

ECAP5006 – Sport and Health Psychology

Dr Stuart Jones

Introduction.

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Aims

- * To provide students with a theoretical and applied understanding of the contribution of psychology to the study of sport and health

Learning Outcomes

- * • critically review the application of a range of theories derived from psychology in relation to successful and non-successful sporting performance;
- * • critically appraise the application of a variety of psychological skills (for example, arousal regulation, imagery, goal setting) and its impact on sporting performance;

Learning Outcomes

- * • demonstrate a critical understanding of the importance of Health Psychology to promote health and well-being and the development of preventative strategies within health and mental health arenas;
- * • take responsibility for their own learning and skill development; including effective personal planning, self-reflection and project management skills.

Content

- * • A critical understanding of the nature of stress, anxiety and arousal and its impact on sporting performance.
- * • A critical understanding of the techniques (such as goal setting, imagery, and arousal regulation) adopted by applied sports psychologists and its impact on sporting performance.
- * • Examination of the psychological theories and research that has informed and developed the field of health psychology.

Content

- * • To critically appraise the applicability of models and theories relating to health psychology.
- * • Examination of the nature of health psychology and applying health psychology in practice

Assessments

- * **ASSESSMENT**

- * **Course work** **50%**

- * Report (2,500 words)

- * **Examination** **50%**

- * One paper (2 hours)

Assessment

- * Component 1– Examination (one paper) 2 hours – 50%.
- * NOT A TIMED ESSAY.
- * Students will answer 2 questions.
- * Question 1 = 50%
- * Question 2 = 50%

Assessment

- * Component 2– Report (2,500 words)
- * Further information will be placed on Moodle.
- * 50% of the module mark.

Module Outline

- * See module outline document on Moodle.

Reading List – Essential.

- * Cox, R. (2012). *Sport psychology: Concepts and applications* (7th ed.). McGraw-Hill.
- * Hanton, S., & Mellalieu, S. (2009). *Advances in applied sport psychology: A review*. Routledge.
- * Karageorghis, C., & Terry, P. (2011). *Inside sport psychology*. Human Kinetics
- * Marks, Murray, Evans, Estacio, Murray, M., Evans, Brian, & Estacio, Emee Vida. (2015). *Health psychology: Theory, research and practice* (4th ed.). Sage.
- * Morrison, V., & Bennett, P. (2016). *An introduction to health psychology* (Fourth ed.). Pearson.
- * Ogden, J. (2012). *Health psychology* (5th ed.). McGraw-Hill/Open University Press.
- * Weinberg, & Gould (2015). *Foundations of sport and exercise psychology* (Sixth ed.). Human Kinetics

Reading List - Further

- * Bull, S. (1991). *Sport psychology: A self-help guide*. Crowood.
- * Hardy, L., Gould, D., & Jones, J. (1996). *Understanding psychological preparation for sport: Theory and practice of elite performers*. Wiley.
- * Jarvis, M. (1999). *Sport psychology (Routledge modular psychology)*. Routledge.
- * Lyons, A., Chamberlain, K., & NetLibrary, Inc. (2006). *Health psychology a critical introduction*. Cambridge University Press.
- * Morris, Summers, Morris, Tony, & Summers, Jeffery J. (1995). *Sport psychology: Theory, applications and issues*. Wiley.
- * Singer, Hausenblas, Janelle, Singer, Robert N, Hausenblas, Heather A, Janelle, Christopher M. (2001). *Handbook of sport psychology (2nd ed.)*. Wiley.

Introduction

- * Within the past 40 years, the academic community and public have recognised sport psychology as a distinct field of study.
- * Division of Sport and Exercise Psychology (BPS)
 - * 249 members, September 2014.
- * British Association of Sport and Exercise Science (BASES).
 - * Recognises Sport and Exercise Psychology.

