

Preliminary Validation of a Survey Measuring Therapeutic Factors in Virtual and Face-to-Face Care

Brianna Cerrito, MS¹, Amanda Fialk, Ph.D., LCSW, LICSW¹, Amie DiTomasso, MA¹, Alexa Connors, MA, LMSW¹ & Frank D. Buono, PhD²



1. The Dorm, New York City and Washington, D.C.
2. Department of Psychiatry, Yale University School of Medicine, New Haven, CT

INTRODUCTION

- The use of virtual mental healthcare spiked in 2020 as a critical response to the COVID-19 pandemic, effectively serving as a contact-free alternative to receiving treatment.
- While virtual care remains a viable option for individuals with geographic and physical barriers to treatment, there are a number of perceived therapeutic disadvantages (i.e., missing nonverbal signals, handling crises, confidentiality, weakened social connection in group therapy).
- This study provides preliminary validation of a survey designed to measure effectiveness of virtual therapy versus face-to-face treatment across key therapeutic factors (i.e., therapeutic alliance, engagement, rapport, confidentiality).

METHODS

Participants:

- Participants were young adults, ages 18-35, who had received virtual and face-to-face therapy at an intensive outpatient mental health treatment program for young adults, from April 2020 to July 2022.
- A total of 122 individuals began the study and 89 participants completed it. Fifteen items were factor analyzed using principal component analysis.

Data Analysis:

- An exploratory factor analysis of 15 items was conducted using principal component analysis with Varimax rotation (Kaiser Normalization)
- A 3-factor solution was analyzed with all 15 survey items included, however, this resulted in cross-loadings.

Sample:

- All participants were young adults who sought treatment at a holistic intensive outpatient mental health treatment program (mean age=23.61; SD=3.54).

Table 1. Survey Measuring Therapeutic Factors in Virtual and Face-to-Face Care

Factor 1: Therapeutic Impact of Face-to-Face Care

- I changed because of face-to-face sessions.
- My clinician was more approachable in face-to-face sessions.
- I was able to connect with my therapist more in face-to-face sessions.
- I was able to maintain relations with other clients in face-to-face sessions.
- I was more comfortable sharing feelings in face-to-face sessions.

Factor 2: General Factors in Virtual Care

- I was able to see my clinicians clearly in virtual sessions.
- I was able to hear my clinicians clearly in virtual sessions.
- I experienced technical difficulties that impacted my experience with virtual care.
- My confidentiality was protected in virtual sessions.

Factor 3: Therapeutic Impact of Virtual Care

- I believe virtual sessions at the Dorm are just as effective as face-to-face sessions.
- I changed because of virtual sessions.
- My clinician was more approachable in virtual sessions.
- I was able to maintain relations with other clients in virtual sessions.
- I was more comfortable sharing feelings in virtual sessions.

Table 3. Variance Explained by Number of Factors

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings
	Total	% of Variance	Cumulative %	
1	3.812	27.230	27.230	27.230
2	2.981	21.290	48.520	48.520
3	1.758	12.560	61.081	61.081
4	1.073	7.667	68.748	
5	.843	6.023	74.771	
6	.674	4.818	79.589	
7	.601	4.294	83.883	
8	.522	3.729	87.612	
9	.417	2.979	90.591	
10	.351	2.509	93.100	
11	.311	2.219	95.319	
12	.270	1.931	97.250	
13	.216	1.541	98.791	
14	.169	1.209	100.000	

Extraction Method: Principal Component Analysis.

Table 4. Rotated Matrix of 14 Items From the Scale

Rotated Component Matrix^a

	Component		
	1	2	3
Virtual_1	-.141	.233	.782
Virtual_2	.049	.804	.176
Virtual_3	.090	.869	.201
Virtual_4	.038	.733	-.130
Virtual_5	.169	.650	.036
Virtual_6	.235	.014	.645
Virtual_7	-.135	-.195	.740
Virtual_9	-.051	.127	.592
Virtual_10	-.276	.077	.682
Face-to-Face_1	.665	.225	.102
Face-to-Face_2	.863	-.019	-.121
Face-to-Face_3	.859	.068	-.152
Face-to-Face_4	.788	.218	-.082
Face-to-Face_5	.817	-.021	-.103

