

Why and How Digital Art Therapy Impact People with Dementia's Needs?

The World Health Organization estimates that there are about 50 million people globally who have dementia. It was projected that this number will rise to 82 million by 2030 and 152 million by 2050 (WHO, 2019 in Webb, 2020). Therefore, according to Hodge et al. (2019) with the rising in the number of people with dementia (PWD), designing interactive products and processes for this group has become a growing interest.

Art therapy, on the other hand, is a creative and engaging approach that promotes creativity, curiosity, and compassion in individuals with Alzheimer's disease (Götell et al., 2002). It is defined as a holistic approach that utilizes nonverbal forms of expression to engage the mind, body, and spirit. It allows for alternative modes of communication that can surpass the limitations of language (American Art Therapy Association, 2017, (Broader) Definition of Art Therapy, para. 4). Moreover, de Witte et al. (2021) believe there is a big tendency to employ various artistic techniques to enhance health and wellbeing. They claimed that these forms of art might be utilized by art therapists as an intervention or in arts programs created for in daily life uses as a side benefit to foster health. In addition, Carós et al. (2020) state that one of the treatments to prevent the progression of Alzheimer's, as they referred to as a kind of dementia, is the development of therapies. However, PWD face challenges in accessing traditional therapy due to cost, availability, and transportation. Therefore, it is important to explore digital art therapy interventions as an alternative strategy for PWD.

This study aims to present a research-based discussion on the impact of creativity in digital art therapy for PWD. A framework has been developed for the first time to identify the needs of this population. It includes two main categories of "emotional needs" and "physical

needs," each with sub-categories and sub-sub-categories for a better understanding of their needs. In the following, based on other scholars' studies, we will explore the benefits of using art therapy as a non-pharmacological intervention for PWD, including improved mood, decreased agitation, and increased social interaction. We will show why creatively using digital art therapy for this population is the key components of the art therapy process and how it can benefit PWD.

We anticipate that our study will demonstrate the importance of creatively using digital art therapy in art therapy sessions for PWD. We expect to show that digital art therapy can provide a meaningful and engaging activity for PWD, which can lead to increase the sense of safety and social interaction, as well as improving their short-term memory, thinking, learning, and their physical abilities in performing their daily activities, language impairment and exercising. To this end, we designed a psychophysiological experiment for future study to measure how traditional art therapy versus digital art therapy might have impact on PWD's emotional arousal. Additionally, a framework, as a guide, will be presented to show how digital art therapy might help PWD meet their need and why we believe that.

In conclusion, this study aims to make a valuable contribution by presenting research on the benefits of art therapy specifically digital art therapy for PWD. It is hoped that this study will inspire further research on this topic and encourage the incorporation of creative digital art therapy into the standard of care for PWD as this population often is left behind in digital art therapy. We believe that the components of digital art therapy can enhance the well-being of PWD and contribute to a more compassionate and supportive society.

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