Example: Self-directed learning (CPD) through structured reading

How science can contribute in an interdisciplinary fashion to understanding of etiology of overuse injuries – of a musculoskeletal nature

To arrive at the best care solutions with respect to diagnosis, treatment, rehabilitation and an understanding of aetiology relating to musculoskeletal conditions, Therapists must have a strong understanding of all the options available, and a willingness to utilize them. Private Therapists frequently operate as detached individuals, working in isolation, which is considered to be a monodisciplinary and often a biased approach. Consequently, we are frequently encouraged to adopt a more open approach to solving problems by utilising specialists from other professions; this is often referred to as a multidisciplinary approach.

Moreover, the modern day patient / athlete have very high expectations, and where applicable, expect value for money when seeking professional care. Ideally, this care pathway should be evidence based, best practice, delivered with minimal risk, resulting in the quickest possible return to work /competition, without reoccurrence of injury. Therefore, working in isolation using a ‘monodisciplinary’ approach is highly unlikely to achieve this ideal care pathway. However, within the field of remedial / sports science research there are now concerns that a ‘multidisciplinary’ approach may also be somewhat inadequate, and thus an ‘interdisciplinary’ approach is preferred. The next few paragraphs will attempt to explain the reasoning behind this approach.

Overuse injuries have become an increasing problem in remedial / sports medicine and they present three distinct challenges diagnosis, treatment and an understanding of the aetiology (1). The problem of injuries cannot be addressed effectively by any single discipline in isolation. To ensure optimal progress, an interdisciplinary approach is essential (2). In a review, Burwitz et al (3) established the unique value of interdisciplinary sports science research. The strengths of an interdisciplinary approach lie within the ability to integrate the disciplines to create a bigger picture rather than just acknowledge the different disciplinary components.

Although the monodisciplinary approach may be appropriate in many research and support scenarios it is not always appropriate when a holistic patient-centred approach is desired (3, 4). Monodisciplinary can create an isolated and detached or biased professional approach. A difference clearly exists between multidisciplinary and interdisciplinary. Whilst both are a product of an input from more than one discipline, the principle difference is the integrative approach of the interdisciplinary sports scientist as opposed to scientists working in parallel often associated with multidisciplinary.

The term interdisciplinary describes a group of professionals from several different disciplines who work together as a team with the same client (5), to synthesize information through ‘bridge-building’ or a ‘restructuring’ process to create new knowledge (3). Bruhn (6) states “interdisciplinary research attempts to ask questions in ways that cut across disciplinary boundaries”. Specific working definitions of each of the three approaches can be found in BASES (4).
Conclusion

Burwitz et al (4) reminds us that research into the aetiology of musculoskeletal injuries has generally employed a monodisciplinary approach. Moreover, it is important to consider aetiology from an interdisciplinary perspective to establish the interaction between biomechanical, physiological, psychological and socioeconomic factors that have been linked with injury. While employing an interdisciplinary approach may be recognised as the ideal scenario in the field of research, this is not always going to happen within a practical or clinical environment – the reasons are many. However, as modern proactive Therapists, we should acknowledge that these different approaches exist, acknowledge their individual strengths and weaknesses, and when possible, strive to utilise the multidisciplinary and interdisciplinary options.

References


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Nick specialises in research of lower limb biomechanics, particularly foot function with respect to cycle racing. His research into cycling biomechanics, carried out at Manchester Metropolitan University, has been published across the world (links below). In addition to advising professional cyclists, Nick often delivers private CPD workshops and presents at Conferences. Nick has served on the Executive Committee of The Society of Sports Therapists and has worked with GB cycling teams, Manchester Wheelers, English Fell Running teams and assisting Nicola at Blackburn Rugby Union club.

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