Evaluation Summary of a Low-Intensity Cognitive Behavioral Therapy Program

| 3/20/2024 | Uncommon Good
Evaluation by Julie K. Staples, Ph.D. |

Evaluation Summary of a Low-Intensity Cognitive Behavioral Therapy Program

UNCOMMON GOOD
EVALUATION BY JULIE K. STAPLES, PH.D.

Participant Numbers, Demographics, and Number of Sessions Attended

Promotoras were trained to deliver Low-Intensity Cognitive Behavioral Therapy (LICBT) to community members. Eleven promotoras provided LICBT to 75 community members ages 18 – 95. The average age was 45.3 ± 14.8 (Mean ± Standard Deviation (SD)). There were 60 females (80%) and 15 males (20%). All were Latinx. Seventy-three provided marital status: 45 were married; 20 were single; 5 were divorced/separated; and 3 were widowed.

Data on the number of sessions attended was collected from 54 participants. They attended from 1 to 24 sessions each with the average number of sessions being 6.4 ± 5.7 (Mean ± SD). Seventy-eight percent attended 1-8 sessions. A table of the breakdown of number of sessions is shown below.

Number of Sessions Attended	Number of Participants	Percent of Participants
1	8	14.8 %
2	8	14.8 %
3	8	14.8 %
4	3	5.6 %
5	3	5.6 %
6	5	9.3 %
7	2	3.7 %
8	5	9.3 %
9	1	1.9 %
10	2	3.7 %
13	2	3.7 %
14	2	3.7 %
18	2	3.7 %
20	1	1.9 %
21	1	1.9 %
24	1	1.9 %

Fifty-two participants were asked "What is your main reason for speaking with the promotora today?" They were given 5 choices: Anxiety, Stress, Depression, Trauma Symptoms and "Other".

Sixty-two percent of the participants reported seeking help for more than one symptom. The average number of symptoms was 2.2 ± 1.2. The table below shows the responses for each symptom (percentages are more than 100% due to the multiple symptom responses).

| Symptom	Number of Participants	Percent of Participants
Stress	39	75 %
Anxiety	32	62 %
Depression	24	42 %
Trauma	8	15 %
Chronic Illness	5	10 %
Other (Relationship/Family Problems; Panic; Anguish/Sadness; Afraid to leave house)	7	13 %

Measures

The Depression Anxiety and Stress Scale (DASS-21) was used to measure depression, anxiety, and stress symptoms and the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) was used to measure well-being. These scales were administered before the first session and after the last LICBT session held by the promotoras for each participant.

Statistics

Data analysis was performed using SPSS version 29. The MIXED procedure was used to run linear mixed models to account for repeated measures over time for individuals. Time was a fixed factor in all models. The Means and Standard Errors in the graphs below are the Estimated Marginal Means (EMM) and Standard Errors from these models. McNemar's test was used to determine whether there were differences in the proportion of participants having normal levels of depression, anxiety, or stress before and after the LICBT treatment.

