

The Relation of Sports Sciences with Other Disciplines in a Multidisciplinary Framework in Turkey

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ABSTRACT

Sports sciences have become one of the most popular disciplines in the world and Turkey. Recently progress made especially in training and exercise psychology fields provided remarkable contributions to science. On the other hand, sports science can not be claimed to be discipline by itself. This discipline will always need several essential disciplines like medicine, psychology, and sociology. Like other developing disciplines, sports science is a developing discipline in Turkey. But there is a point remaining a mystery related to approach of other disciplines especially when attempting scientific collaborations. The perceptions of other disciplines towards sports sciences may not be as welcoming as the practices in other countries. As most sports scientists come from an athletic background in Turkey this perception may create a prejudice in the sight of other disciplines and scientists. In this review, literature, and research related to multidisciplinary studies and practices were focused, also the importance of multidisciplinary scientific collaborations was emphasized. In conclusion, the need for scientific collaborations with sports sciences in Turkey was highlighted.

Keywords: multidisciplinary, sports science, research

ÖZET

Türkiye’de Spor Bilimlerinin Diğer Disiplinlerle Multidisipliner Çerçevedeki İlişkisi

Spor Bilimleri dünyada ve Türkiye’de en yaygın disiplinlerden biri haline gelmiştir. Son zamanlarda kaydedilen ilerlemeler özellikle antrenman ve egzersiz psikolojisi alanlarında bilime önemli katkılar sağlamıştır. Diğer yandan, spor bilimlerinin tek başına bir disiplin olduğu ileri sürülememektedir. Spor bilimleri disiplini tıp, psikoloji ve sosyoloji gibi başlıca disiplinlere her zaman ihtiyaç duyacaktır. Diğer gelişmekte olan disiplinler gibi spor bilimleri de Türkiye’de gelişmekte olan bir disiplin olarak karşımıza çıkmaktadır. Fakat diğer disiplinlerin özellikle bilimsel araştırmalardaki işbirliklerde spor bilimleri disiplinine karşı yaklaşımları bir merak konusu olmaya devam etmektedir. Türkiye’de diğer disiplinlerin, spor bilimleri disiplinine karşı algıları diğer ülkelerde olduğu düzeyde işbirlikçi olmayabilir ve spor bilimcilerinin birçoğunun sporcu geçmişi olduğu için spor bilimcilerle iş birliği yaparken diğer disiplinlerde bir takım ön yargılar oluşabilir. Bu derlemede multi disiplinler araştırma ve uygulamalara ilişkin literatür ve araştırmalara odaklanılmış ve ayrıca multidisipliner bilimsel işbirlikçi çalışmaların önemine değinilmiştir. Sonuç olarak Türkiye’de spor bilimleriyle yapılacak multi disiplinler bilimsel işbirliklerine olan ihtiyaç ortaya konulmuştur.

Anahtar Kelimeler: multidisipliner, spor bilimleri, araştırma.

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INTRODUCTION

By the looks of history, as a science discipline, sports science has its origin in ancient Greece. There were essays written on improving human health (131-201) (Berryman, Jack, Roberta, 1992). For example, medicine and psychology are among the most known sciences to recover human physical and mental health. Yet as a preventive mechanism, exercise and sports play an important role in human health. Regarding all other disciplines, each discipline has its contribution to their disciplines and sciences. Multidisciplinary collaborations contribute to transform the understandings of researchers and produce new knowledge, new solutions, and may even create a new discipline. Collaborations are needed when things are more complex and seem difficult to be solved by one side (Derry, Schunn, and Gernbacher, 2014). It is for sure that sports sciences as a discipline particularly can not exist without medicine. Tests and measurements taken in sports science research require medical knowledge and approval besides, inventories and scales have been used so far in psychology and sociology fields are being applied frequently in sports sciences as well. However more multidisciplinary research in sports science and other disciplines seems required for the development of sports sciences but when we focus on collaborations of other disciplines with sports science in Turkey, there seems a gap to bridge regarding the multidisciplinary scientific collaborations.

