Artificial intelligence in sleep and art

Artificial intelligence (AI) seems everywhere. What is it? “AI refers to the capability of computer systems to perform tasks conventionally considered to require human intelligence, such as speech recognition, decision-making, and visual recognition of patterns and objects.”

In the realm of visual art, the program DALL.E 2 (https://open-ai.com/dall-e-2/) uses as input natural language commands to create new art, or modify existing art. The images generated do not have “an artist.” If there is not an artist, is it art?

AI has penetrated many aspects of life from the operation of motor vehicles, medical decision making and even surgery, to manufacturing, and myriad other applications. In PubMed in 2022 alone there were more than 15,000 articles with the keywords “Artificial Intelligence.” Fig. 3 shows the dramatic increase since 2018 in the articles with keywords “Artificial intelligence” and “sleep.” One might have the impression that this is something new in medicine and especially sleep medicine. This is simply not correct. AI has been used in many different ways, and the terms for its use have varied over the last four decades. Early systems were “heuristic” (rule-based) and later “neural networks,” and finally “AI.”

Sleep has always been a data-intensive field and computers have been used to acquire and attempt to analyze data and replicate human interaction with the data. This trend started in the 1970s, first to define waveforms, then stage sleep, then to analyze breathing patterns. As the sleep field and computers and cloud computing evolved, much more complex issues could be addressed. For example, large datasets can be evaluated to phenotype data from hundreds to thousands of patients. With the development of miniaturized sensors and the adoption of wearable devices, data from millions of people can be analyzed.

Where AI will take medicine is still a mystery. Where AI will take art is even a bigger mystery.
Declaration of conflicts of interest

The author has declared that he has no conflicts of interest to disclose.

Meir H. Kryger, MD
Yale University, New Haven, Connecticut, USA
*Corresponding author: Meir H. Kryger, MD, Yale University, PO Box 208057, New Haven, CT 06520-8057, USA. E-mail address: meir.kryger@yale.edu

References