Results

Depression, Anxiety, and Stress Scores
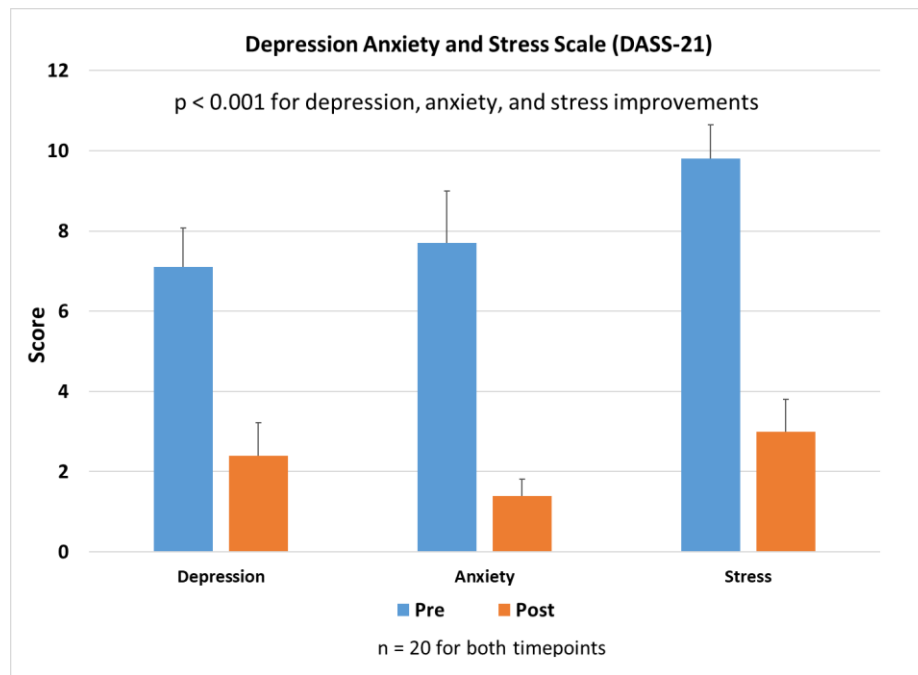
There was a statistically significant improvement in depression, anxiety, and stress symptoms following the last LICBT session. In addition, the change in scores for depression, anxiety and stress were all clinically meaningful.[1]

Depression, Anxiety, and Stress Severity Levels

The DASS-21 manual has cut-off scores for the following categories of symptoms: normal, mild, moderate, severe, and extremely severe.[2] The graphs below show the changes in the severity levels of depression anxiety and stress before and after the LICBT treatment.

