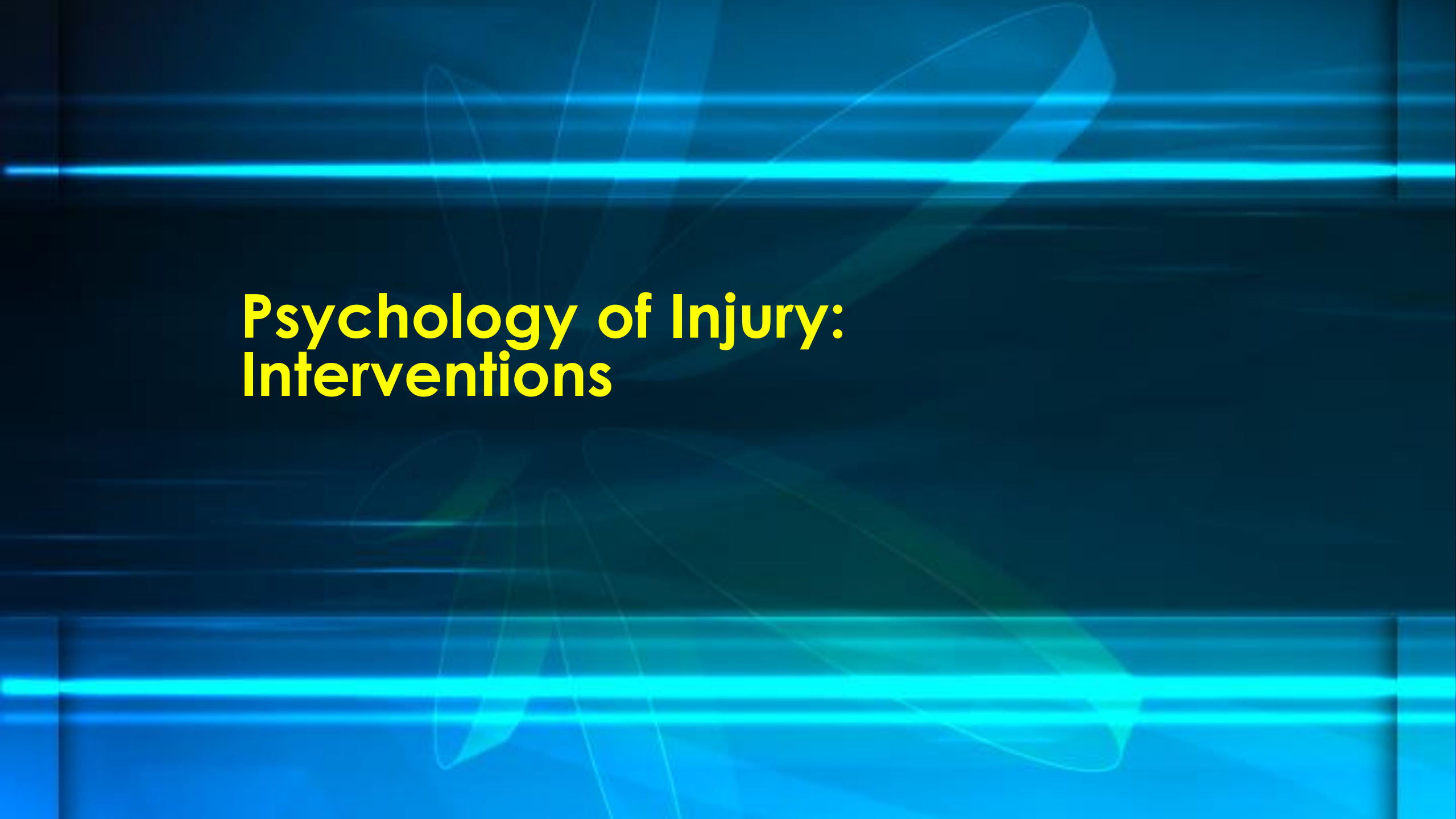
Characterised by...

- lack of social support / need for social support from coaches, physio, teammates etc to buffer potential perceptions of alienation & isolation

Bianco, 2001; Johnston & Carroll, 1998; Podlog & Eklund, 2005, 2007; Podlog et al., 2010

Social Support...



The background is a dark blue gradient. It features two prominent, bright blue horizontal lines that span the width of the image. Between these lines and in the surrounding space, there are faint, glowing, and slightly blurred horizontal streaks. A large, faint, stylized figure, possibly a person in motion or a winged figure, is visible in the background, rendered in a lighter blue color that blends into the overall theme.

