

# MINDSET AND METASTATIC CANCER RESEARCH STUDY SUMMARY

AUTHORS: KATHERINE B. GRILL, PHD,  
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STUDY FUNDED BY THE WILLOW FOUNDATION AND CONDUCTED BY THE COMEDYCURES FOUNDATION IN COLLABORATION WITH NEALTH

## PURPOSE

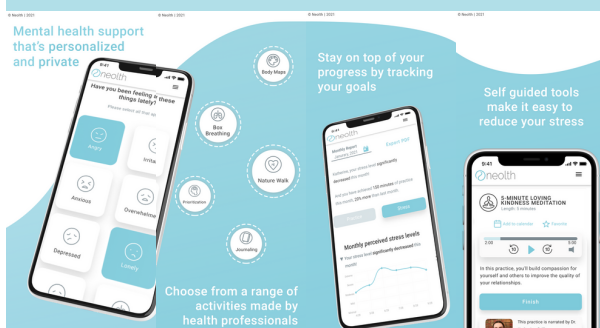
- **Test the feasibility** of a digital intervention delivered to women living with advanced cancer.
- **Explore the efficacy** of the program to reduce perceived stress, depression, anxiety and increase self-efficacy.
- **Provide insight** into the use of a digital app with self-guided relaxation content, comedic strategies and therapeutic comedy.

## METHODS

**Study Design:** This pilot was a single-arm feasibility trial for women living with advanced cancer (WLAC). WLAC who participated in the pilot used a mobile app [Nealth] for self-guided stress and mental health support. Participants were asked to use Nealth for 8 weeks, engaging in at least two relaxation practices and watching at least one ComedyCures video each week. (Practices and videos were located on the app). Participants had the option to attend three of six virtual live events with comedians, at baseline and 4 and 8 weeks post-baseline.

**Assessments:** Completed at baseline, 4 weeks post-baseline, and eight weeks post-baseline, from September 2021 - November 2021. Included the PSS-10 as measure of perceived stress, HADS as a measure of anxiety and depression and GSE as a measure of self-efficacy.

**Analysis:** Mean scores at baseline, 4-weeks and 8-weeks were used to assess the percentage change of the PSS-4, HADS and GSE. Feasibility was measured using engagement rates, as a measure of acceptability and adherence.



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## RESULTS

- **Participants:** Ranged in age from 31 to 74 years old, with the mean age of 52.2 years. 31 women completed the 8-week study.
- **Engagement:** Spent on average of 116 minutes per week on Nealth. 30-day retention was 100%. 60-day retention was 83%. Average daily active use was 19%.
- **Clinical outcomes:** Perceived stress decreased 15.1%, depression 18.1% and anxiety 9.7%. Self-efficacy increased 7.6%.

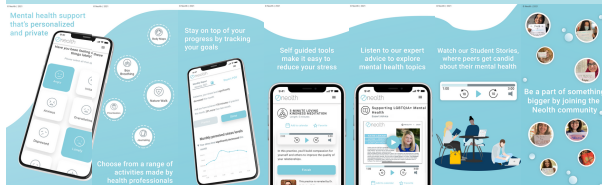
## IMPLICATIONS

**Changes in mood and confidence:** Participants experienced reductions in stress, depression and anxiety and increases in self-efficacy. These results were observed in the context of a life-threatening illness.

**Above industry standard:** Engagement rates were significantly higher than industry standard (Baumel, 2019).

**Qualitative feedback:** Participants noted that the self-care reminders and engagement notifications from the Nealth app made them realize they needed to prioritize their mental health during their cancer fight. Participants were highly engaged with the therapeutic comedy videos made by ComedyCures, featuring cancer survivor Saranne Rothberg, and 90% requested access to more videos.

**What it means:** These results suggest delivering relaxation and therapeutic comedy via a mobile app presents a practical approach to reducing stress in a short period of time, as it is affordable, users can participate remotely, and there are few time constraints.



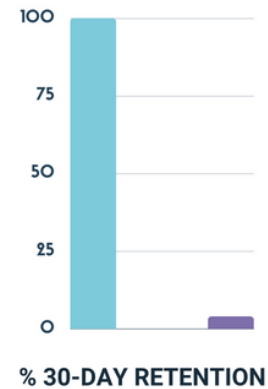
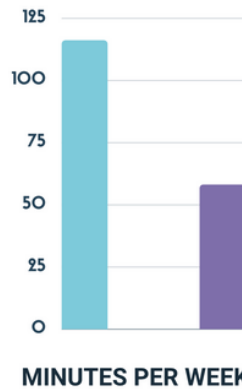
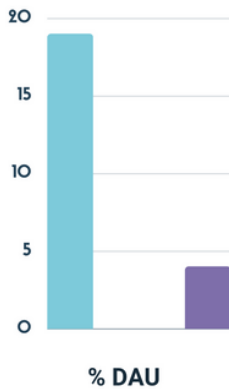
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## NEOLTH VS. INDUSTRY STANDARD

NEOLTH  
INDUSTRY STANDARD\*



\*COMPARISON DATA FROM BAUMEL ET AL., 2019

## CLINICAL OUTCOMES POST-BASELINE

PERCEIVED STRESS



PSS-10

15.1% decrease at 8 weeks

DEPRESSION



HADS-D

18.1% decrease at 8 weeks

ANXIETY



HADS-A

9.7% decrease at 8 weeks

SELF-EFFICACY



GSE

7.6% increase at 8 weeks

For more information contact Grace Lee, [HumorBuddy@ComedyCures.org](mailto:HumorBuddy@ComedyCures.org)