Changes in Depression Severity

**Changes in Anxiety Severity**

Changes in Stress Severity
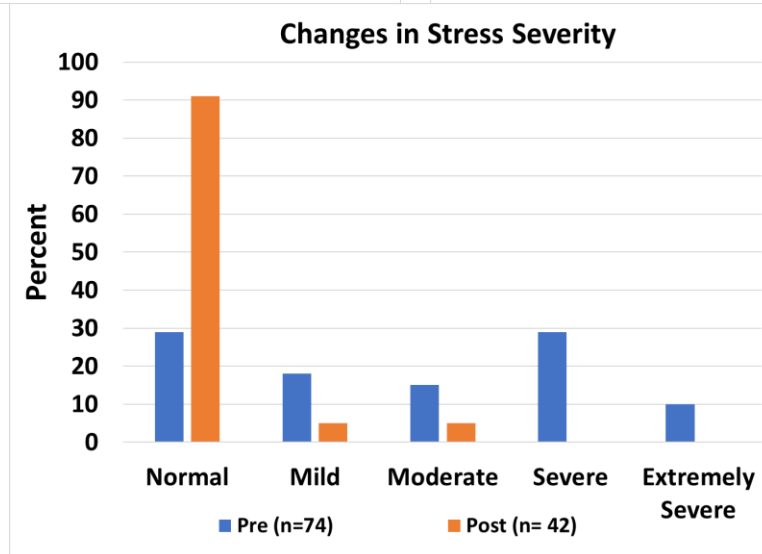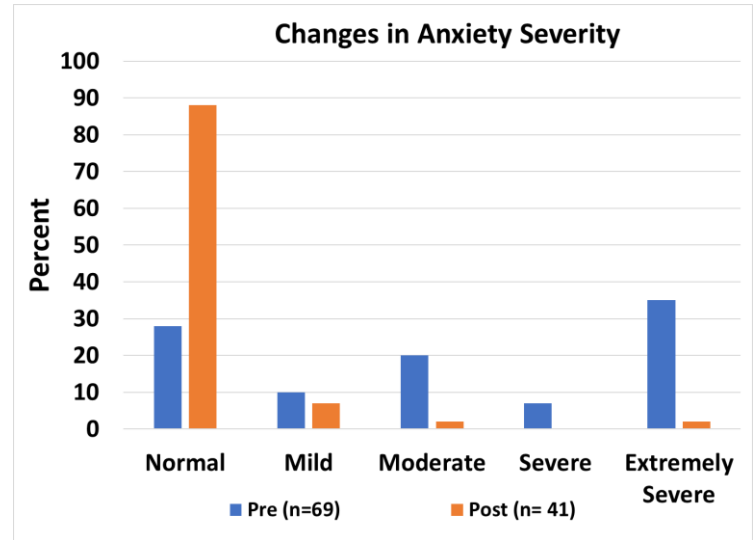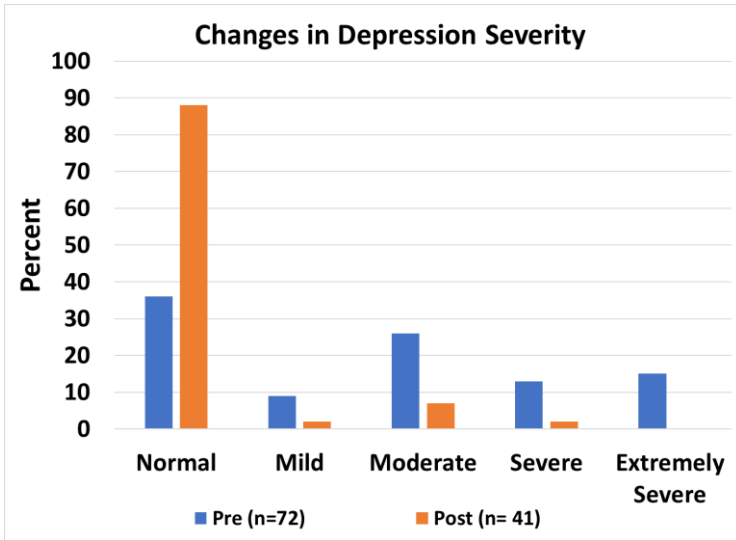
For depression, 65% of participants were in the mild to extremely severe range of depression prior to treatment. After LICBT, 80% of those in the mild to extremely severe range were in the normal range. For anxiety, 73% of participants were in the mild to extremely severe range of anxiety prior to treatment and none were in the extremely severe range. After LICBT, 81% of those in the mild to extremely severe range were in the normal range and none were in the severe range. For stress, 71% of participants were in the mild to extremely severe range of stress prior to treatment. After LICBT, 86% of those in the mild to extremely severe range were in the normal range and none were in the severe or extremely severe range. An exact McNemar's test determined that the difference these proportions of participants in the normal range of depression, anxiety and stress before and after LICBT was statistically significant, $p <$ .001. That is, significantly more people had normal levels of anxiety, depression, and stress following the LICBT. Ninety-one percent had normal stress levels and 88% had normal depression and anxiety symptom scores.

The improvement in the DASS-21 scores were better in this LICBT program than for other CBT therapies in the literature for populations that had similar baseline levels of depression, anxiety, and stress as our program as shown in the table below. This table shows the change in depression, anxiety and stress scores on the DASS-21 in three studies. Smaller changes indicate less improvement. The average change scores in our evaluation (depression = 5.5; anxiety = 6.5; stress = 7.5) was greater than that in the cited studies and was clinically significant as noted above.

Study	Change in Depression Score	Change in Anxiety Score	Change in Stress Score
1. 30 adults injured in a motor vehicle crash receiving 10 weeks of CBT[3]	1.8	2.2	2.4
2. 11 adults with Parkinson's Disease with depression and/or anxiety receiving 8 weeks of group CBT[4]	3.3	2.9	1.8
3. Internet-delivered 8-week CBT program for university students for depression (31 students), anxiety (52 students) or stress (19 students)[5]	2.5	2.5	1.9
4. 31 university students with mild to moderate depression receiving 8 weeks of CBT [6]	3.3	1.4	3.2
Uncommon Good's LICBT Program	**5.5**	**6.5**	**7.5**

