

INTED 2023

**SIMULATION IN EDUCATION OF HEALTH
PROFESSIONS:
A DESCRIPTIVE ANALYSIS THROUGH
BIBLIOMETRICS**

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Background



- Simulation-based training has been defined as the use of a person, device, or set of conditions to present and evaluate problems authentically that can be applied to many different disciplines and types of trainees.
- Simulation is a valuable tool in the education and training of health professionals and can take many forms, including high-fidelity simulations that mimic real-life scenarios as closely as possible, and low-fidelity simulations that use simple, cost-effective techniques to teach basic skills.

Background

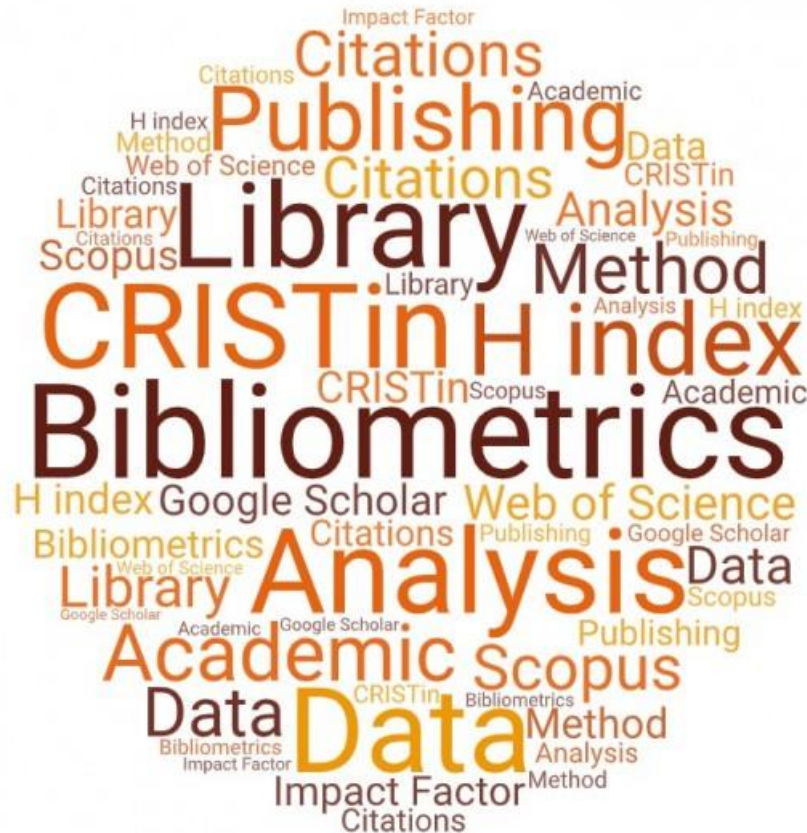


Image source: <https://www.uis.no/en/bibliometrics>

- The usage of simulation, in Health professions practice and education, is still growing, with a possible impact also on research. However, the increase in the number of scientific publications makes it difficult to know the scientific structure and development of this field. Visualization techniques based on bibliometric data are useful for the understanding of scientific fields.
- Bibliometrics is the study of patterns and trends in research literature. It involves the use of statistical and mathematical methods to analyze and measure the impact of research papers and other scholarly works.
- Bibliometric studies are often used to evaluate the productivity and impact of research in a particular field or institution, and may be used to inform decisions about funding, hiring, and promotion

Methodology



- The author performed a bibliometric, descriptive, and retrospective study. The author identified publications from the Pubmed database from 2000 till 2022 related to the use of Simulation in Health Professions Education
- Using this search string ("Teaching"[Mesh] OR "education"[Subheading] OR "Education"[Mesh]) AND ("Patient Simulation"[Mesh] OR "Computer Simulation"[Mesh] OR "Simulation Training"[Mesh] OR "High Fidelity Simulation Training"[Mesh]).
- From the titles and abstracts of these publications, was selected the main terms related to the field, extracted by **VOSviewer** software, to create a visualization of the most important trends referred to in the literature.

Results

The author identified 2,212 eligible references (1,825 Clinical trials and Randomized Controlled Trials and 389 Meta-Analysis and Systematic Reviews) (Fig.1).

