



## Background

In the past 15 years, the opioid epidemic has been one of America's rising health concerns. Alabama has limited access to opioid abuse services in rural populations. Specifically, many struggle with lack of health care providers in their area, no transportation to their treatment facility, and poor access to comprehensive, quality treatment. People between 19-35 have the highest rates of opioid abuse, but are also most likely to drop out of treatment. Researchers are challenged with developing effective treatments that cater to this populations. Telehealth can be used to help improve access to healthcare for people in rural areas, as well as give this technologically inclined subpopulation a more engaging approach to treatment.

## Virtual Reality-Based Behavioral Interventions for Opioid Use Disorder: A New Era in Tele-Health

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## Implications

After reviewing the literature, VRT has been shown to be an effective form of treatment for a variety of substance use disorders. However, few studies were found that specifically looked at its implementation with opioid use disorder. Therefore, more research is needed to ascertain its efficacy in this population.

## Conclusions

Various studies have concluded that VRT is a credible and effective treatment for SUDs. Increasing availability of substance abuse treatment promises to have positive outcomes for individuals with opioid use disorders because we know that treating these disorders can help this population maintain sobriety. VRT will offer a new, innovative way to occupy the minds of a population that lacks the focus needed in a traditional therapeutic setting.

## References

- Park, C.B., Choi, J.S., Park, S.M., Lee, J.Y., Jung, H.Y., Seol, J.M., Hwang, J.Y., Gwak, A.R. & Kwon, J.S. (2014). Comparison of the effectiveness of virtual cue exposure therapy and cognitive behavioral therapy for nicotine dependence. *Cyberpsychology, Behavior, and Social Networking*, 17(4), 262-267. doi: 10.1089/cyber.2013.0523
- Smith, M.J., Bell, M.D., Wright, M.A., Humm, L.B., Olsen, D., and Fleming, M.F. (2016). Virtual reality job interview training and 6-month employment outcomes for individuals with substance use disorders seeking employment. *J Vocational Rehabilitation*, 44(3), 323-332. doi: 10.3233/JVR-160802
- Son, J.H., Lee, S.H., Seok, J.W., Kee, B.S., Lee, H.W., Kim, H.J., Lee, T.K., & Han, D.H. (2015). Virtual reality therapy for the treatment of alcohol dependence: a preliminary investigation with positron emission tomography/computerized tomography. *Journal of Studies on Alcohol and Drugs*, 76(4), 620-627. Retrieved from: <https://doi.org/10.15288/jsad.2015.76.620>

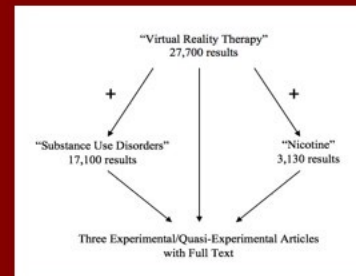
## Purpose

The purpose of this literature review was to analyze the efficacy of virtual reality as a treatment option for substance use disorder (SUD).



## Methods

A search was conducted using the keywords "virtual reality therapy" (VRT), "substance use disorders," and "nicotine" in *Google Scholar* and *PubMed*. Inclusion criteria for the final articles were virtual reality based interventions for SUD published within five years. The three articles were chosen because they were experimental/quasi-experimental designs with full text.



## Results

Son et al (2015), in a study that examined VRT in 12 subjects with alcohol dependency, found that it was successful in decreasing cravings. In a study that utilized VRT with 14 individuals with SUD, Smith et al (2016) found that compared to control this group had greater odds of obtaining a competitive job position by the six-month follow-up. Lastly, Park et al (2014) found that virtual cue exposure was effective in increasing abstinence from nicotine use.