



# Is Virtual Reality a New Way to Support Patients Nearing the End Stages of Their Lives?

Nasrin Hosseini<sup>1,\*</sup> and Shabnam Nadjafi<sup>1</sup>

<sup>1</sup>Neuroscience Research Center, Iran University of Medical Sciences, Tehran, Iran

\*Corresponding author: Neuroscience Research Center, Iran University of Medical Sciences, Tehran, Iran. Email: [hosseini.n58@gmail.com](mailto:hosseini.n58@gmail.com)

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Most people, especially those reaching the end stages of their lives, have had dreams (1) that they could never achieve throughout their lifetimes. These dreams may vary tremendously from going for a walk along the beach to a spacewalk on the moon (2). Realizing some of these dreams is one thing that could often relieve the patients' suffering and discomfort as well as that of their families. Therefore, many studies have aimed to create a sense of satisfaction for these patients and their close relatives (3).

What could be more fulfilling for a child suffering from a fatal illness or their parents than finding ways to overcome this situation? Although many things could provide solutions to such a challenge, the answer at times either involves spending a lot or remains extremely unattainable.

In recent years, we have witnessed enormous changes and advancements in modern technologies. Virtual reality (VR) is one of these emerging technologies in the twentieth century (4), first introduced as computer gaming. The application of VR in various sciences, including medicine, has been of considerable interest to researchers during recent decades. As such, VR laboratories are created to investigate how people would interact with their surrounding environment under more realistic conditions and virtual simulations very close to reality have been developed in these laboratories. The critical element in VR is the ability to disconnect the individual from the physical reality perceived by their five senses, in such a way that breaking the laws of optics and physics becomes possible (5).

Nowadays, VR can also train individuals to operate complex machinery by appropriately responding to the rapidly unfolding events generated by the flight and drive simulators. Moreover, it has been utilized to modify human behavior in the treatment of psychological and mental health disorders. Various applications of VR also include cognitive therapy, visualization facilita-

tion in psychotherapy, and special education for learning-disabled children. Another use of VR is presenting the schizophrenic patients with the virtual hallucinations aiming to desensitize them to the actual ones (6).

As evidenced, VR is a research area of rapid growth and vast potential. Considering the significant improvements in VR software and hardware engineering as well as their constantly falling cost, this technology has become more accessible and might satisfy many dreams of patients anticipating in the end stages of their livings.

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## Footnotes

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## References

1. Saraiya B, Bodnar-Deren S, Leventhal E, Leventhal H. End-of-life planning and its relevance for patients' and oncologists' decisions in choosing cancer therapy. *Cancer*. 2008;**113**(12 Suppl):3540-7. doi: [10.1002/cncr.23946](https://doi.org/10.1002/cncr.23946). [PubMed: [19058149](https://pubmed.ncbi.nlm.nih.gov/19058149/)]. [PubMed Central: [PMC2606925](https://pubmed.ncbi.nlm.nih.gov/PMC2606925/)].
2. Taheri MA. Absence of Knowledge, Understanding, and Perception of the Heaven (Symphase with the Heaven) as Approached by Halqeh Mysticism. *Procedia - Social and Behavioral Sciences*. 2014;**114**:111-5. doi: [10.1016/j.sbspro.2013.12.668](https://doi.org/10.1016/j.sbspro.2013.12.668).
3. Sanagoo A, Azizi Moghadam A, Hazini A, Azar Gashb E, Mahasti Jouybari L, Araghian Mojarad F. The Comparison of Family Member's Satisfaction of Palliative Care and Standard Care for Patients With Incurable Cancer. *Journal of Critical Care Nursing*. 2016;**In Press**(In Press). doi: [10.17795/ccn-6243](https://doi.org/10.17795/ccn-6243).

4. Organisation for Economic Co-Operation and Development. *21st century technologies: promises and perils of a dynamic future*. OECD; 1998.
5. Onyesolu MO, Eze FU. Virtual reality laboratories: An ideal solution to the problems facing laboratory setup and management. *Proc. of the World Congress on Engineering and Computer Science*. 2009.
6. Tarr MJ, Warren WH. Virtual reality in behavioral neuroscience and beyond. *Nat Neurosci*. 2002;**5 Suppl**:1089-92. doi: [10.1038/nn948](https://doi.org/10.1038/nn948). [PubMed: [12403993](https://pubmed.ncbi.nlm.nih.gov/12403993/)].