canopie

Randomized Control Trial Program Evaluation Results

Background

Canopie's digital program to treat symptoms of postpartum depression was adapted from rigorously tested therapeutic techniques. Interpersonal therapy (IPT) and cognitive behavioral therapy (CBT) are recommended by the U.S. Preventive Services Task Force to prevent and treat postpartum depression. These therapeutic techniques have been tested and proven to reduce depression for women in the perinatal period across income groups and cultures. Postpartum depression is a major risk factor for child neglect, the most common form of maltreatment and why many children are separated from their mothers.

From April to May 2021, Canopie recruited 100 (treatment n=51, control n=49) expecting women and mothers with children < 1 with English-language proficiency to participate in a randomized control trial (RCT) to test the program's effectiveness to reduce symptoms of depression using clinically validated scales. 59% were categorized as low-income and countries of origin included U.S., UK, Canada, Mexico, Poland, South Africa, Zimbabwe, Haiti, Germany, Israel, Estonia, Greece.

Study Design

The treatment group completed a baseline survey with the Edinburgh Postnatal Depression Scale (EPDS). They were then enrolled into Canopie's audio program and were asked to engage with 2 hours of Canopie's sessions (10-15 mins of audio/day) over the course of two weeks. They received 2 emails with light guidance as well as a letter of gratitude written from the perspective of their baby. They then completed an endline survey which included the EPDS as well as additional quantitative metrics and qualitative feedback. The control group completed the baseline survey and endline survey with the EPDS. At the 2-week follow-up, both treatment and control groups completed the EPDS.

Results

The treatment group had significantly lower levels of depressive symptoms post treatment ($p < 0.00015$, Hedges g =.68) and were more likely to achieve a statistically reliable improvement (index >4) which clinicians and researchers use to determine definite mood change. No statistical differences were observed across groups according to income, age, ethnicity, race, or country of origin. Severe depressive symptoms reduced 100% from n (16) to n (0) in the treatment group, and only 14% in the control with n (14) baseline and n (12) at endline. These results compare to reported results through meta analyses of CBT (.642, $p < .001$), psychodynamic therapy (.526, $p = .014$), counseling (.418, $p = .014$), and education (.100, $p = .457$) on postpartum depression.

Perceived value of the program was high. 98% (50) of participants said they would recommend the program to someone else, and (1) participant responded they were "not sure". 100% of participants responded that the program helped them feel better - 55% responded that it helped them feel a lot better and 45% responded that it helped them feel a little better.

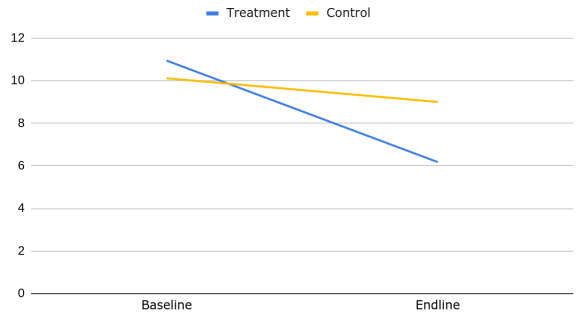

Figure 1: Change in mean depression (Edinburgh Postnatal Depression Scale) in treatment and control groups. Hedges (g) treatment effect of .68. Average 4.8 pt reduction in depression in the treatment group. There was no statistically significant change in the control group.

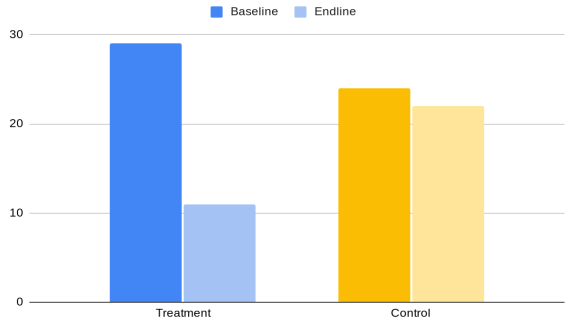

Figure 2: Change in participants with depression (i.e. scores >10 in the Edinburgh Postnatal Depression scale). 62% of participants with depression in the treatment group had scores drop to below 10 i.e. below the clinical threshold. There was no statistically significant change in the control group.

Conclusion

Canopie tested a low-touch version of its program. Even with more limited guidance, support, and content, the program evaluation indicates Canopie's program is an effective intervention for addressing clinical symptoms of depression. Canopie will conduct 4-week and 6-week follow-up surveys with both groups to understand changes in effects over time, to help guide the duration and intensity of the program.