Publications at the interface of dance, science and medicine: a bibliometric analysis

Derrick Brown¹,²

Radboud University, Nijmegen, the Netherlands
National Centre for the Performing Arts, Arnhem, the Netherlands

Dance as a profession has received increased attention in medical, scientia and educational paradigms over the past four decades[1]. Along a spectrum we see at one end an emphasis on pathology and malady while at the other, accents on expertise and performance. As research has increased, so has the number of peer-reviewed publications representing a diverse network of fields including dance/sports medicine, dance science, rehabilitation medicine, neuroscience, psychology, cognitive science and dance fitness training. In addition to these studies, a number of national and international groups have published consensus or position statements that make diverse recommendations on the diagnosis, management, and prevention of dance injuries with a generous proportion of recommendations and guidelines based largely upon modest empirical evidence and expert opinion. As the medical and scientific developments behind professional dance transition from a nascent to an established field, an important question is the effect of this transition on the creation and dissemination of ideas. Therefore, the purpose of this study then is a comprehensive bibliometric depiction of the co-authorship, organization and citation networks formed within medical and scientific research comprising pre and professional dancers between 1980-2016.

We utilized visualisation of similarity (VOS) software to create, visualize, and explore bibliometric maps of science and medical articles related to dance. VOS locates low-dimensional space items in such a way that the distance between any two items reflects the similarity of items in co-citation, bibliographic coupling and text corpora. Using the Web of Science Core Collection© digital library we filtered ±13,000 articles using dance related search terms into key categories and extracted ≤1700 peer reviewed articles from which to construct our analysis.

Our findings provide a scientometrics depiction of research within the scholarly community of scientists and medical professionals who research dance performance. Relatedness rather than impact factor highlights existing, as well as new connections of common interest. By analyzing similarities across bibliometric measurements, we chart the evolution of research broader than the term ‘dance medicine and science and show the expanse of research and its relevance across multiple dance disciplines.

References: