



Examining the Effectiveness of Telehealth vs. In-Person Services for Children Using the CANS-IP

Sierra Cheung, BS, MA; Vincenty Front, BS; Katherine H. Tsai, PhD, MPH
Research and Clinical Training Department, Five Acres

INTRODUCTION

- Results regarding the effectiveness of services provided through telehealth to the general population have been relatively positive. Most studies show evidence that telehealth can be equally as effective as in-person services (Shah & Badawy, 2021, Greenwood et al., 2022).
- However, there is growing discussion surrounding the challenges in using telehealth effectively with children. For instance, one study indicated higher dropout rates for children using telehealth compared to adults (Hoffnung et al. in 2021).
- This suggests that even if telehealth is comparable in potential benefit to in-person care, children may not benefit from telehealth at the same rate as adults.
- Given the increasingly prevalent uptake of the telehealth delivery model after the COVID-19 pandemic, it is important that we gain a greater understanding as to whether children can equally benefit from telehealth services.

METHODS

- Our sample included 328 clients receiving community-based mental health outpatient services ages 2 to 20 (mean = 11). Clients were 77% Hispanic/Latino, 9% Black/African American, 6% White, 3% Asian/Pacific Islander, and 5% Other/Unknown. 54% of clients in the sample were female.
- The median telehealth usage of clients in our sample was 34.6% of their total minutes of care. Those who were below the median were considered in-person clients (n=164) and those who were above the median were considered telehealth clients (n=164). In-person clients received an average of 10.7% of their care via telehealth, while telehealth clients received an average of 79.5% of their care via telehealth.
- The Child and Adolescent Needs and Strengths (CANS) IP assessment was used to assess client outcomes. It consists of 62 items; 50 that are rated by a provider on a 0-3 scale, with 0 being “No action needed” to 3 being “Immediate action required,” and 12 on a yes/no scale, with yes indicating presence of a given traumatic childhood experience.
- Overall scores for the CANS were calculated by summing all 50 strength and needs items, with strength items reverse-scored.

A paired t-test was used to measure change in CANS scores from intake to discharge. We also used an independent t-test to compare change scores by methods of care. To determine whether the two groups differed by drop out rates, we conducted a z-test to compare proportions of dropout between methods of care.

RESULTS

Results showed a statistically significant improvement in CANS scores from initial to discharge. We found no significant difference in change scores by method of care, and no significant difference in dropout rates between method of care.

Variable	t/z	p	Mean Diff.	95% Conf. Interval	
				Lower	Upper
Initial & Discharge	5.71	<0.01	2.1	1.38	2.83
Change Score & Method of Care	1.39	>0.1	1.02	-0.42	2.47
Dropout Rate & Method of Care	1.08	>0.1	5.5%	-4.4%	15.4%

Table 1. Results of the two t-tests and z-test.

