Fundamental Significance of AI-Enabled Clinical Decision Support Systems in Nursing

Hammami Markus[*]

Department of Advanced Sciences, Peking University, Beijing, China

DESCRIPTION

Assessment, diagnosis, planning, execution, and evaluation are the five interconnected stages in the professional discipline of nursing. The nursing care process is an important step in care planning and problem-solving in nursing practise that aids in identifying patients' needs. Nurses must apply clinical judgement and critical thinking to each of these phases in order to make difficult decisions on patient care. Additionally, when the patient's health evolves, the nursing care process is dynamic and frequently necessitates numerous iterations. When nurses use the nursing care process for continuous care planning, they go through the four unique stages of human information processing for each decision they make: information collection, information analysis, decision selection, and action implementation. For instance, a nurse must gather data on the patient's history, physical and mental health, and current functional state in order to create a care plan to prevent falls. The nurse must use this data to assess the patient's fall risk and decide on the best course of action. They can then carry out the chosen courses of action to guarantee the finest patient outcomes. Nurses may be expected to make a number of decisions during each stage of the nursing care process, and for each decision, they may go through one or more phases of human information processing [1].

The goal of AI-enabled Clinical Decision Support Systems (CDSSs) is to generate patient-specific assessments and recommendations for healthcare professionals, as well as to support clinical decision-making through human-computer interaction. CDSSs are software programmes that make use of massive data sets, medical knowledge, and analysis engines. Since the availability of computer technology has increased, there has been much discussion on the use of CDSS promises examples in various fields [2].

By carrying out information collecting, analysis, decision and action selection, and action implementation on behalf of nurses, CDSSs are playing a crucial part in facilitating the nursing care process. The task of nursing practitioners and nursing managers has become very straightforward and generally correct by providing personalized information support. In the subject of CDSSs in nursing, such as pain treatment, fall prevention, pressure ulcer management, and others, numerous scholarly studies have recently been published. By 2021, the nursing industry will greatly benefit from the usage of information technology breakthroughs. To help nurses and raise the standard of care, CDSSs can offer tailored information about medication safety, ordering diagnostic tests, and cutting healthcare expenditures [3,4].

As a result, the CDSSs that represent AI applications have the unimaginable potential to influence virtually every element of nursing care, and we will soon see even more applications. Bibliometric analysis, which can provide a broad, quantitative, and qualitative overview of a particular issue with a deep background, has emerged as a key element of study review. In recent years, this tactic has drawn the attention of nursing researchers. It can aid researchers in understanding the trajectory of a certain field of study, as well as assess the contributions of journals, organisations, and nations to that field. It can serve as a foundation for the creation of clinical guidelines, particularly in the medical industry [5].

CONCLUSION

To the best of our knowledge, the use of clinical decision support systems in nursing has not been the subject of bibliometric research or a visualisation map. The current study is the first comprehensive scientometric study to address this gap, with the goals of identifying the characteristics of articles about the global performance and development of nursing clinical decision support system research, summarising recent accomplishments in this area, understanding its research directions and hot spots, and providing specific references for future research directions. These analyses and findings will aid researchers in developing a thorough understanding of the state of the field and cutting-edge developments in clinical decision

Correspondence to: Hammami Markus, Department of Advanced Sciences, Peking University, Beijing, China, E-mail: markus.h@gmail.com

support system use in nursing, with the goal of offering pertinent data and sources for future research and publications on the subject. Additionally, lay the groundwork for future advancemensts in this field of expertise.

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