Sport Psychology

- * Seeks to understand the psychological variables affecting the behaviour of individuals, teams or organisations in sport, and how lifestyle issues influence their well-being. Practitioners in sport psychology offer services to athletes, teams and to others engaged in competitive sport, be it at elite, youth or recreational level, to promote performance enhancement and personal development

Applied Sport Psychology

- * Concerned with the psychological factors that influence participation and performance in sport and exercise.
- * Psychological effects derived from participation.
- * Theories and interventions that can be used to enhance performance, participation and personal growth.

Sport Psychology

- * In addition to developing theories that have been exclusively developed in the field of sport and exercise, sport and exercise psychologist will also test the applicability of theories derived from other areas of psychology to the sports and exercise domain.
- * Examples:
 - * Goal Setting – Occupational Psychology.
 - * Emotions and Coping – Derived from Mainstream Psychology.
 - * Group Dynamics and Leadership – Social Psychology.
 - * Theories of Learning – Cognitive Psychology.



Exercise Psychology

- * In the last 20-25 years has become a highly viable area of specialisation.
- * Grant Support – World wide.
- * Importance of exercise in reducing risk of disease and all-cause mortality.
 - * NHS.



Exercise Psychology

- * Seeks to understand the psychological benefits of exercise and physical activity, and the importance of exercise for the individual and how to promote lifelong participation. Practitioners in exercise psychology will typically work with individuals or organisations who wish to optimise the value of exercise as part of a healthy lifestyle.



Two Objectives of Sport and Exercise Psychology

1. Understand the effects of psychological factors on physical and motor performance
2. Understand the effects of participating in physical activity on psychological development, health, and well-being

Objective 1

- * Understand the effects of psychological factors on physical and motor performance

Objective 1

- * Typical questions studied in sport and exercise psychology:
 - How does anxiety affect a basketball player's accuracy in free-throw shooting?
 - Does lacking self-confidence influence a child's ability to learn to swim?
 - How does a coach's reinforcement and punishment strategies influence a team's cohesion?
 - Does imagery training facilitate the recovery process in injured athletes and exercisers?

Objective 1

- What are the factors that influence group dynamics in teams?
- What factors can implicit learning have on motor performance ?
- How can you help an athlete who chokes under big pressure ?

Objective 2

- * Understand the effects of participating in physical activity on psychological development, health, and well-being

