

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

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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 (Bokdolo, 2020; Reay et al., 2020; Zulman & Verghese, 2021).
- While virtual care remains a viable option for individuals with geographic and physical barriers to treatment, there are a number of perceived therapeutic disadvantages (e.g., missing nonverbal signals, handling crises, confidentiality, weakened social connection in group therapy) (Kanani & Regehr, 2003; Lopez et al., 2020; Reay et al., 2020; Schuster et al., 2018; Zulman & Verghese, 2021).
- 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 geared for young adults, between April 2020 and July 2022.
- A total of 122 individuals began the study and 89 participants completed it. Fifteen items were factor analyzed using principal component analysis with Varimax rotation (Kaiser Normalization).

Sample:

- A total of 89 data sets were included in the analysis.
- 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 2. Demographics

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
Trauma	No	21	23.6
	Yes	68	76.4
	Total	89	100.0
SUD	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
	Total	89	100.0

Table 1. Survey

Factor 1: (General Factors in Virtual Care)

- I believe virtual sessions at the Dorm are just as effective as face-to-face sessions.
- 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 2: (Therapeutic Impact of Virtual Care)

- 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.

Factor 3: (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.

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.

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Table 4. Rotated Matrix of Items From the Scale

Rotated Component Matrix^a

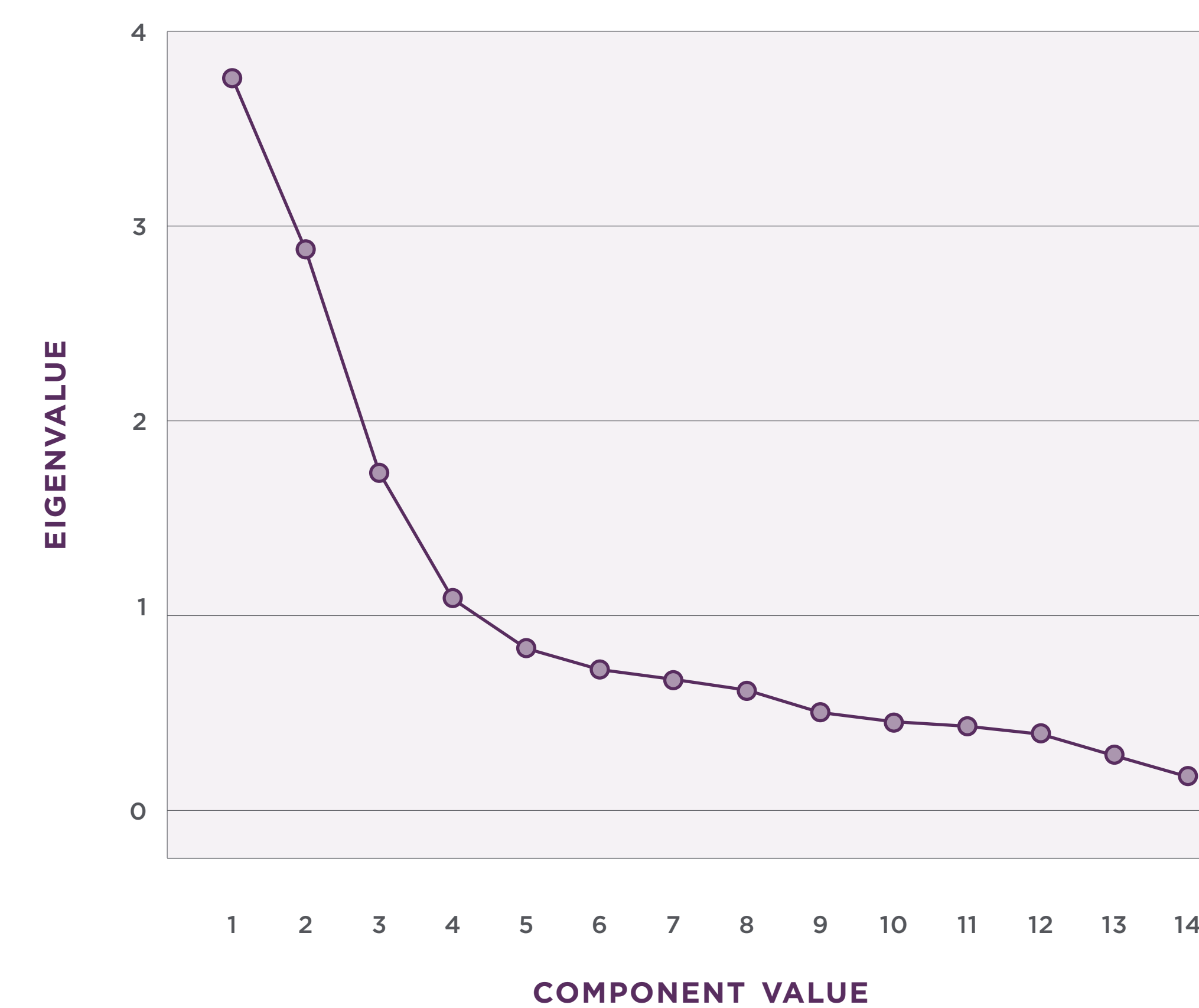
	Component		
	1	2	3
Q8 Virtual_1	-.141	.233	.782
Q8 Virtual_2	.049	.804	.176
Q8 Virtual_3	.090	.869	.201
Q8 Virtual_4	.038	.733	-.130
Q8 Virtual_5	.169	.650	.036
Q8 Virtual_6	.235	.014	.645
Q8 Virtual_7	-.135	-.195	.740
Q8 Virtual_9	-.051	.127	.592
Q8 Virtual_10	-.276	.077	.682
Q8 Face-to-Face_1	.665	.225	.102
Q8 Face-to-Face_2	.863	-.019	-.121
Q8 Face-to-Face_3	.859	.068	-.152
Q8 Face-to-Face_4	.788	.218	-.082
Q8 Face-to-Face_5	.817	-.021	-.103

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.^a

a. Rotation converged in 4 iterations.

Table 5. Scree Plot

Scree Plot



RESULTS

- 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.
- Of the 15 items, 14 were above the .3 minimum threshold.
- The following question was dropped from the survey — '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 the 14-item survey.

DISCUSSION

- Results indicate that the scale is valid as a 3-factor model for understanding factors related to virtual and face-to-face interactions in therapy.
- The identified factors that contribute to variance in the scores are: 1) General Factors in Virtual Care (i.e., technology), 2) Therapeutic Impact of Virtual Care, and 3) Therapeutic Impact of Face-to-Face 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 (Kanani & Regehr, 2003; Lopez et al., 2020; Reay et al., 2020; Schuster et al., 2018; Zulman & Verghese, 2021).
- In light of the marked changes that have occurred following the COVID-19 pandemic, it is of extreme importance 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 data and impartial completion, only 89 were included in 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.
- Acuity levels were not accounted for in this sample, however, clients are admitted based on a tier system where acuity level ranges from severe to mild.

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