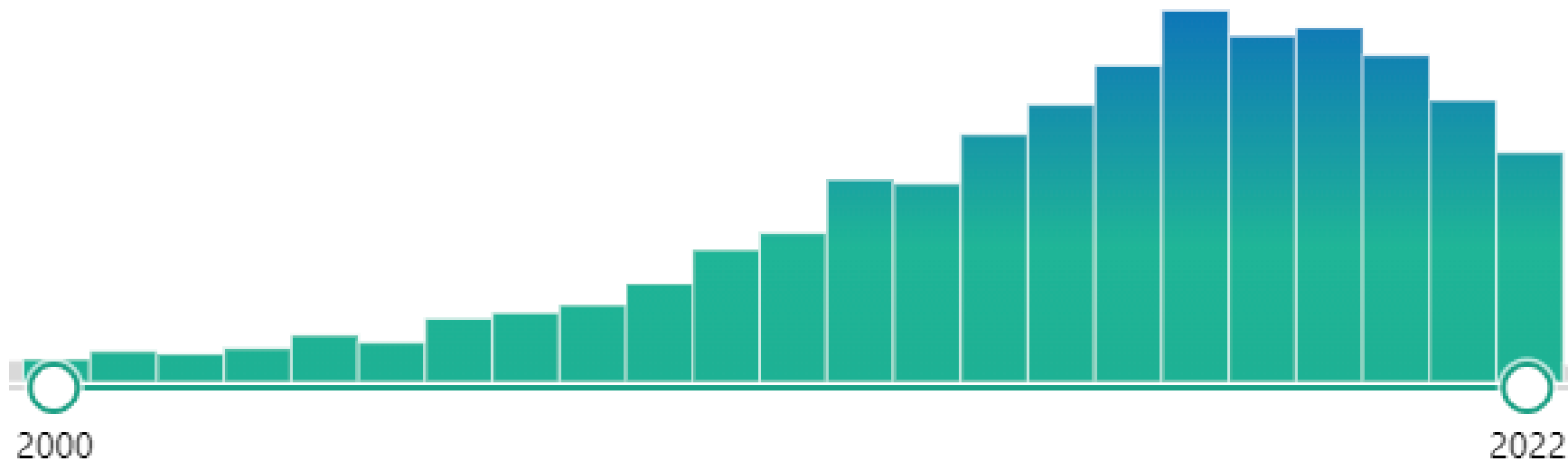


Figure 1. Publications identified in Pubmed database from 2000 till 2022

Results

Upon analysing the co-occurrence of the terms associated with simulation and education, the most common one was the usage of this approach in different areas and education levels in the medical profession followed by nursing and allied health (Fig.2). It was noticeable also in the emergence after 2017 of the use of this strategy with nursing students (Fig.3)

