Evaluation Study
Ebenezer Senior Living
Minneapolis, MN Campus
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In summer 2017, we partnered with Ebenezer Senior Living Minneapolis Campus and studied the impact of virtual reality for relaxation and overall wellbeing across two senior living communities, over two months. Early results of our pre/post evaluation of VR exposure show that virtual reality can help our elderly to maintain a high level of positive emotion and relaxation. Participants reported positive stimulation and therapeutic sensation, and appraised VR as one of their preferred activities for even evading dementia.

Introduction

Visual is a media and technology company creating virtual and augmented reality experiences that enhance healthy and happy living.

In 2017, Visual launched WellnessVR—a virtual lifelong learning and enrichment platform, designed specifically for our seniors. WellnessVR is offered to residential senior living communities and administered by care delivery staff or trained volunteers.

In summer 2017, we partnered with Ebenezer Senior Living Minneapolis Campus and studied the impact of virtual reality for relaxation and overall wellbeing across two senior living communities, over two months. Early results of our pre/post evaluation of VR exposure show that virtual reality can help our elderly to maintain a high level of positive emotion and relaxation. Participants reported positive stimulation and therapeutic sensation, and appraised VR as one of their preferred activities for even evading dementia.
The aim of this study was to evaluate the effect of exposure to virtual reality experience on the state of well-being of the seniors. This design is widely used in behavioral research and the measurement of pre-treatment and post-treatment change allows assessment of the impact of exposure to VR experience. 25 participants joined the study and they were required to be English speaking, independent, competent decision makers, who are cognitively intact, and visually acute with or without vision aids. The participants were exposed to 7-11 minutes long virtual reality content (nature, travel, arts, and performances) twice per week and for four weeks. They were asked to complete a pre and post exposure assessment before the first treatment and following the final treatment. The assessment was composed of three sections measuring the participants' state of wellbeing, reactions to VR exposure, and their self-reported scores for a Life Engagement Test that was validated for seniors.

“When you live on the 20th floor of this building you don't get a lot of opportunities to think about going boat riding—so that's cool.”
results
Relaxation

The VR experience for study participants was unanimously good, with 100% of participants reporting they enjoyed the VR experience. The VR experience also strongly impacted participants positive affective state, with 96% of participants reporting the VR experience helped them feel happier, 97% reporting it helped them feel more relaxed, and 98% reporting it helped them feel more positive. The VR experience also helped alleviate worry for our participants, with 94% of respondents reporting the VR experience helped them feel less worried.

The most startling finding is what may be assumed to be the spill-over effect of the VR experience to other aspects of participants lives: the benefit of engagement in other activities is significantly more improved after participants have been engaged in a four-week exposure to VR.

“That sure calmed me down. I could sit and watch for hours.”
A comparison of the VR experience to other activities participants engage in on a regular basis, such as attending religious services, socializing with neighbors or engaging in the arts demonstrates that although these activities generally improve how participants feel, the positive affect resulting from the VR experience is significantly higher than participation on religious services, socializing with friends, or participating in art activities.

The carry-over effects from the VR experience to other areas of life are strongly suggestive of a more long-term benefit of VR as well as the role of VR exposure to participants overall well-being. For instance, prior to VR exposure, 65% of participants report that spending time with friends or family improved how they felt a lot or some, almost 95% of participants report the same improvement following the 4 week exposure to VR (p=0.0333).

In addition to a qualitative improvement in the quality of time spend with friends or family following VR exposure, a quantitative difference is also present, with the frequency of social interaction dramatically increasing post-VR exposure. The frequency of social interactions 2-3 times a day increased for 30.4% of participants pre-VR to 45.8% of participants post VR, and the percentage of participants who socialized everyday increased from 34.8% to 50% post-VR (p=0.0285).
Anxiety and Nervousness

Use of VR is related to a reduction in the impacts of nervousness on participants. Prior to any VR exposure, 54.5% of participants report having trouble with nervousness, while only 36% of participants report this trouble after the 4-week exposure to VR (p=0.0822).

VR also seems to be related to a reduction in trouble with depression, with 18.2% of respondents feeling sad or depressed prior to VR exposure, and only 4% reporting same following 4-weeks of VR exposure. While this trend is emerging, our sample size is too small to attain statistical significance.

Participants also self-reported their overall life engagement on a Life Engagement Test that was validated for seniors. While we have observed some positive trends, the small sample size precludes the findings attaining statistical significance. We expect the trends to reach statistical significance over a longer period of exposure and alongside the advancement of virtual reality content and experiences.

“I feel like I got my feet in the water.”
Interviews & Observations

In a focus group, a subset of participants reported that they found the VR experience more realistic and immersive than what they had originally expected. They expressed that they would like to continue with the VR program and that they prefer to experience it on average 15-30 minutes per week.

The administrators frequently observed and reported gestures of deep astonishment, enjoyment, excitement, and nostalgia. Ebenezer staff also articulated their surprise about the social aspects of the experience where they observed the participants treating their common VR involvement similar to that of a book club, and nicknamed the program: “The VR Club.”

Participants displayed levels of engagement and motivation, during the 7-11 minutes long sessions very high which suggests that VR can provide an important new medium to support and enhance adherence to other wellbeing programs and treatments.

“Nostalgic”

“Peaceful”

“Calm”

“Amazing”

“Therapeutic”

“Astounding”

“Nostalgic”

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Visual Inc. is a media and technology company creating virtual and augmented reality experiences that enhance healthy and happy living. Our flagship product, WellnessVR, is a mobile VR platform that reduces anxiety and promotes wellbeing for seniors and patients in recovery. WellnessVR is a subscription-based program for mobile Gear VR headsets that fuses Visual’s proprietary video delivery system with immersive 360° video from around the world.

Currently, WellnessVR offers five tracks for virtual reality experiences: relaxation, guided meditation, travel, culture & performances, and therapeutic arts.

Since 2014, we’ve created VR experiences for dental practices, orchestras, NBA teams, newspapers, non-profits, health organizations, and Fortune 500 companies. As a full 360° video production company Visual has the following capabilities in creating VR-based dementia training: filming, stitching, editing, animating, VFX, and post-production.

Learn more at visualisgood.com