Psychology of Injury: Interventions

Nature of Interventions (Cupal, 1998)

- Goal is to identify the subjective cost of injury to an athlete whilst teaching / strengthening coping resources
- Interventions should
 - Consider the personal meaning of injury
 - Empower the athlete with appropriate recovery/preventative strategies
 - Include components that consider both personal & situational injury factors

Responses to Injury

Disruption of normal
functioning
(Shock, anxiety, depression)

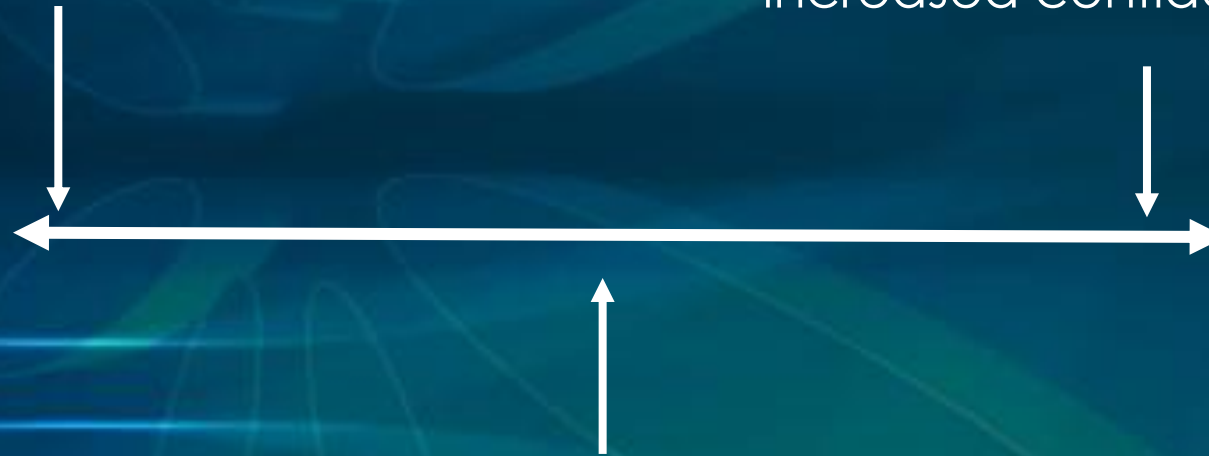
Re-injury/ performance issues

(Anticipation, impatience,
increased confidence)

Onset

Return

Rehabilitation concerns
(Anger, depression, frustration, apathy)



3 Phases of Recovery (Bianco, Malo & Orlick, 1999)

Injury-Illness Phase

Help the athlete deal with the emotional upheaval that accompanies the onset of injury



Rehabilitation-Recovery Phase

Help the athlete sustain motivation and adherence to rehabilitation protocols



Return to Full Activity Phase

Full recovery is not complete until the athlete can return to normal functioning within his/her sport

Intervention Strategies

- Goal setting
- Imagery (& Relaxation)
- Self-talk
- Social support

Intervention Strategies

- **Goal setting**

- adherence, self-efficacy, rehab performance -

Appears to have exerted positive effects through self-efficacy, attributions, perceptions of control, attention, and possibly motivation

- **Social support**

- adherence, self-efficacy

Evans et al., 2000; Evans & Hardy, 2002; Gilbourne et al. 1996; Theodorakis et al., 1996; 1997.

Goals

- Process
- Performance
- Outcome

- **Imagery**

- Relaxation & guided imagery:

- Sig. greater knee strength
- Sig. less re-injury anxiety & pain
- Sig. difference in knee laxity

(Cupal & Brewer, 2001; Maddison et al., 2012)

- Injured athletes use cognitive, motivational, healing and pain management imagery

(Sordoni, Hall & Forwell, 2001; 2002; Dreidiger, Hall & Callow, 2006; Evans, Hare & Mullen, 2006; Hare, Evans, & Callow, 2008)

Self-Talk

WHAT IS THE POTENTIAL ROLE OF SELF-TALK IN INJURY
REHAB?

Self-talk

Motivational

Mastery - focus, self-confidence, mental readiness & coping

Arousal - psyching up, relaxation, & emotional control

Drive - drive, control, goals, encouragement, to reach potential

Instructional (cognitive)

Specific - skill development & execution

General - performance improvement & strategy

(Hardy et al., 2001)

Practical Implications



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