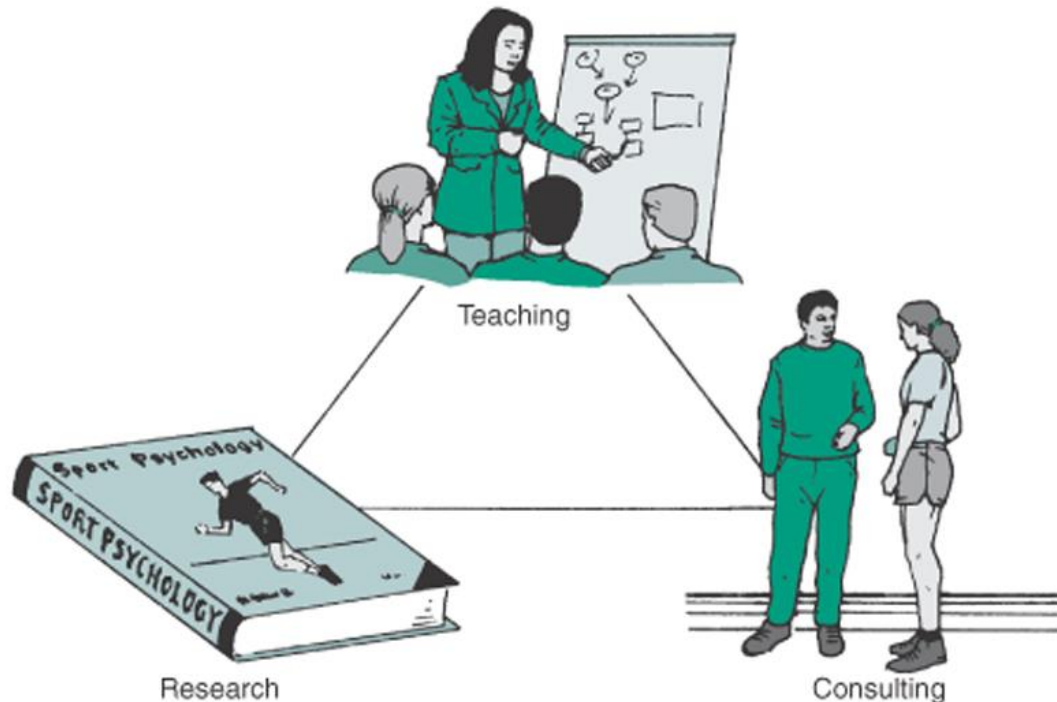
Objective 2

Typical questions studied in sport and exercise psychology:

- Does running reduce anxiety and depression?
- Do young athletes learn to be overly aggressive from participating in youth sports?
- Does participation in daily physical education classes improve a child's self-esteem?
- Does participation in college athletics enhance personality development?

What Sport and Exercise Psychology Specialists Do

- * The roles of the sport and exercise psychologist



Topics within Sport and Exercise Psychology.

- Motivation of Sport and Exercise.
- Personality and Athletic Identity.
- Stress and Anxiety and Performance.
- Reinforcement, Positive and Negative Feedback.

Topics within the field of Sport and Exercise Psychology.

- * Group Dynamics and Cohesion.
- * Leadership.
- * Social Psychology of Sport.
- * Fanship.

Topics within Sport and Exercise Psychology.

- Adherence to Exercise.
- Psychology of Injury and Adherence to Rehabilitation.
- Leadership.
- Communication.

Topics within Sport and Exercise Psychology.

- Psychological Skills to enhance performance.
 - Arousal Regulation.
 - Imagery
 - Self-Confidence.
 - Goal Setting
 - Self Confidence.
- Burn out and over training.
- Retirement and Career Termination.
- Addictive Behaviours (Being Addicted to Exercise).

Attentional Process and Sport Performance

The study of attention

- * Long history in Mainstream Psychology.
 - * E.g. William James, Wilhelm Wundt
- * Interest re-ignited after second world war.
 - * How long could a radar operator watch a screen without losing focus.
 - * Cherry cocktail party phenomena

The Study of Attention

- * Multidisciplinary (Parasuraman, 1984).
- * Cognitive Psychology
- * Neuroscience
- * Developmental Psychology

Attention in Sport

- * Moran (1996) – Vital aspect of athletic performance.
 - * <https://www.youtube.com/watch?v=t42lAfu7Cs>
 - * http://www.youtube.com/watch?v=_p73Ms3i_vU
- * However, despite this.... Boucher (2008) stated that due to lack of empirical research examining a suitable framework not yet established.
 - * Explored using theory derived from other psychological perspectives.



Information-Processing (Cognitive) Perspective

- * “Conceptualise attention as the ability to switch focus from one source of information to another and as the amount of information that can be attended to at any one time” (Boutcher 2002, p 442).
- * Selective Attention
- * Capacity
- * Alertness.

Selective Attention.

- * Scenario 1.
- * A rugby player is about to receive a **pass** from a **team mate** in a **critical** six nations match with **thousands of fans** willing his side to do well. He is aware that his side is **losing** and this could well be the last play of the game before the **referee** blow his final whistle. The **opposition** know if they get the ball of him they win.
- * Look at how many things the player needs to consider.
- * LET ALONE THE THINGS THAT HE ALREADY **FILTERED** OUT OF HIS thoughts.
 - * The clothes he is wearing
 - * That he is standing
 - * Other important aspects about his life and career.

This is in essence SELECTIVE ATTENTION!

- * Refers to the process by which certain information from the environment (internal or external) enters the information processing system, while others is screen (or filtered) out.
- * How much information can we attend to at one given time **and** at what stage is information deemed irrelevant and filtered is much debated in psychology.

Selective Attention in Sport.

- * Central in learning and performing a sports skill.
- * Stimuli that you need to attend to change as a consequence of practice and skill improvement (Boutcher, 2008).