METHOD

In this review, the literature data were obtained from “Google Scholar” and “Trakya University Library Database” and keywords were used in search engines with “multidisciplinary studies”, “benefits of multidisciplinary scientific collaborations” and ‘sports science’ keywords.

RESULTS and DISCUSSION

As An Academic Discipline Physical Education and Sports Discipline

There may be some perceptions from other disciplines that sports science is a practical or applied field and it may be marginalized through the eyes of others and this situation may be simulated to the work of a physical education teacher; for example, a maths, science or even a music teacher may consider physical education as a game course for children to play and they assume Physical Education teachers as the teachers of different practices. But the fact is that a physical education teacher can become a psychologist, an emergency service, a trainer, etc. for students in and out of courses in the school environment. Physical education

courses and teacher metaphor can apply to the academic field. Today with its developments and progress, sports science is a unitary discipline reserving many other disciplines in it. An example from exercise psychology is that the healthcare professionals and practitioners working with patients can benefit from several principles from exercise psychology to reduce anxiety and depression in the engagement of a cardiac rehabilitation program (Weinberg, Gould 2007; Exercise Science 2001). Starting from this point of view, It can be suggested that professionals from medical science like psychiatrists and professionals in applied exercise psychology may collaborate scientifically on both intervention programs and scientific research altogether. In sports sociology; Henry (1978) suggests that the significant contributions to knowledge in this field are coming from physical education scholars who have a cross-disciplinary background in sociology, rather than from sociologists (Henry, 1978). Nevertheless sports science and scholars in this discipline can be considered as significant among other disciplines and when many developed countries observed scholars open their doors to each other when it comes to multi-disciplinary research. But in Turkey, sometimes scholars from sports disciplines get into difficulties, and it may become a problem to collaborate with other disciplines, and scholars from several fields seem reluctant to collaborate with exercise science discipline.

For instance, a motor learning course must incorporate neurophysiology and related anatomy as well as specific aspects of experimental psychology. Should such a course be taught in a psychology department, it would be expected to devote more attention to learning small movement tasks than to gross motor or large muscle phenomena and kinesthetic perception, and thus be inadequate for physical education. Similarly, child development courses as taught in psychology departments necessarily direct major attention to non-motor aspects of behavior, leaving insufficient time for adequate treatment of gross motor behavior and its physiological concomitants after the first few years of childhood. A motor development course must by its nature be cross-disciplinary; so must a course in kinesiology, since it presumably includes the physics of body mechanisms (Henry, 1978). This can be shown as a proof of multidisciplinary collaborations not only for sports science but also every other discipline in the world, therefore in health and social disciplines the lack of scientific collaborations with sports discipline in Turkey may not only be setting barriers to development and progress of sports science but also it may build a barrier to their disciplines as well. Focusing on this issue from this aspect may contribute to new viewpoints for multidisciplinary collaborations in Turkey.

Could Educational Background Be Another Issue For Sports Scientists In Multidisciplinary Collaborations?

Many sports scientists and scholars mostly come from sports faculties and physical education departments of universities. In some countries like Turkey, some physical tests need to be passed by candidates who would like to attend in the Physical Education department at universities. For this reason, one of the prejudices occurred by other disciplines might be the athletic backgrounds of scholars from sports disciplines as the half or more of their curriculums involved practical courses requiring several physical abilities during their bachelor's education. In Turkey, there is an academic perception in many disciplines towards people dealing with arts and sports and they may be thinking that this population is not eligible enough for academic research due to their academic backgrounds. Hence scientific, multidisciplinary collaborations in the academic field in Turkey sometimes can be difficult to carry out for sports scientists with other disciplines.