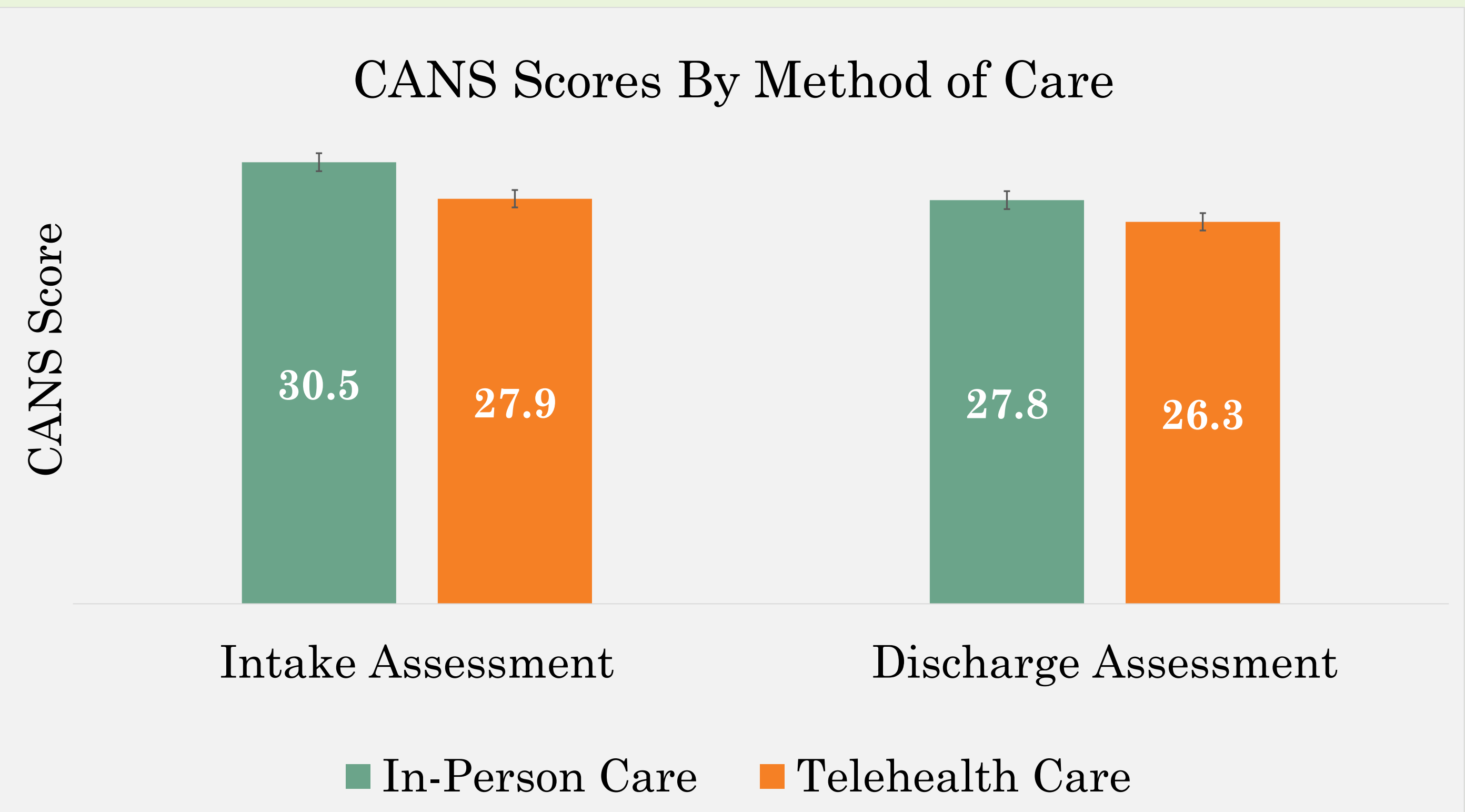


Figure 1. Initial and Discharge CANS Summed Scores by mode of service

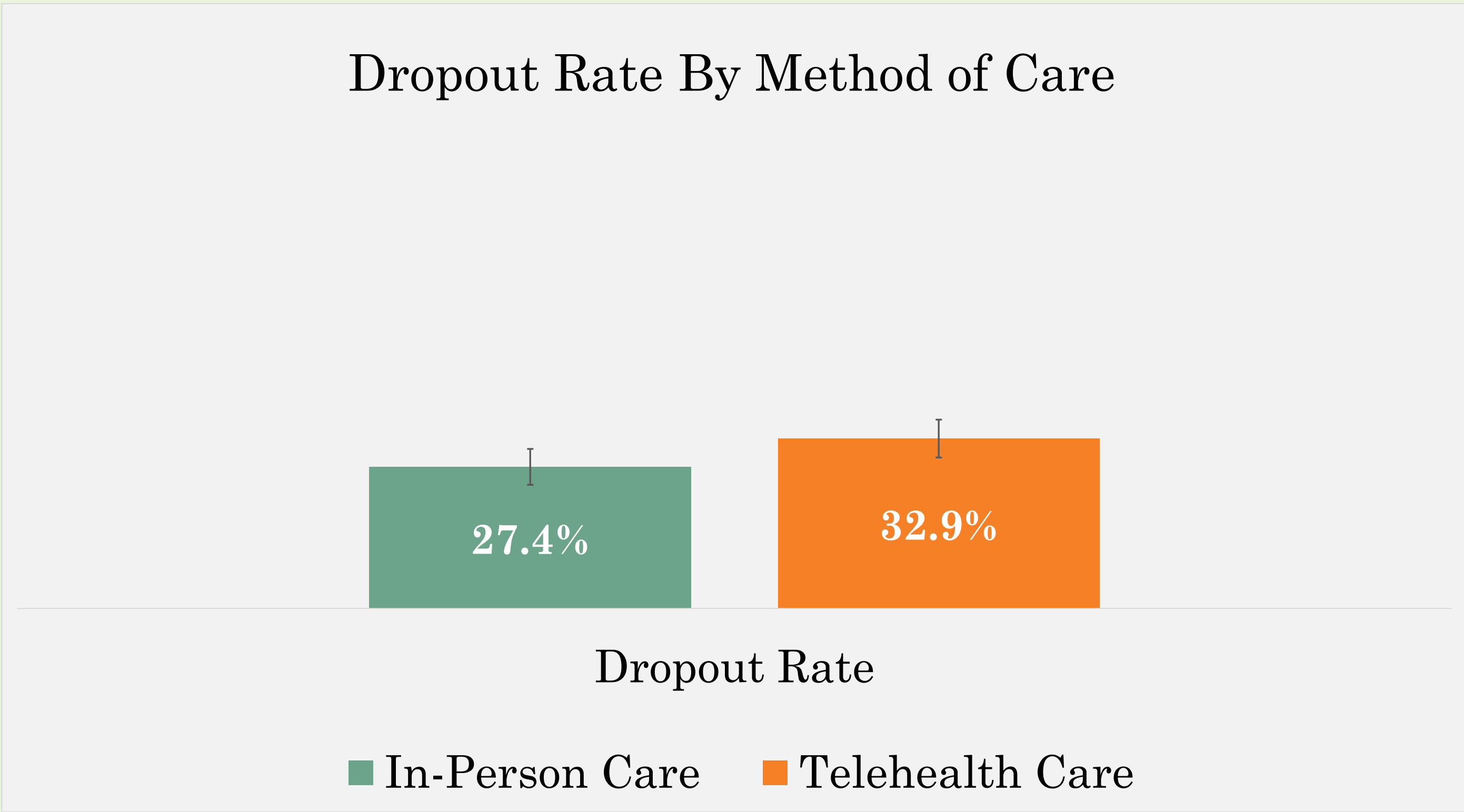


Figure 2. Dropout Rates by Method of Care.

DISCUSSION

- This study indicated that there were no differences in treatment effectiveness when comparing clients who received services via telehealth versus in-person.
- These findings are important as use of telehealth can reduce barriers for clients who may otherwise not be able to obtain mental health care (e.g., rural or low socio-economic status).
- Although CANS change scores were statistically significant, the average change score across clients was only 2.1. Statistical significance does not always equate to clinical significance, which is perhaps equally if not more important for the field to understand. Future studies should explore how clinical significance plays a role in these relationships.

REFERENCES

- Hoffnung, G., Feigenbaum, E., Schechter, A., Guttman, D., Zemon, V., Schechter, I. (2021). Children and Telehealth in Mental Healthcare: What We Have Learned From COVID-19 and 40,000+ Sessions. *Psychology Research and Clinical Practice*, 3.3, 105-113.
- Greenwood H, Krzyzaniak N, Peiris R, Clark J, Scott AM, Cardona M, Griffith R, Glasziou P. Telehealth Versus Face-to-face Psychotherapy for Less Common Mental Health Conditions: Systematic Review and Meta-analysis of Randomized Controlled Trials. *JMIR Ment Health*. 2022 Mar 11;9(3):e31780. doi: 10.2196/31780.
- Shah AC, Badawy SM. Telemedicine in Pediatrics: Systematic Review of Randomized Controlled Trials. *JMIR Pediatr Parent*. 2021 Feb 24;4(1):e22696. doi: 10.2196/22696. PMID: 33556030; PMCID: PMC8078694.