Example

- * Basketball Novice.
- * First learning to dribble – much attention devoted to the skill.
 - * Cannot lift head up.
- * Practice – Able to lift ahead – skill becomes automatic and synchronised
 - * Shift of attention to opposition.



Control and Automatic Processing

- * Much research in sports.
- * Control Processing – Novel or inconsistent information.
 - * A new routine / skill
 - * Wind conditions in Golf
 - * Testing out a new equipment.
 - * E.g. Cricket bat, Swimsuit etc.

Control and Automatic Processing

- * Automatic Processing.
- * Developed Skills
- * Become implicit.
- * Require little attention / effort / awareness.
 - * Attention capacity can be “used” for other tasks.

Automatic Processing

- * Driving a car – after several years.
- * How many roundabouts did you come across on your journey to Carmarthen today?
- * How many times did you change down gear?
- * Cannot remember??? But you arrived safe and you must have surely changed down gears at least once?
 - * Skill is now automatic and you can do it without being consciously aware of it.
 - * Comb your hair, do your make up, sing with the radio at the same time.

Type of Sport and Processing Type

- * Boucher (2008).
- * Closed-skill sports – no opponent as such require more automatic processing.
 - * E.g. Golf, Archery, Clay Pigeon Shooting.
- * Open-skill sports – where an opponent's movements need to be considered – require more control processing.
 - * Football, Rugby, Basketball (in play).

Attention Capacity

- * The information process perspective suggested that it is impossible to attend to ALL information.
- * Researchers such as Broadbent (1958) suggested that we have a FIXED CAPACITY and this remains the same irrespective of the task.
- * Early selection process.