How To Make Scientific Collaborations With Sports Science In Turkey

When multidisciplinary scientific collaborations are needed, it is worth to focus on some examples before starting to discuss this topic: Some research carried out with sports disciplines are; experiments conducted with athletes using biomechanical, physiological and thermodynamic methods to study muscle functions (Hill, 1970), Biomechanical and physiological methods to study locomotion (Margaria, 1976) and biomechanical, physiological and neurophysiological methods to develop a model for human locomotion (Hatze, 1981). There are numerous studies from all over the world like these to prove how several disciplines can make research with sports discipline. Sports science is such a discipline that it can embody many disciplines in it and it is for sure that there are many skillful sports scientists raised and still raising in Turkey. By increasing the participation in National and International Multidisciplinary Congress this situations may be handled and meeting scholars from other disciplines face to face may also be a contribution to breakdown the prejudices against sports science and sports scientists at these meetings. Regarding sports scientist's part for having collaborations with a scholar from other disciplines in Turkey, they should be willing to express their academic purposes and concerns on their research subject clearly and should not bite back when it comes to multidisciplinary academic research when it seems necessary.

Defining The General Benefits of Multidisciplinary Academic Collaborations

In some cases, a unique discipline and one-sided approach may not get enough to reveal the facts of research. When this happens, a call for a collaboration with a relevant discipline may have benefits on diversifying approaches towards a research subject. The biggest benefit of multidisciplinary research is that it can contain a common, comprehensive definition of the problem, an explanatory view of relevant mechanisms and processes, and a manageable set of problem solutions. To the extent that the multidisciplinary team succeeds, however, they would find themselves in an interdisciplinary endeavor, in which relevant parts (concepts, models, methods, findings) of different scientific disciplines are merged and neatly integrated. Thus, for example, a natural science model about the spreading of air pollution might be coupled to a behavioral science model of using motorized transport; or an economic model of consumer utility maximization might be combined to a psychological model of habit formation and social status-seeking. This would extend the scientific basis for effective research (Uiterkamp and Vlek, 2007). Contemporary science has begun to become multidisciplinary in many fields; the fact of reaching the most comprehensive and effective solutions for problems through teamwork was accepted by many scientific environments. For example, the brain was excluded from the monopoly of certain medical fields under the multidisciplinary approach. In research and explanations related to the brain, cognitive process, and relation of them; knowledge, approach, and techniques of basic sciences, clinical sciences, and technical sciences have been started to be used together. Today, a multidisciplinary approach which is considered as the essence of the ‘‘Second Renaissance in Science’’ phenomenon has become the cornerstone of science, and technology and scientific success have been understood to belong to groups and institutions who adopt and practice multidisciplinary approach (Karakaş and Karakaş, 2000). Such an understanding of multidisciplinary research contributes to those disciplines who collaborate will help academic environments to be aware of the benefits and if so starting from this point, researchers from medicine and social sciences in Turkey may change their stereotyped thoughts and attitudes towards sports science and sports scientists.

CONCLUSION and RECOMMENDATIONS

The purpose of this review was to discuss the benefits of scientific multidisciplinary collaborations with sports science and its necessity in Turkey. Achieving success in multidisciplinary research is not that difficult and many other disciplines have been doing it. For example, when a sports science researcher, research the effects, cons, and pros of exercise

on individuals with mental disorders, he/she will need clinical practices at mental care services and it is obvious that a sports science researcher is not able to maintain his/her research without a medical doctor then a multidisciplinary collaboration will not only help sports science, researcher, to practice his/her tests but also may bring new perspectives to clinical approaches in psychiatric therapy applications. For better results, for creating diversity in sports, medicine, and social sciences, scholars can make much more progress than before when researchers from other disciplines approach equally to each discipline and researchers in Turkey. Many sports scientists are wishing to collaborate with scholars from other disciplines as co-researchers in health and social science. It is beyond doubt that sports scientists sometimes may need researchers from other disciplines to make progress in the sports science discipline with more quality research results in the context of a multidisciplinary research approach.

Regarding this issue qualitative research (observation and immersion, interviews, open-ended surveys, focus groups, content analysis of visual and textual materials, oral history) (Crossman, 2017) with scholars, researchers and scientists from several disciplines and sports science discipline can be carried out and their current views, attitudes, and opinions towards multidisciplinary scientific collaborations in other countries and Turkey may reveal and address new viewpoints about the benefits, cons, and pros of multidisciplinary collaborative research.

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