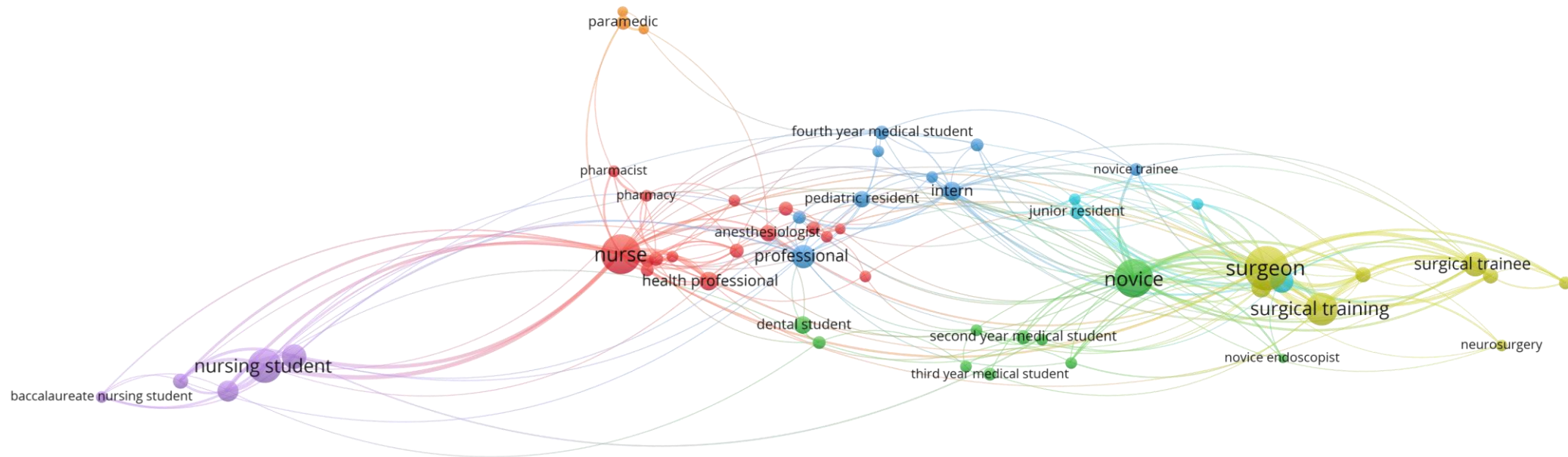


Figure 2. Co-occurrence of the terms associated with simulation and professions (VOSviewer)

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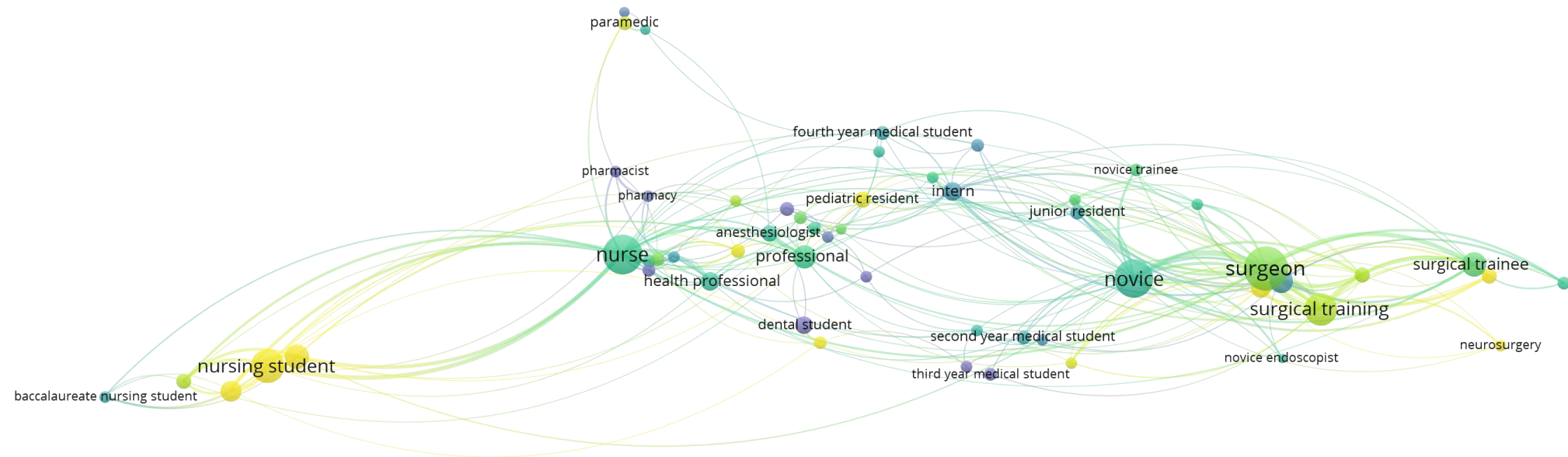


Figure 3. Co-occurrence of the terms associated with simulation and professions trough time (VOSviewer)

Conclusions



- As shown by the published research, the interest in simulation as a method of education and training for health professions has grown exponentially in recent years.
- This is due in part to the numerous benefits that simulation-based training can offer, such as providing a safe and controlled environment for students to practice their skills, as well as allowing for the inclusion of a wide range of patient scenarios and contexts.
- Simulation-based training has the potential to revolutionize the education and training of health professionals, by providing them with the opportunity to practice in a safe and controlled environment and to address the challenges that remain unaddressed in clinical training.

