

Peer Review

Review of: "Virtual Reality in Medical Education: Prometheus' Gift or Pandora's Box?"

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Thanks for allowing me to review this manuscript. Although it is a timely and valuable study, it would greatly benefit from substantial improvements in its writing quality and the structural organization of specific sections.

Overall: The writing style is not consistent. For example, using colloquial, overly specific, or medical terms can make the content difficult to understand. Some sentences are too long and confusing. Subheadings are not intuitive.

Abstract

- There are three types of VR based on the levels of immersion: non-immersive, semi-immersive, and immersive. This means that the first sentence, "Virtual reality (VR) is a realistic and immersive computer-generated simulation....." is not quite right. Please rephrase it.
- The last sentence, "In this way, readers who want to use VR in medical education will gain a comprehensive and up-to-date scientific foundation on its correct and appropriate use." is in a colloquial writing style. Please improve it to a professional writing style.

Introduction

- Please remove or improve these sentences: "Almost everyone dreams every night. This is a kind of virtual reality (VR)." They don't contribute to the introduction and are even confusing.
- Please remove "In this way" in the last sentence and improve the rest of the sentence. It doesn't sound professional.

Definition

- Please correct the following sentence, "VR is a realistic and immersive computer-generated simulation..." based on a comment under the abstract section.

- Please change “like” to another professional term. Use “For example” or “such as” instead.

Classification

- The second paragraph, starting with “VR can also....Reality,” should be replaced with an explanation of non-immersive, semi-immersive, and immersive VR.

History

- I recommend removing the second sentence, “With a somewhat exaggerated approach, the quest for realism in images can be traced back to cave paintings where shadows were added to pictures.” This is too stretched, although the authors mentioned it. Please fix Figure 2 accordingly.

VR in Medical Education

1. Advantages

- Under the “Attention” heading, replace the term “agreed” with “studied”. Furthermore, add one more citation. The last sentence indicated “Studies.....”. And then, please add at least one more citation because “studies” means many studies.
- Please change “Applicability Anytime, Anywhere” to “Applicability”. This is more concise.
- Please change the “Simulating Challenging Situation” to “Simulation”. This is more concise.
- Under the “Simulating Challenging Situation” heading, replace the term “crucial” in the first sentence with “valuable”. The “crucial” is too strong.
- Under the “Repeatability” heading, replace the term “full learning” in the last sentence with “mastery”. It sounds more professional.
- Please change the “Depth Perception and Immersive Experience” to “Realism”.
- Under “Digital Identity,” please add more citations beside [41]. The sentence started with “studies...”
- Please change the “Virtual Trainers, Peers, Patients, and Hospital” to “Virtual Environment”.
- Please change the “Cost” to “Cost Effectiveness”.

2. Risks

Digital Eye Strain heading

- Please change “post” to “after”. Please add some examples of “extraocular symptoms” in the sentence, “Digital eye strain, known by various names including computer vision syndrome, ocular asthenopia secondary to digital devices, eye strain post computer or mobile usage, and visual fatigue, is a condition characterized by both ocular (related to the eye's surface, accommodation, and vergence) and extraocular symptoms that arise from extended periods of digital device use.”

- The paragraphs starting with "Blinking...." include too much information, especially medical terms that most readers don't need to know - recommending to shorten it by removing medical jargon.
- The sentence, "...we look straight ahead, resulting in a wider gap between our eyelids," Please change it to "Our eyes widened as we looked straight ahead." The latter one is more natural.

Conclusions

- I don't understand the meaning of "For our eyes, which have evolved to meet basic needs in an environment without light-emitting devices and closely used displays, VR technology represents one of the heavy digital burdens that increase day by day." Please rephrase it.

Declarations

Potential competing interests: No potential competing interests to declare.