Table 5. Scree Plot

Scree Plot

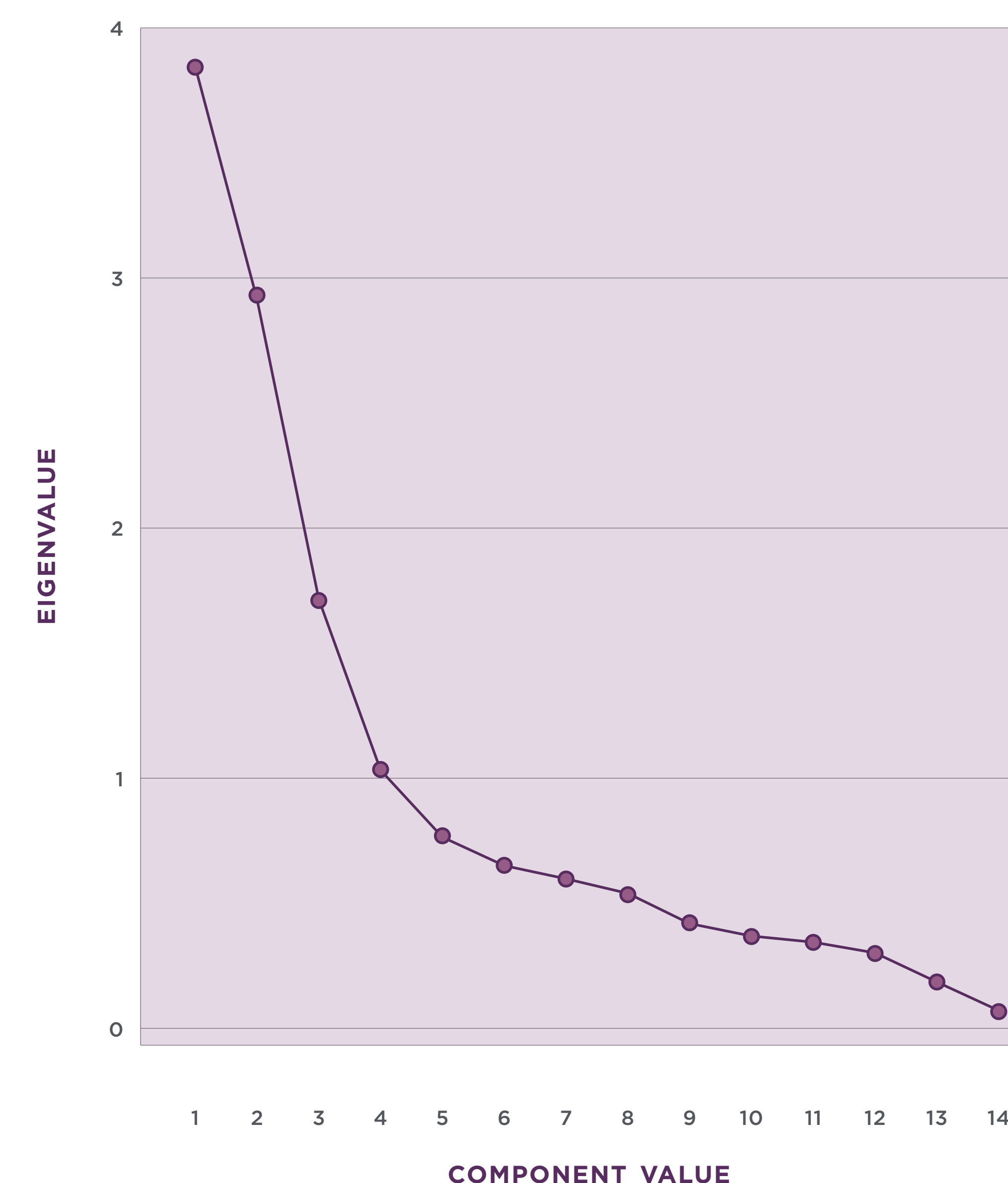


Table 2. Participant Demographics and Psychometrics

Category	Sub-Category	Frequency (N)	Percent (%)
Demographics	Cisgender female	33	37.1
	Cisgender male	33	37.1
	Gender non-binary	6	6.7
	Gender queer	1	1.1
	My gender identity is not listed above	5	5.6
	Trans female	4	4.5
	Trans male	3	2.2
	Transgender	2	1.1
	Unknown and/or exploring	4	4.5
	Total	89	100.0
Employment	Employed	30	33.7
	Student	36	40.4
	Unemployed	23	25.8
	Total	89	100.0
Self-Reported History of Trauma	No	21	23.6
	Yes	68	76.4
	Total	89	100.0
Substance Use Disorder Diagnosis	No	61	68.5
	Yes	28	31.5
	Total	89	100.0
Time in Treatment	1-5	74	83.1
	11-15	1	1.1
	16-20	3	3.4
	21+	1	1.1
	6-10	10	11.2
	Total	89	100.0

RESULTS

- Of the 15 items, 14 were above the .3 minimum threshold.
- This question that was dropped is: 'I was able to connect with my therapist more in virtual sessions.'
- Measures of sampling adequacy for the 14 items were .746, and Bartlett's Test of Sphericity was significant ($p < .01$).
- The analysis yielded three factors, with 61% of the variance accounted for by the factors.
- These findings support an underlying 3-factor structure for a 14-item survey, as one question was dropped from the survey due to being above the .3 threshold.

DISCUSSION

- Results indicate that the scale is valid as a 3-factor model and the identified factors that contribute to variance in the scores are:
 - Therapeutic Impact of Face-to-Face Care
 - General Factors in Virtual Care (i.e., technology)
 - Therapeutic Impact of Virtual Care
- While the use of virtual care following the COVID-19 pandemic has been pervasive, there are therapeutic factors natural to face-to-face contact (e.g., social connection, therapeutic relationship-building) that may be weakened or negatively impacted within a virtual environment.
- It is important to be able to evaluate the impact of virtual mediums on therapeutic factors in care.
- Continual research is warranted to establish a standardized tool for assessing the therapeutic impact of virtual versus face-to-face care.

LIMITATIONS

- The present population is a sample of young adult clients in intensive outpatient mental health treatment in New York, New York and Washington, D.C.
- A total of 122 surveys were collected, however, due to missing and impartial data, 33 data points had to be removed for analysis.
- Due to the specificity of this sample, the findings may not be generalizable to other populations. It is important that future research seeks to validate the present survey in diverse populations.
- Concurrent and discriminant validity were not assessed in the present study, but are warranted in future research.
- Additionally, acuity levels were not accounted for in this sample, however, it is important to note that clients included in the study have varying acuity, which ranges from severe to mild.

References available upon request