Well-Being
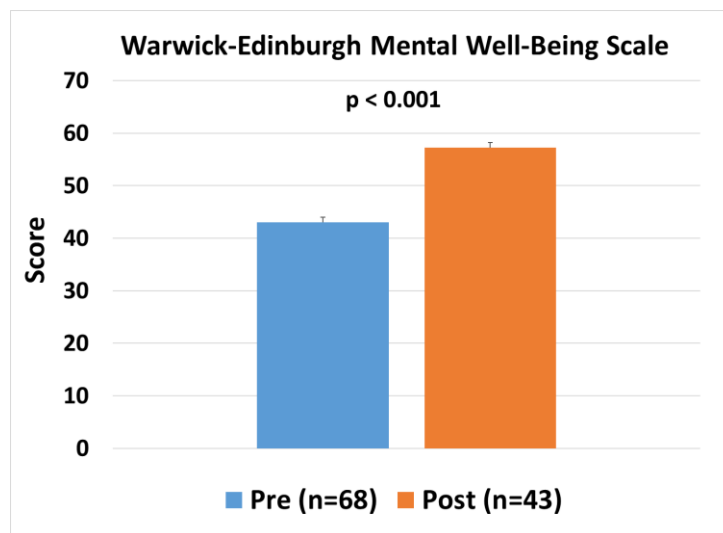
There was a statistically significant improvement in well-being following the last LICBT session. According to the Warwick-Edinburgh Mental Well-Being manual,[7] a change in 3 points correlated with clinically significant improvements in the context of a counseling service and the change in the LICBT program was 14.2 points, indicating a very large improvement. At the end of the LICBT sessions, participants had scores higher than norms for people with high perceived health status, high incomes, and good employment. [7]

Summary

The participants of the LICBT program offered by the promotoras had clinically significant reductions in depression, anxiety, and stress scores following their last session. They also had a significant improvement in well-being. The improvements in depression, anxiety, and stress were larger than those seen in the literature for other CBT programs and the average well-being scores at the end of the last sessions indicated a high levels of well-being. These results indicate the program was highly successful for these 75 participants and demonstrate that this is an effective way to provide low-cost CBT services to a Latinx community that can be administered by lay-people trained in delivering LICBT.

Citations

1. Ronk FR, Korman JR, Hooke GR, Page AC. Assessing clinical significance of treatment outcomes using the DASS-21. *Psychol Assess*. 2013;25(4):1103-1110. doi:10.1037/a0033100

2. Lovibond SH, Lovibond PF. *Manual for the Depression Anxiety and Stress Scales.* The Psychology Foundation of Australia, Inc.; 1996. http://www2.psy.unsw.edu.au/dass/

3. Guest R, Tran Y, Gopinath B, Cameron ID, Craig A. Psychological distress following a motor vehicle crash: preliminary results of a randomised controlled trial investigating brief psychological interventions. *Trials*. 2018;19(1):343. Published 2018 Jun 27. doi:10.1186/s13063-018-2716-2

4. Troeung L, Egan SJ, Gasson N. A waitlist-controlled trial of group cognitive behavioural therapy for depression and anxiety in Parkinson's disease. *BMC Psychiatry*. 2014;14:19. Published 2014 Jan 27. doi:10.1186/1471-244X-14-19

5. Palacios JE, Richards D, Palmer R, et al. Supported internet-delivered cognitive behavioral therapy programs for depression, anxiety, and stress in university students: Open, non-randomised trial of acceptability, effectiveness, and satisfaction. *JMIR Ment Health*. 2018;5(4):e11467. Published 2018 Dec 14. doi:10.2196/11467.

6. Changklang, P., & Ranteh, O. (2023). The effects of cognitive behavioural therapy on depression, anxiety, stress, and self-esteem in public health students, Thailand. *J Educ Health Promot*. *12*, 152. doi:10.4103/jehp.jehp_1274_22

7. Taggart, F, Stewart-Brown S, Parkinson J. *Warwick-Edinburgh Mental Well-Being Scale (WEMWBS) User Guide* (Version 2). The University of Warwick. NHS Health Scotland; 2015.