

A meta knowledge production in the exercise behaviour studies

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Aim of paper and research questions

There is a lack of meta-analysis study in the field of exercise behaviour. Hence, this study used citation and co-citation analysis in order to help researchers identify the linkage among different scholars and confirm the status of each of these scholars with regard to their contribution to exercise behaviour in the field of sport management. In addition, this study aimed to bridge the gap in research and map the intellectual structure of exercise behaviour research in the past decade.

Literature review

There are a large number of techniques that can be used to study a body of literature. Among these techniques, a simple literature review is the most widely used method (Ma, Lee & Yu, 2007). However, more objective and quantitative techniques are available for analysing author citations and co-citations (Rogers, 1995). The quantity and quality of management research in the field of sport and physical education has been discussed. Previous studies on sport management have been reviewed through a brief analysis of selected textbooks and master's and doctoral studies. (Paton, 1987). Additionally, there has been a short introductory commentary on sport and exercise psychology that focuses on quantitative systematic reviews, including meta-analysis (Biddle, 2006). Recently, Olsen, Bain, Jordan, Nagle, Green, Whiteman and Webb (2007) started to identify eligible studies by using the ISI Science Citation Index, which only uses the manual reviews of retrieved references. The present citation papers from the mathematical methods are devoted to two directions: journal co-citation analysis as an example of citation networks and lexical analysis of keywords in the titles and texts (Irina, 2005). According to some scholars' social network analysis tools can be used to graph the relations in the co-citation matrix and identify the strongest links and thus, the core areas of interest in the field of management. (Pilkington & Teichert, 2006). However, there have been few attempts to establish the intellectual structure of the exercise behaviour literature. Following Garfield, Sher and Torpie (1964), this study uses the social network approach and computer-aided searches of databases, such as SSCI and SCI, in order to provide an overview of the literature. These databases were employed to obtain a comprehensive record of past knowledge production in exercise behaviour studies.

Research design and data analysis

Unlike prior studies, the data used in this study were not drawn from journals chosen by peer studies (Walstrom & Leonard, 2000). This study employed the "key word" method to search the articles in the SSCI and SCI databases. It involved an analysis of 11,938 citations of 536 articles published in the field of exercise behaviour of sport management between 1998 and 2007. In this study, we used citation analysis, co-citation analysis and social network analysis to trace

the development path of exercise behaviour research. In addition, this study used the UCINET software (Borgatti, Everett & Freeman, 2002) shows graphically the core areas of interest. The different shapes of the nodes result from performing a faction study of these authors. This method seeks to group elements in a network based on the sharing of common links to each other.

Results

The result of the citation analysis revealed the most influential documents with the highest citations. The most influential scholars were then identified by the total number of citations within the selected journal articles. Co-citations in the selected articles were tabulated for each source document. Further, the findings of the social network analysis were represented in the form of a pictorial map that reveals the number of interactions between authors and the closeness of the relationships between nodes within a network.

Discussion and conclusion

In this study, the authors of the citations present the most influential scholars and these articles are the most influential publications. Besides, the linkage among different scholars identifies and confirms the contribution of these scholars in the field of exercise behaviour. In order to understand the state of exercise behaviour research, this study provides a co-citation network analysis to map the evolving patterns of the exercise behaviour in the field of sport management in the past decades. Furthermore, this study adopts a unique approach and offers a novel perspective it is the first study to apply citation and co-citation analysis to exercise behaviour research literature. Thus, it can help identify the research direction of exercise behaviour research and provide a valuable tool for researchers to access the literature in this area.

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