Broadbent's filter model

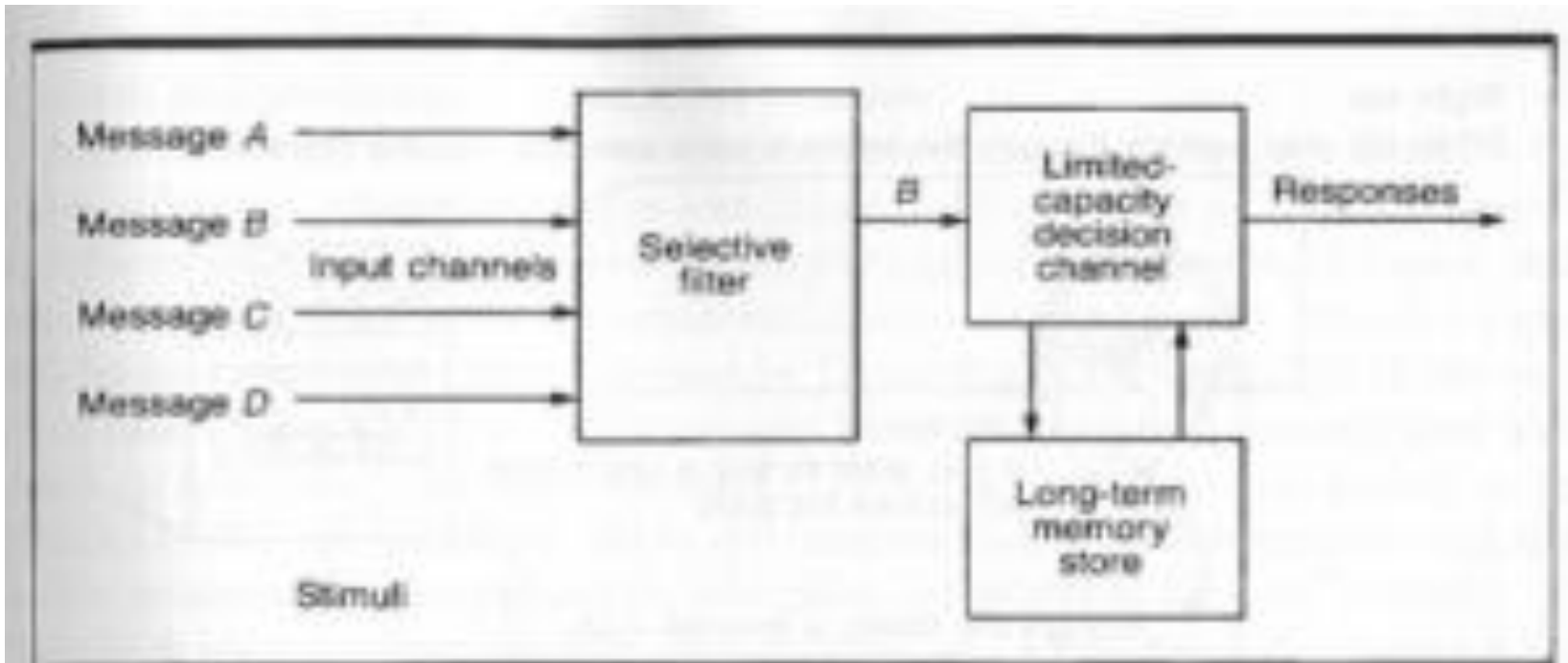


Figure 4-7

Broadbent's Filter theory of selective attention. Four messages are presented, yet only one is selected and passed to the limited-capacity decision mechanism. Adapted from Broadbent (1958).

Critique of Broadbent

- * Two simplistic.
- * Individual Differences
- * Alternative – Multiple Resource theory (Navon and Gopher, 1979).
 - * Attention = Set of pools of resources with its own capacity in relation to information processing.
 - * Ability to handle more than one stimulus at a time.
 - * Importance of tasks involved
 - * Task Difficulty
 - * Structural considerations.

However

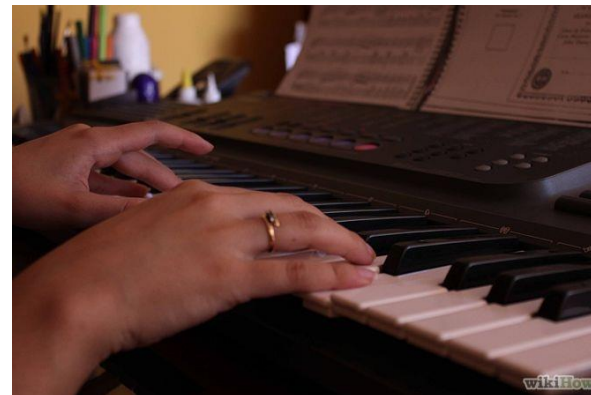
- * Whilst Multiple Resource theory of attention appeals to sport psychologists, still a number of unanswered questions.
- * What are the number of resources needed to cover all aspects of attention?
- * What about the impact of Practice? (Hirst, 1986).

Automatic Functioning in Sports

- * One of the most researched areas in relation to attention in performance.
- * Hirst (1986) the impact of practice can enable a skill that was once controlled become more automatic.
- * Baumeister (1984) – competitive pressure focus switches to process of performance.
 - * Conscious (Controlled) monitoring of the performance.
 - * Can lead to attention capacity issues and a degrading of performance (Kimble and Perlmutter, 1970).

Examples

- * Langer and Imber (1979) – Typing task.
 - * When applying pressure those in the over practiced group performance deteriorated.
- * Keele (1973) – Piano playing
 - * Similar findings – deterioration when re-focusing on hand movements.



Is this the case for Sporting Performance

- * Oudejans et al (2011)
- * Verbal reports to 350 elite level athletes.
- * Asked to report on high pressured situations.
- * Claimed they switch attention on worries (fear of the competition) as opposed to performance process.
 - * Going against Baumiester's (1984) views.

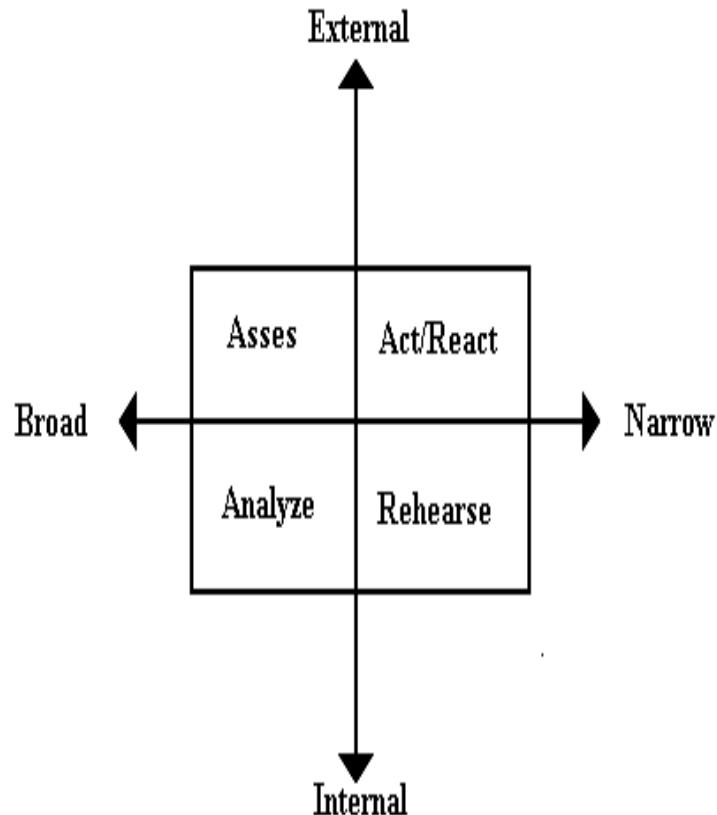
Attentional Style

- * Suggestions that there are individual differences regarding attention capacity and performance.
- * Why?
- * Is it due to Variations to attentional style.
 - * Do some individuals focus on different things or in a different way to others?

Nideffer (1976)

- * Suggested that attentional demands in ANY sporting situation will vary along two dimensions.
- * Broad / Narrow
- * Internal / External

Attentional Styles... (Nideffer)



- * **Width of attention:** Broad and Narrow.

- * **Direction of attention:** External and Internal.

Nideffer (1976)

- * The challenge of the athlete is to match the demands of the sport with the appropriate attentional style.
 - * E.g. Penalty kick in football, should be narrow and not wide.
- * Also stated that arousal (pressure) produces an involuntary narrowing of attention, may interfere with the ability to switch styles.
- * Individual has preferred attentional style.
 - * Led to development of Test of Attentional and Interpersonal Style (TAIS).

The future of Research in Attention in Sport

- * Despite the natural links between attention and performance, the empirical research relating to sport and exercise is limited.
- * No theoretical framework to guide research.
- * Intervention strategies largely based on trial and error (Boutcher, 2008).

Neurofeedback

- * Also known as EEG Biofeedback.
- * Based on the evidence that brain waves activity can be self-regulated through gaining an awareness.
- * Schwartz, Davidson and Pugwash (1976).
 - * Trained participants to develop symmetrical and asymmetrical EEG patterns

EEG- Biofeedback, Attention and Sports

- * Arns et al (2008)
- * Golf Putting task (6 participants).
- * Biofeedback training was predetermined following observing the brain wave activities in successful puts of participants.
 - * Personalised event locked EEG profile



Arns et al (2008).

- * 4 test sessions.
- * However, before the second and fourth sessions they were given EEG feedback training to regulate their attention to successful demonstrations.
- * Individualised to whatever the waves they found successful in the test run.



Arms et al (2008)

- * Findings
 - * Significant improvements in the second and fourth sessions over sessions where there was no feedback training.
- * Critique – Sample Size.
- * Ecological Validity
- * No control group.
- * Practise effects? Maybe to some degree, but why was 3 trial (no feedback) less successful than second session (feedback).

EEG – Biofeedback – The future of Attentional Research in Sports?

- * Promising findings so far.
- * Number of issues
- * Ecological Validity
 - * For practical reasons to get the base line participants are required to watch a sports video or use imagery of successful performance.
 - * Although that does not mean it is still does not have potential to work.
- * Currently only available in certain sports.
 - * Cannot exactly be connected to an EEG playing Rugby.
 - * Although moving away from the lab settings.

